The Economist

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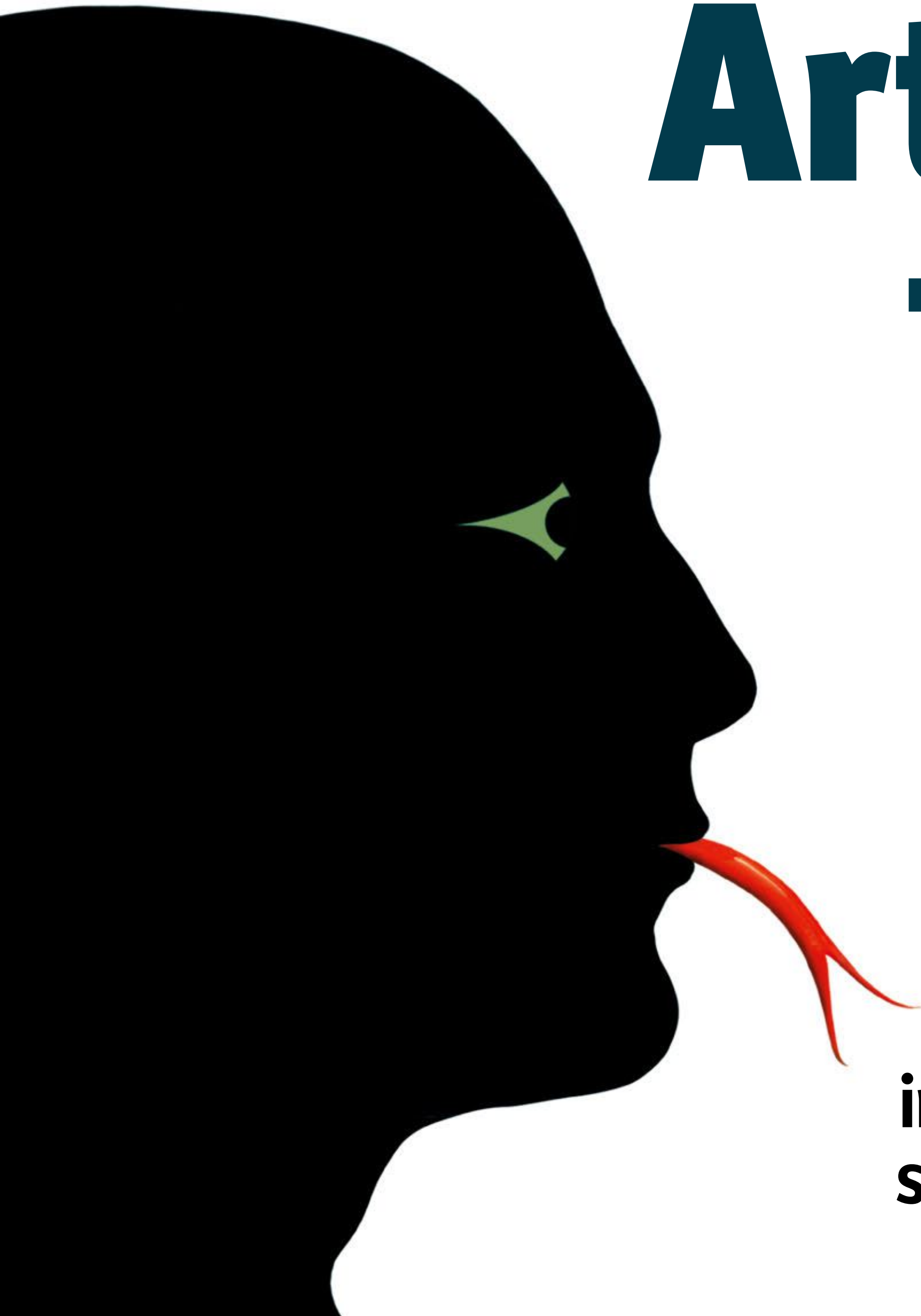
Rodrigo Duterte's guide to diplomacy

What is Gulenism?

Introverts: overlooked and undervalued

Rise of the wooden skyscraper



Art of the lie

Post-truth politics in the age of social media

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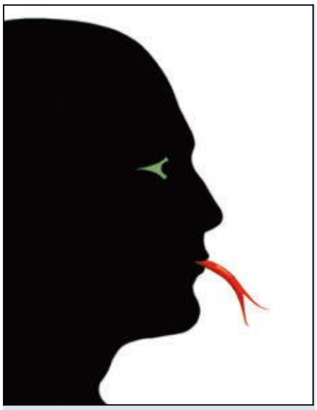

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to take part in "a severe contest between intelligence, which presses forward, and an unworthy, timid ignorance obstructing our progress."

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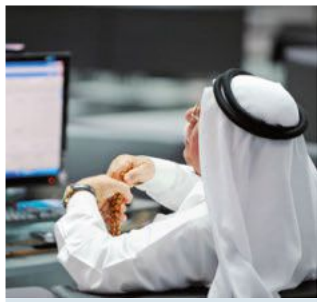

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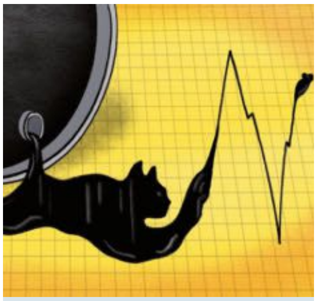

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Politics

Hong Kong held elections for its 70-member Legislative Council, known as Legco. Six of the successful candidates were "localists", as those who support greater independence for the territory are often described. It is their first presence in Legco and is sure to anger **China**, which fears they will use their new positions to push for a referendum on Hong Kong's relationship with the mainland.

Uzbekistan buried Islam Karimov, the blood-drenched despot who ruled the country since independence after the break-up of the Soviet Union in 1991. His death was announced after days of feverish speculation about his health. Vladimir Putin laid flowers on his grave.

The Taliban launched a series of attacks in Kabul, the **Afghan** capital. The defence ministry and the offices of a charity were among the targets. At least 35 people were killed.

Rodrigo Duterte, the president of the **Philippines**, responded to a bombing in his home town of Davao by deploying the army to help in his current crackdown on drug-dealing and other crimes. He also caused a diplomatic kerfuffle by calling Barack Obama a "son of a whore".

More than hot air

Building on pledges made two years ago, America and China said they were committed to implementing last year's Paris accord on **climate change**. America and China account for 40% of the world's carbon emissions. Mr Obama plans to bypass the Republican-controlled Senate, which is required to give its approval to any treaty, reasoning that the agreement constitutes an executive action. He may try to push the deal through before he leaves office in January.

Hurricane Hermine battered north **Florida**. It was the first hurricane to hit the state since Wilma in 2005, and caused a lot less damage.

Hillary Clinton and Donald Trump took part in a televised forum that focused on **foreign policy**. In a preview of what to expect from the presidential debates Mrs Clinton stumbled to answer searching questions on issues such as Iraq and her misuse of e-mails, whereas Mr Trump got away with some bizarre and some invented statements.

Dumped because of Trump

Mexico's finance minister, Luis Videgaray, resigned after helping to organise the recent unpopular visit to the country by Donald Trump. The Republican presidential candidate is rather disliked in Mexico because of his disparaging remarks about migrants. The departure of Mr Videgaray was seen as a chance for Mexico's president, Enrique Peña Nieto, to improve his dire poll ratings.

As opposition to **Venezuela's** leftist regime mounted on the streets, the authorities charged a journalist, Braulio Jatar, with money-laundering. He had used social media to publicise an incident in which President Nicolás Maduro was jostled and humiliated by pot-banging women in a working-class district that was once his stronghold.

A wounded animal

At least 40 people were killed in a series of bombings in **Syria** for which Islamic State (IS) claimed responsibility. Possibly synchronised explosions took place in Tartus, Homs and a suburb of Damascus (all areas held by the government), and in Hasakah, which is controlled by Kurdish forces.

Turkey sent more tanks into northern Syria and is closer to sealing off IS's access to its border. Turkey's president, Recep Tayyip Erdogan, said that together with America, Turkey could soon expel IS from its Syrian capital, Raqqa.

America urged **Bahrain** to release a prominent human-rights campaigner, Nabeel Rajab, who was detained earlier in the summer and is believed to be facing further charges for writing to the *New York Times*.

Somalia's beleaguered government began to implement a ban on flights to Mogadishu, the capital, from neighbouring Kenya that carry qat, a narcotic popular among Somalis. Illicit flights to other parts of the country will doubtless ensue.

The migrant crisis

In **Germany's** regional elections, a fifth of the voters in Angela Merkel's home state, Mecklenburg-Vorpommern, plumped for the anti-immigrant Alternative for Germany (AfD) party, pushing Mrs Merkel's centre-right Christian Democrats into third place. The Social Democrats came first. Mrs Merkel acknowledged that many Germans have lost trust in her liberal refugee policy.

European foreign ministers met **Turkey's** European Union-affairs minister, Omer Celik. The hot topic was the deal to slow the flow of migrants into the EU. Despite Turkey's earlier threats to renege on the deal if Europe failed to lift visa restrictions on Turks, all concerned at the meeting gave assurances that it would be implemented.

Hungary's prime minister, Viktor Orban, and the leader of **Poland's** nationalist Law and Justice party, Jaroslaw Kaczynski, joined forces to launch a "cultural counter-revolution" to put an end to Europe's "crisis of conscience". Mr Orban's anti-immigrant government has formed close ties with Poland since Mr Kaczynski's party took power there last October.

Russia's last remaining independent polling firm, the Levada Centre, was designated a "foreign agent" by the government, two weeks ahead of parliamentary elections. No reason was given for the decision, but Levada had recorded a drop in support for United Russia, Vladimir Putin's ruling party.

Theresa May, **Britain's** prime minister, said she opposes an "Australian-style" points system to control immigration. The system was one of the main promises to "control our borders" made by the campaign to leave the EU, but Mrs May has repeatedly noted its shortcomings. She also indicated a strong desire to reintroduce "an element of selection" in education, possibly by reviving the grammar-school system. That would reverse a decades-old policy held by successive governments.

At the G20 summit Mrs May talked about trade deals with Australia and China. She downplayed her decision to review the **Hinkley Point** nuclear-power plant deal in which China has a stake and declared that the two countries were entering a "golden era" in relations. Chinese officials were not so positive.

Business

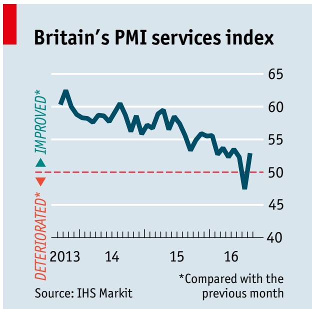
A federal investigation began into the explosion of a **Spacex** rocket as it was undergoing tests on a launch pad at Cape Canaveral. Led by Elon Musk, Spacex is a pioneer in private-sector space transport. But the accident has prompted questions about its safety record. A satellite leased by Facebook that was to provide internet services to poor countries was destroyed in the blast. Spacecom, which owned the satellite, said it would want Spacex to conduct several safe flights before using its services again.

Piping hot

Enbridge, which is based in Canada and shifts crude oil around North America, agreed to buy **Spectra**, a natural-gas company in Texas, for $28 billion, creating a giant in energy infrastructure. Enbridge is one of the biggest owners of oil tanks in Cushing, Oklahoma, a hub for West Texas oil. Spectra has assets in the Marcellus shale-gas basin. With the industry under pressure to consolidate because of the plunge in oil prices, more mergers are thought to be in the pipeline.

Exor, an Italian investment company controlled by the Agnelli family, confirmed it was moving its legal headquarters to Amsterdam, from Turin. Exor, which is *The Economist*'s largest shareholder, says the move will simplify its operations. Its Fiat Chrysler and Ferrari businesses are legally based in the Netherlands. The company will remain listed on the Milan stock exchange.

The first **corporate bonds** from the private sector to be sold with negative yields were issued in Europe. Henkel, a German company, and Sanofi, a French one, sold bonds with a yield of -0.05%, meaning that investors who buy them are prepared to end up with less money in return. The European Central Bank's expansion of its asset-buying programme to include corporate debt has driven yields to new lows.



Markit said that its monthly survey of activity in **Britain's services industry** had posted a record gain in August. The financial-data firm now thinks the economy is unlikely to fall into recession, reversing its forecast following Britain's vote in a referendum in June to leave the European Union. But it does think the economy will slow considerably.

The ultimate insider

The EU's ombudsman raised concerns about the decision of José Manuel Barroso to join **Goldman Sachs**. Mr Barroso is a former president of the **European Commission** and oversaw reforms to the financial industry that were often resisted by the City of London. The ombudsman said Mr Barroso's appointment to the investment bank had caused "public unease", and asked for clarification on how officials who used to work with Mr Barroso, including those who will head the EU's Brexit negotiations, should liaise with him.

South Africa's economy grew by an annualised 3.3% in the second quarter, the fastest pace since late 2014. In the first three months of the year GDP contracted by 1.2%, leading to fears of recession, but mining, the mainstay of the economy, has since rebounded.

Bayer sweetened its takeover offer for **Monsanto**, to $65 billion, the latest move in a spell of consolidation in the agricultural seeds and chemicals business. Monsanto has softened its response to the approach from its German rival, describing the latest negotiations as "constructive".

After a decade of ownership by a private-equity firm, **Formula One** was sold to **Liberty Media**, an American company, in a deal that values the racing-car championship at $8 billion. Bernie Ecclestone stays on as F1's chief executive.

Hewlett Packard Enterprise decided to sell most of its remaining software assets to **Micro Focus**, a British tech company, for $8.8 billion. The assets include what is left of Autonomy, a former star of British tech. Its purchase, in 2011, in a deal that rapidly turned sour, precipitated the splitting of HP into two companies last year.

Augmenting its business in **3D-printing**, General Electric said it was buying Arcam of Sweden and SLM Solutions of Germany, two of the leading companies in metal-based additive manufacturing. GE will use the firms' technologies to enhance its business in printing aircraft parts.

Ear today, gone tomorrow

Apple unveiled the iPhone 7. Sales of the device have slowed recently, in part because consumers have awaited its latest iteration. The new phone is waterproof and, controversially, does away with the headphone socket, so those who still want to use their top-of-the-range noise cancellers will have to carry an adaptor. Meanwhile, Apple's arch-rival, **Samsung**, issued a safety recall for its new Galaxy Note 7 smartphone because of a fault in the battery that can cause the device to catch fire.

Other economic data and news can be found on pages 80-81

Art of the lie

Politicians have always lied. Does it matter if they leave the truth behind entirely?

CONSIDER how far Donald Trump is estranged from fact. He inhabits a fantastical realm where Barack Obama's birth certificate was faked, the president founded Islamic State (IS), the Clintons are killers and the father of a rival was with Lee Harvey Oswald before he shot John F. Kennedy.

Mr Trump is the leading exponent of "post-truth" politics—a reliance on assertions that "feel true" but have no basis in fact. His brazenness is not punished, but taken as evidence of his willingness to stand up to elite power. And he is not alone. Members of Poland's government assert that a previous president, who died in a plane crash, was assassinated by Russia. Turkish politicians claim the perpetrators of the recent bungled coup were acting on orders issued by the CIA. The successful campaign for Britain to leave the European Union warned of the hordes of immigrants that would result from Turkey's imminent accession to the union.

If, like this newspaper, you believe that politics should be based on evidence, this is worrying. Strong democracies can draw on inbuilt defences against post-truth. Authoritarian countries are more vulnerable.

Lord of the lies

That politicians sometimes peddle lies is not news: think of Ronald Reagan's fib that his administration had not traded weapons with Iran in order to secure the release of hostages and to fund the efforts of rebels in Nicaragua. Dictators and democrats seeking to deflect blame for their own incompetence have always manipulated the truth; sore losers have always accused the other lot of lying.

But post-truth politics is more than just an invention of whingeing elites who have been outflanked. The term picks out the heart of what is new: that truth is not falsified, or contested, but of secondary importance. Once, the purpose of political lying was to create a false view of the world. The lies of men like Mr Trump do not work like that. They are not intended to convince the elites, whom their target voters neither trust nor like, but to reinforce prejudices.

Feelings, not facts, are what matter in this sort of campaigning. Their opponents' disbelief validates the us-versus-them mindset that outsider candidates thrive on. And if your opponents focus on trying to show your facts are wrong, they have to fight on the ground you have chosen. The more Remain campaigners attacked the Leave campaign's exaggerated claim that EU membership cost Britain £350m ($468m) a week, the longer they kept the magnitude of those costs in the spotlight.

Post-truth politics has many parents. Some are noble. The questioning of institutions and received wisdom is a democratic virtue. A sceptical lack of deference towards leaders is the first step to reform. The collapse of communism was hastened because brave people were prepared to challenge the official propaganda.

But corrosive forces are also at play. One is anger. Many voters feel let down and left behind, while the elites who are in charge have thrived. They are scornful of the self-serving technocrats who said that the euro would improve their lives and that Saddam Hussein had weapons of mass destruction. Popular trust in expert opinion and established institutions has tumbled across Western democracies.

Post-truth has also been abetted by the evolution of the media (see pages 20-23). The fragmentation of news sources has created an atomised world in which lies, rumour and gossip spread with alarming speed. Lies that are widely shared online within a network, whose members trust each other more than they trust any mainstream-media source, can quickly take on the appearance of truth. Presented with evidence that contradicts a belief that is dearly held, people have a tendency to ditch the facts first. Well-intentioned journalistic practices bear blame too. The pursuit of "fairness" in reporting often creates phoney balance at the expense of truth. NASA scientist says Mars is probably uninhabited; Professor Snooks says it is teeming with aliens. It's really a matter of opinion.

When politics is like pro-wrestling, society pays the cost. Mr Trump's insistence that Mr Obama founded IS precludes a serious debate over how to deal with violent extremists. Policy is complicated, yet post-truth politics damns complexity as the sleight of hand experts use to bamboozle everyone else. Hence Hillary Clinton's proposals on paid parental leave go unexamined (see page 33) and the case for trade liberalisation is drowned out by "common sense" demands for protection.

It is tempting to think that, when policies sold on dodgy prospectuses start to fail, lied-to supporters might see the error of their ways. The worst part of post-truth politics, though, is that this self-correction cannot be relied on. When lies make the political system dysfunctional, its poor results can feed the alienation and lack of trust in institutions that make the post-truth play possible in the first place.

Pro-truthers stand and be counted

To counter this, mainstream politicians need to find a language of rebuttal (being called "pro-truth" might be a start). Humility and the acknowledgment of past hubris would help. The truth has powerful forces on its side. Any politician who makes contradictory promises to different audiences will soon be exposed on Facebook or YouTube. If an official lies about attending a particular meeting or seeking a campaign donation, a trail of e-mails may catch him out.

Democracies have institutions to help, too. Independent legal systems have mechanisms to establish truth (indeed, Melania Trump has turned to the law to seek redress for lies about her past). So, in their way, do the independent bodies created to inform policy—especially those that draw on science.

If Mr Trump loses in November, post-truth will seem less menacing, though he has been too successful for it to go away. The deeper worry is for countries like Russia and Turkey, where autocrats use the techniques of post-truth to silence opponents. Cast adrift on an ocean of lies, the people there will have nothing to cling to. For them the novelty of post-truth may lead back to old-fashioned oppression. ■

Elections in Hong Kong

A not-so-local difficulty

China's separatist troubles have just got bigger. It has only itself to blame

AT LEAST for a few moments, China's president, Xi Jinping, might have felt like king of the world on September 4th as, one by one, the leaders of the planet's biggest economies walked into a cavernous room in the centre of which he stood motionless, waiting for each to approach him, shake his hand and then disappear, stage left. It was the first time that China had played host to a summit of the G20 (see page 67). The Communist Party's propagandists milked the occasion for every drop of patriotic feel-goodery that it could produce. Mr Xi has promised a "great revival" of the Chinese nation; presiding over such a meeting of global grandees was a perfect opportunity to show the public that he was on target.

How awkward, then, that as he was doing so voters in Hong Kong were sending Mr Xi a different—and, for the party, shocking—message. In elections for the territory's Legislative Council, or Legco, six candidates who want Hong Kong to be more independent from China gained seats in the 70-member body (see page 29). Some lean towards Hong Kong's outright separation. It is the first time since the party dismantled the Dalai Lama's government in Tibet in 1959 that sympathisers of separatism have gained a foothold in a political institution in China. Mr Xi will see this as a threat to his nation-building.

Mercifully, it is extremely unlikely that China will resort to the tactics it has used to crush separatism in Tibet and Xinjiang in the far west, namely sending in troops and conducting mass arrests. Since China took over Hong Kong from Britain in 1997, it has allowed the territory to maintain freedoms that are forbidden on the mainland. These include the right to vote for some legislators in competitive elections (the Communist Party's backers dominate Legco with the help of seats reserved for groups that tend to support the establishment). China tolerates Hong Kong's distinctive politics because it promised to do so, at least until 2047. It knows that to scrap that promise would be the death knell for Hong Kong as a global financial hub.

But China's good sense cannot be entirely counted on. Indeed, it is China's own miscalculations that have fuelled support for politicians known as "localists", who include outright separatists as well as people who want Hong Kong to enjoy more autonomy. The biggest mistake was a decision in 2014 not to allow the territory's leader to be elected by the public, with anyone allowed to stand. China said it would fulfil its promise of "universal suffrage" in such polls, but retain a system for weeding out candidates it does not like. Public anger over this decision triggered the "Umbrella movement" later that year, involving weeks of demonstrations and sit-ins. Some of the localists just elected were leaders of that campaign.

Since those protests, China has kept picking away at Hong Kong's freedoms. Voters were spooked by the detention, a few months ago, of several Hong Kong residents who had been selling gossipy books about Beijing's leaders. One of them appears to have been spirited from Hong Kong by the mainland's agents. And it was doubtless at the behest of leaders in Beijing that Hong Kong required candidates for Legco to forswear independence. As a result, several of the more outspoken ones were barred from standing.

Separate ways

To prevent separatism from growing in Hong Kong, Mr Xi has only one option that might actually work. That is to give the territory full democracy, not a system that is rigged in favour of the Communists' supporters. Mr Xi may well prefer to stifle democracy even more. That would increase anger and frustration, boost separatist demands and make China's great revival as a "harmonious" nation ever more distant. ■

England's National Health Service

Bitter pills

The NHS is in terrible shape. Keeping it alive requires medicine both the left and right will find hard to swallow

NEARLY everyone born in England after 1948 was delivered into the care of the National Health Service, and most retain an almost filial loyalty to the organisation. The taxpayer-funded service, which provides health care free at the point of use, is so precious in the public imagination that politicians are less likely to talk of improving the NHS than "protecting" it.

Yet this national treasure is looking frail (see page 52). Nine out of ten of the local trusts which run hospitals are spending beyond their budgets; overall the service faces a funding gap of £20 billion ($27 billion) by the end of the decade. Doctors have gone on strike over a new, less generous contract that the government is imposing on them. And everywhere hospitals are struggling to make ends meet. In recent weeks one trust has abruptly shut an emergency department to children because it was found to be unsafe; another said it was considering delaying all surgery on obese patients.

The diagnosis is simple: rising demand for health care from an ageing population is outstripping supply. But the cure will be hard to stomach for both left and right. Increasing the NHS's capacity will require a far more ruthless focus on efficiency. Even then, taxpayers will have to get used to forking out more. Managing demand will involve not just uncontroversial mea- ▸▸

sures such as more emphasis on preventive medicine, but toxic ones such as introducing charges for services that have been free. Such is the price Britons must expect to pay for living a decade and a half longer than when the NHS was founded.

Though the NHS is lean by international standards, it still bleeds money through inefficiency. There can be few organisations in England that still use fax machines as often as doctors' surgeries do. Poor staff planning means that shortages are tackled by expensive overtime. And the English have a romantic attachment to small local hospitals, which are costlier and deliver worse results than big specialist ones. By scaling up, the NHS could offer better care for the same money. In some parts of the country family doctors are leaving their cottage practices to join chains of larger surgeries that share back-office functions such as call centres. Countries such as Germany and Denmark have found that by reducing the number of hospitals that offer particular surgical procedures, they can reduce the incidence of complications.

You may feel some discomfort

Yet even if all such wastefulness can be eliminated, the government's plan to close the NHS's entire funding gap through greater efficiency is heroically optimistic. Britain already spends less as a share of its GDP on health care than most other rich countries. It is now on course to shrink that share, from 7.3% to 6.6% by 2021. At a time of steeply rising demand that is unrealistic. Politicians must make plain to voters that if they want to keep the taxpayer-funded model and expect to carry on living into their 80s and beyond, they will have to pay for it.

At the same time as making available more resources, the government needs to rein in demand for NHS services. Patients should, where possible, be diverted from expensive forms of care into cheaper ones. One reason that hospital beds are in such short supply is that budgets for social care have been slashed. It makes no sense to use hospitals as expensive substitutes for old people's homes. Amalgamating health and social care, as some regions are already doing, would lead to a more sensible allocation of resources. If more doctors dealt with simple queries from their patients by phone or e-mail, they would have more time to devote to tricky ones. Subjecting more services to fees would temper frivolous demand. In-person doctor's appointments, for instance, could incur a modest charge, as prescriptions and dental work already do.

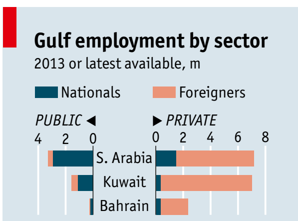
More fundamentally, the focus must shift away from treating illness and towards preventing it. The NHS was designed with acute conditions in mind; nowadays 70% of its spending is on long-term illnesses. It is cheaper, as well as better for patients, to reduce obesity, say, than to treat diabetes. Yet NHS providers are paid for the procedures they carry out, not for those that they render unnecessary. A better model would be to give health providers a budget based on the population they serve, and pay them according to their ability to meet targets of better public health. This would increase the incentives to use new technology that would give patients more responsibility for their own health. If private outfits can do this with a profit margin to spare, good for them.

Higher taxes, new charges and more rationed services: these are bitter pills for politicians. But the English are ageing, and as long as their leaders promise simply to "protect" the NHS by doing nothing, the service faces only decline. ■

Economic reform in the Gulf

Time to sheikh it up

How to get the locals to work



THE people of Saudi Arabia have for decades enjoyed the munificence of their royal family: no taxes; free education and health care; subsidised water, electricity and fuel; undemanding jobs in the civil service; scholarships to study abroad; and much more. This easy life has been sustained by gushers of petrodollars and an army of foreign workers. The only thing asked of subjects is public observance of Islamic strictures and acquiescence in the absolute power of the sprawling Al Saud dynasty.

Similar arrangements hold in the other countries of the Gulf Co-operation Council (GCC), a six-member club of oil monarchies. But these compacts are breaking down. The price of oil has fallen sharply since 2014, and the number of young Gulf citizens entering the job market is growing fast. The maliks and emirs can no longer afford huge giveaways, or to pay ever more subjects to snooze in air-conditioned government offices. The monarchs know it. They say they are seeking to diversify their economies away from oil rents; they are also whittling away generous subsidies and plan a new value-added tax across the GCC.

But reforms have to go further. If Gulf citizens are to keep enjoying rich-world standards of living, they will increasingly have to find productive work in the private sector. That means overhauling labour markets that keep too many of the region's citizens idle.

The pampering of Gulf citizens has made them expensive for firms to hire (see page 41). By contrast, the third-class legal status of many migrant workers makes them extra-cheap (see page 42) and puts them at the mercy of their employers. Given the choice between a hardworking foreigner and a costly local, private firms have long preferred the foreigner.

In response Gulf governments have imposed ever more stringent quotas on foreign companies to employ locals, especially in desirable white-*dishdasha* jobs. In Bahrain 50% of workers in banks must be Bahrainis; but only 5% of those in construction need be. (It's awfully hot on building sites.) Quotas reduce the incentive for Gulf citizens to do a job well: why bother, when your employer has little choice but to keep you on? Firms often regard hiring locals as a sort of tax. Some pay them to stay at home.

The best policy would be to phase out quotas entirely, while also slimming the bureaucracy and making it clear that civil-service jobs are no longer a birthright. In Saudi Arabia two-thirds of citizens are employed by the state. Public-sector wages account for 12% of GDP in the Gulf and Algeria, compared with an average of 5% across emerging economies.

The way migrant labourers are treated needs to change, too. Gulf states deserve credit for letting in far more immigrants than almost all Western countries, relative to their populations. (In many cases, foreigners outnumber locals.) Migrants gain from earning far higher wages than they could back in India or Pakistan. But the coercive parts of the *kafala* system of sponsoring foreign workers should be dismantled. Migrant workers should not need their employers' permission to leave the country. After a while, they should be allowed to switch jobs. Contracts should be clear and enforced by local courts. Long-term foreign workers should be able to earn permanent residence; ultimately those who wish to should have the opportunity to become citizens.

These reforms—less pampering for locals and more rights for migrants—would reshape the labour market. More locals would have to do real work. Migrants would be better treated, though inevitably fewer would be hired. Some new ideas are being tested. Bahrain is allowing firms to ignore quotas by paying a fee for each foreign worker they employ. As part of its ambitious economic agenda, Saudi Arabia is talking of issuing green cards to some migrants.

A new social contract

At a time of bloody turmoil across the Arab world, many royals fear undoing the social compact that has kept them in power. But cheap oil makes change unavoidable; doing nothing merely postpones the reckoning. Economic transformation should nudge Gulf states towards political reform. Perhaps, as their citizens are asked to do more to earn their living, they will demand that rulers do more to earn their consent. ■

Interest-rate caps

Cut-price logic

A bad idea that is remarkably common

THE Kenyan government has a problem. Its banks will not lend cheaply to the private sector. Tired of asking nicely, the government has taken matters into its own hands. This month it will put a cap on commercial banks' interest rates: charging borrowers more than four percentage points above the central bank's base rate, which now stands at 10.5%, will be illegal (see page 67). Shares of the largest Kenyan banks plummeted by 10% in response to news of the cap.

This sort of crude meddling in the market may seem antiquated, but it is remarkably common. A review by the World Bank in 2014 found then that at least 76 countries impose a limit on interest rates. Half the countries in sub-Saharan Africa have such caps. Rich countries are also fond of them. In America, 35 states have ceilings on payday-loan rates. Lending at a rate of more than 17% in Arkansas, for example, is forbidden; any higher, and the borrower can claim back double the illegal interest paid.

The financial crisis of 2007-08 seems to have made governments more willing to intervene in this way. From Japan to El Salvador, lawmakers have either tightened their existing caps or slapped on fresh ones. British financial regulators limited interest rates on payday loans in 2015.

Policymakers usually mean well: by controlling the cost of credit, they may hope to improve access to finance. But rate caps often have precisely the opposite effect. The most expensive loans are pricey because they go to the riskiest borrowers: younger firms without collateral, poorer consumers without credit histories. If lenders cannot charge interest rates that reflect these risks, they may not lend at all.

When microfinance loans in west Africa became subject to interest-rate limits, small loans to the poorest borrowers in the most remote areas were the first to be axed. In Nicaragua an interest ceiling introduced in 2001 reduced lending growth from 30% a year to just 2%, according to a local microfinance body. After Ecuador introduced rate caps in 2007, the average size of bank microloans jumped, indicating that smaller loans had become less viable. A cap on payday-loan interest rates in Oregon, which became binding in 2007, increased the share of people reporting difficulties in getting short-term credit by 17-21 percentage points: many resorted to paying bills late instead. With fewer options to choose from, some borrowers may instead turn to loan sharks. One study suggests that illegal lending was at the time more widespread in Germany and France than in Britain because of their penchant for price caps.

Sometimes conventional lenders keep extending credit but recoup their costs in other ways. A study of car loans in America between 2011 and 2013 found that dealer-lenders jacked up the price of cars, and thus the amount of credit they were extending, in response to interest-rate limits. Borrowers ended up no better off. In Nicaragua and South Africa lenders introduced so many extra fees and commissions in response to interest-rate caps that loans became more expensive overall. An interest-rate ceiling introduced in 2005 in Poland prompted lenders there to add a convenience fee that handily fell outside the definition of administrative fees and charges, also capped at 5%. A review by the European Commission found that rate limits were unlikely to cut the level of over-indebtedness.

If the cap doesn't fit

No one doubts that price-gouging happens. Some people should not be borrowing in the first place. But rate caps target a symptom of a malfunctioning credit market, not the underlying problem. Exorbitant interest rates usually stem from weak competition or from insufficient information about borrowers and lenders. Transparency about fees, more sources of funding and credit scoring all tackle market failures much more directly than price caps. In Kenya's case, a fiscal splurge has pushed up interest rates on government debt so much that banks make healthy returns by lending to the government and have scant incentive to make the effort to lend to the private sector. Ham-fisted price manipulation might make for good headlines. But imposing rate caps is shoddy economics. ■

Expand homeownership

You argued that America has in effect nationalised its housing market ("Comradely capitalism", August 20th). But the government has been supporting home financing and incentives for the past 80 years, whether through the mortgage-interest deduction or programmes that ensure affordable mortgage capital. Washington's inability to press forward with reform has caused uncertainty and restricted credit for homebuyers. People are confident that if they qualify for a mortgage a bank will lend them the money. The Federal Housing Association, Fannie Mae, Freddie Mac and other programmes provided this stability. They took on the credit risk of mortgages so long as Wall Street took on the interest-rate risk. This system must be protected.

The FHA, Fannie Mae and Freddie Mac have worked hard to further their public mission of supplying mortgage capital during depressed markets while protecting their integrity. During the housing recovery they have repaired their balance-sheets and strengthened underwriting standards. Any proposal that increases the cost of mortgages and threatens the availability of mortgage capital is wrong. Fannie Mae and Freddie Mac already charge a fee that reflects the costs of paying losses and of holding capital (even though they are not allowed to increase their capital reserves).

We do need private capital to come back to the mortgage market, especially in California where so many homes exceed the loan limits of Fannie, Freddie and the FHA. But private capital has struggled to make a significant return after the bust. The private securities markets are still unable to agree on how to fix many of the issues that caused the financial crisis.

In America, we unapologetically promote homeownership as it continues to be the best way for low- and middle-class households to build wealth and move up the socio-economic ladder. Any mortgage-finance reform needs to make that its priority so that more people have access to safe and affordable mortgages.

PAT "ZIGGY" ZICARELLI
President
California Association of Realtors
Los Angeles

You left the most important recent development in America's housing market until the end: credit-risk transfer. The risk-transfer mechanisms you dismiss as "a little too like the opaque instruments that blew up in 2007-8" are nothing like the collateralised-debt obligations and credit-default swaps that were issued before the financial crisis. In fact, they represent de facto private capital, the only way to build the appropriate capital buffer in the absence of a congressional resolution on their current status.

Now covering $1 trillion in loans, this market is well on its way to the 20% of total capital that would be required to shed almost all taxpayer risk in most analyses of the market. You did not mention that the reason all this was done under administrative fiat was the inability of the political system to do its part. Given this, the administrative actors are to be commended for pointing the way towards a long-term solution, rather than criticised.

EKNATH BELBASE
Director
MBS Strategy
Andrew Davidson & Co
New York

A bit skint in Scotland

I was pleased to see your recent article about Scottish education ("Not so bonny", August 27th). However, the most important recent story in Scotland is the release of the Government Expenditure and Revenue Scotland statistics for 2015-16. The figures, produced by the Scottish government, show that Scotland's public finances last year gained £9 billion ($12 billion) from pooling and sharing across the United Kingdom, and that Scotland's own deficit is almost £15 billion, or 9.5% of GDP. This information, inter alia but also on its own, effectively scotches any economic case for Scottish independence.

Scottish Nationalist politicians castigated *The Economist* for its famous Skintland cover (April 14th 2012). I was therefore surprised that you passed up the opportunity to demonstrate that you, and most Scots, are right to continue to support Scotland's place in the UK.

ALASTAIR CAMERON
Director
Scotland In Union
Glasgow

Lasso this bad policy

Not only has the ban on horse-processing in America cost taxpayers billions of dollars (Lexington, August 13th), it has also hurt the horses. The processing of livestock is well regulated under the Humane Methods of Slaughter Act, and has been found to be a decent form of euthanasia for horses by the American Veterinary Medical Association. However, because of the ban, horses which would have been processed in America are instead being shipped thousands of miles to facilities in Canada and Mexico. Those not sent to Mexico are starving on rangeland which cannot support the growing population.

If animal-rights activists were truly interested in horse welfare they would lobby to strip language tacked on to spending bills that prohibits the processing of horses and the euthanasia of wild horses. Removing the language would allow the Bureau of Land Management to reduce the wild-horse population to a sustainable level, and provide horseowners with a viable economic means of conveying ownership of their animals rather than releasing them onto the range or shipping them abroad.

ADRIAN SMITH
Member of the US House of Representatives
Gering, Nebraska

Who wants to live for ever?

With mankind becoming ever more narcissistic, verified by selfies and inane posts on Facebook, the pursuit of longevity is the ultimate expression of our conceit ("Cheating death", August 13th). Brilliant scientific minds, backed by investors forecasting tasty returns, will be able to extend our lives steadily to doddery heights. Physically this will be possible, but what about our mental state?

How agile will we be? How set in our ways and resistant to change? We may be alive, but will we be an infuriating brake on progress and innovation? In a world where a diminishing number of working-age people must shoulder an increasing welfare burden, is it really fair that we selfishly continue to think it's only about us?

Perhaps the clever scientific minds and the dollars that back them should focus on providing solutions to younger people whose ability to realise their true potential is curtailed for one medical reason or another. Our world would be much richer. As for the rest of us, we should live our lives to the full, and when our natural time comes bow out gracefully and quickly. We'll be remembered more fondly that way.

JOHN LOEBENSTEIN
Pumpenbil, Australia

"Cheating death"? Postponing it. Easing or prolonging death, maybe. But cheating death? I don't think so.

MONTY LEDFORD
Aberdeen, Idaho ■

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Permanent Secretary

Department for International Trade

There can be few more crucial roles at this historic, exciting and challenging time for the UK than that of Permanent Secretary of the new Department for International Trade (DIT). This vital leader will spearhead promotion of UK business internationally and help to forge new relationships with markets globally following the UK's exit from the European Union. S/he will be responsible for overseeing complex trade negotiations and market access deals with non-EU countries, delivering ambitious targets on exports and inward investment. S/he will work in partnership with the Department for Exiting the EU to support the negotiations for the UK's new relationship with Europe.

Beyond shaping the UK's trade and investment agenda, the Permanent Secretary will have the rare chance to help build and shape a new government department. S/he will implement the overall strategy and policy for DIT, establishing and leading a strong team and promoting a collaborative culture internally and across government. This individual will also play a critical role in contributing to the collective leadership of the Civil Service.

The successful candidate will:

- Be an exceptional leader with experience of delivery in a complex/large organisation in the private, public or third sectors.
- Demonstrate the ability to forge strong relationships with a complex network of key partners nationally and internationally, across the private and public sectors.
- Be commercially minded and politically astute, with international experience.
- Demonstrate the ability to build and develop this new department, establishing and developing the leadership team and culture.
- Be resilient with the ability to operate under high levels of scrutiny.

This is a Senior Civil Service Pay Band Level 4 role, and the salary will be £160,000. There may be some scope for improvement for an exceptional candidate.

Russell Reynolds Associates is advising the Department for International Trade on this appointment. For further information about this role and details of how to apply, please visit Russell Reynolds Associates website at **www.rraresponses.com** or call **+44 (0) 20 7198 1870** for further assistance.

The closing date for applications is noon, 3rd October 2016.

Russell Reynolds ASSOCIATES

Civil Service Commission

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Director of the Division of Human Resources Management
Geneva, Switzerland

Closing date for applications: September 24th 2016

The Director of the Division of Human Resources Management (DHRM) is based in Geneva and administers human resources for the 13,000-strong UNHCR workforce. The position oversees strategic responses to operational and organizational concerns on workforce issues. As UNHCR's work takes place primarily in emergency settings often under trying circumstances, a high degree of flexibility in the workforce is critical to ensure quick and appropriate responses based on operational needs. In this regard, the Director continuously balances the needs of the organization with those of individual staff members.

In 2016, DHRM issued a five-year *People Strategy* to strengthen the way we recruit, care for, support and manage our workforce. The Strategy situates UNHCR's vision along four main goals: preparedness and diversity; performance and competence; flexibility and timeliness; and, care and support. The Director oversees the implementation of a multiyear plan elaborated from the Strategy.

In an effort to modernize human resources practices and tools in use at UNHCR, several ground-breaking reviews and analyses were recently completed on a range of subjects including diversity, inclusion, contractual arrangements, promotions and assignments. The Director will be tasked with coordinating and maintaining oversight of the developments and determining priorities stemming from these reviews.

The Director of DHRM reports to the Deputy High Commissioner and requires a minimum of an advanced university degree (Master's degree or equivalent) in human resources, business administration, social sciences or in another field directly relevant to this position and 20 years professional experience, preferably in an international and/or multi-national environment, with at least 10 years serving as a senior manager, including significant budgetary responsibilities as well as extensive experience leading human resources reform and transformation to meet modern human resources standards.

Applications should be sent to: *tom.vacher@tomvacher.com* by September 24th 2016

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Yes, I'd lie to you

Dishonesty in politics is nothing new; but the manner in which some politicians now lie, and the havoc they may wreak by doing so, are worrying

WHEN Donald Trump, the Republican presidential hopeful, claimed recently that President Barack Obama "is the founder" of Islamic State and Hillary Clinton, the Democratic candidate, the "co-founder", even some of his supporters were perplexed. Surely he did not mean that literally? Perhaps, suggested Hugh Hewitt, a conservative radio host, he meant that the Obama administration's rapid pull-out from Iraq "created the vacuum" that the terrorists then filled?

"No, I meant he's the founder of ISIS," replied Mr Trump. "He was the most valuable player. I give him the most valuable player award. I give her, too, by the way, Hillary Clinton."

Mr Hewitt, who detests Mr Obama and has written a book denouncing Mrs Clinton's "epic ambition", was not convinced. "But he's not sympathetic to them. He hates them. He's trying to kill them," he pushed back.

Again, Mr Trump did not give an inch: "I don't care. He was the founder. The way he got out of Iraq was, that, that was the founding of ISIS, OK?"

For many observers, the exchange was yet more proof that the world has entered an era of "post-truth politics". Mr Trump appears not to care whether his words bear any relation to reality, so long as they fire up voters. PolitiFact, a fact-checking website, has rated more of his statements "pants-on-fire" lies than of any other candidate—for instance his assertion that "inner city crime is reaching record levels", which plays on unfounded fears that crime rates are rising (see chart 1 on next page).

And he is not the only prominent practitioner of post-truth politics. Britons voted to leave the European Union in June on the basis of a campaign of blatant misinformation, including the "fact" that EU membership costs their country £350m ($470m) a week, which could be spent instead on the National Health Service, and that Turkey is likely to join the EU by 2020.

Hang on, though. Don't bruised elites always cry foul when they fail to persuade the masses of their truth? Don't they always say the other side was peddling lies and persuaded ignoramuses to vote against their interest? Perhaps, some argue, British Remainers should accept the vote to leave the EU as an expression of justified grievance and an urge to take back control—not unlike the decision by many Americans to support Mr Trump.

There may have been some fibbing involved but it is hardly as though politics has ever been synonymous with truthfulness. "Those princes who do great things," Machiavelli informed his readers, "have considered keeping their word of little account, and have known how to beguile men's minds by shrewdness and cunning." British ministers and prime ministers have lied to the press and to Parliament, as Anthony Eden did during the Suez affair. Lyndon Johnson misinformed the American people about the Gulf of Tonkin incident, thus getting the country into Vietnam. In 1986 Ronald Reagan insisted that his administration did not trade weapons for hostages with Iran, before having to admit a few months later that: "My heart and my best intentions still tell me that's true, but the facts and evidence tell me it is not."

Fact or fiction

It is thus tempting to dismiss the idea of "post-truth" political discourse—the term was first used by David Roberts, then a blogger on an environmentalist website, Grist—as a modish myth invented by *de-haut-en-bas* liberals and sore losers ignorant of how dirty a business politics has always been. But that would be complacent. There is a strong case that, in America and elsewhere, there is a shift towards a politics in which feelings trump facts more freely and with less resistance than used to be the case. Helped by new technology, a deluge of facts and a public much less given to trust than once it was, some politicians are getting away with a new depth and pervasiveness of falsehood. If this continues, the power of truth as a tool for solving society's problems could be lastingly reduced.

Reagan's words point to an important ▸▸

aspect of what has changed. Political lies used to imply that there was a truth—one that had to be prevented from coming out. Evidence, consistency and scholarship had political power. Today a growing number of politicians and pundits simply no longer care. They are content with what Stephen Colbert, an American comedian, calls "truthiness": ideas which "feel right" or "should be true". They deal in insinuation ("A lot of people are saying…" is one of Mr Trump's favourite phrases) and question the provenance, rather than accuracy, of anything that goes against them ("They would say that, wouldn't they?"). And when the distance between what feels true and what the facts say grows too great, it can always be bridged with a handy conspiracy theory.

This way of thinking is not new. America saw a campaign against the allegedly subversive activities of the "Bavarian Illuminati" in the early 19th century, and Senator Joseph McCarthy's witch-hunt against un-American activities in the 1950s. In 1964 a historian called Richard Hofstadter published "The Paranoid Style in American Politics". When George W. Bush was president, the preposterous belief that the attacks of September 11th 2001 were an "inside job" spread far and wide among left-wingers, and became conventional wisdom in the Arab world.

The lie of the lands

Post-truth politics is advancing in many parts of the world. In Europe the best example is Poland's ultranationalist ruling party, Law and Justice (PiS). Among other strange stories, it peddles lurid tales about Poland's post-communist leaders plotting with the communist regime to rule the country together. In Turkey the protests at Gezi Park in 2013 and a recent attempted coup have given rise to all kinds of conspiracy theories, some touted by government officials: the first was financed by Lufthansa, a German airline (to stop Turkey from building a new airport which would divert flights from Germany), the second was orchestrated by the CIA.

Then there is Russia, arguably the country (apart from North Korea) that has moved furthest past truth, both in its foreign policy and internal politics. The Ukraine crisis offers examples aplenty: state-controlled Russian media faked interviews with "witnesses" of alleged atrocities, such as a child being crucified by Ukrainian forces; Vladimir Putin, Russia's president, did not hesitate to say on television that there were no Russian soldiers in Ukraine, despite abundant proof to the contrary.

Such *dezinformatsiya* may seem like a mere reversion to Soviet form. But at least the Soviets' lies were meant to be coherent, argues Peter Pomerantsev, a journalist whose memoir of Mr Putin's Russia is titled "Nothing Is True and Everything Is Possible". In a study in 2014 for the Institute of Modern Russia, a think-tank, he quotes a political consultant for the president saying that in Soviet times, "if they were lying they took care to prove what they were doing was 'the truth'. Now no one even tries proving 'the truth'. You can just say anything. Create realities."

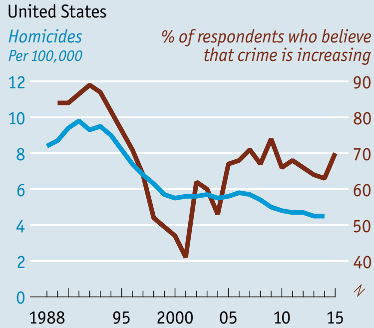
In such creation it helps to keep in mind—as Mr Putin surely does—that humans do not naturally seek truth. In fact, as plenty of research shows, they tend to avoid it. People instinctively accept information to which they are exposed and must work actively to resist believing falsehoods; they tend to think that familiar information is true; and they cherry-pick data to support their existing views. At the root of all these biases seems to be what Daniel Kahneman, a Nobel-prizewinning psychologist and author of a bestselling book, "Thinking, Fast and Slow", calls "cognitive ease": humans have a tendency to steer clear of facts that would force their brains to work harder.

In some cases confronting people with correcting facts even strengthens their beliefs, a phenomenon Brendan Nyhan and Jason Reifler, now of Dartmouth College and the University of Exeter, respectively, call the "backfire effect". In a study in 2010 they randomly presented participants either with newspaper articles which supported widespread misconceptions about certain issues, such as the "fact" that America had found weapons of mass destruction in Iraq, or articles including a correction. Subjects in both groups were then asked how strongly they agreed with the misperception that Saddam Hussein had such weapons immediately before the war, but was able to hide or destroy them before American forces arrived.

As might be expected, liberals who had seen the correction were more likely to disagree than liberals who had not seen the correction. But conservatives who had seen the correction were even more convinced that Iraq had weapons of mass destruction. Further studies are needed, Mr Nyhan and Mr Reifler say, to see whether conservatives are indeed more prone to the backfire effect.

Bodies of evidence 1

United States



Sources: Gallup; FBI

Given such biases, it is somewhat surprising that people can ever agree on facts, particularly in politics. But many societies have developed institutions which allow some level of consensus over what is true: schools, science, the legal system, the media. This truth-producing infrastructure, though, is never close to perfect: it can establish as truth things for which there is little or no evidence; it is constantly prey to abuse by those to whom it grants privileges; and, crucially, it is slow to build but may be quick to break.

Trust your gut

Post-truth politics is made possible by two threats to this public sphere: a loss of trust in institutions that support its infrastructure and deep changes in the way knowledge of the world reaches the public. Take trust first. Across the Western world it is at an all-time low, which helps explain why many prefer so-called "authentic" politicians, who "tell it how it is" (ie, say what people feel), to the wonkish type. Britons think that hairdressers and the "man in the street" are twice as trustworthy as business leaders, journalists and government ministers, according to a recent poll by Ipsos MORI. When Michael Gove, a leading Brexiteer, said before the referendum that "people in this country have had enough of experts" he may have had a point.

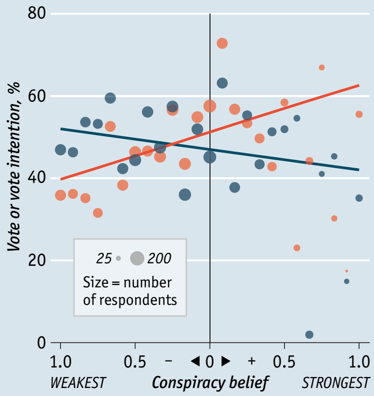
This loss of trust has many roots. In some areas—dietary advice, for example—experts seem to contradict each other more than they used to; governments get things spectacularly wrong, as with their assurances about the wisdom of invading Iraq, trusting in the world financial system and setting up the euro. But it would be a mistake to see the erosion of trust simply as a response to the travails of the world. In some places trust in institutions has been systematically undermined.

Mr Roberts first used the term "post-truth politics" in the context of American climate-change policy. In the 1990s many conservatives became alarmed by the likely economic cost of a serious effort to reduce carbon emissions. Some of the less scrupulous decided to cast doubt on the need for a climate policy by stressing to the point of distortion uncertainties in the underlying science. In a memo Frank Luntz, a Republican pollster, argued: "Should the public come to believe that the scientific issues are settled, their views about global warming will change accordingly. Therefore, you need to continue to make the lack of scientific certainty a primary issue in the debate." Challenging—and denigrating—scientists in order to make the truth seem distant and unknowable worked pretty well. One poll found that 43% of Republicans believe climate change is not happening at all, compared to 10% of Democrats.

Some conservative politicians, talk-

Would you believe it? 2

Respondents' belief* in conspiracy theories v support for: ● Trump 2016 ● Romney 2012



Sources: YouGov; *The Economist*

*Surveyed August 27th-September 3rd 2016

show hosts and websites, have since included the scientific establishment in their list of institutions to bash, alongside the government itself, the courts of activist judges and the mainstream media. The populist wing of the conservative movement thus did much to create the conditions for the trust-only-your-prejudices world of Mr Trump's campaign. Some are now having second thoughts. "We've basically eliminated any of the referees, the gatekeepers…There is nobody: you can't go to anybody and say: 'Look, here are the facts'" said Charlie Sykes, an influential conservative radio-show host, in a recent interview, adding that "When this is all over, we have to go back. There's got to be a reckoning on all this."

Yet gatekeepers would be in much less trouble without the second big factor in post-truth politics: the internet and the services it has spawned. Nearly two-thirds of adults in America now get news on social media and a fifth do so often, according to a recent survey by the Pew Research Centre, a polling outfit; the numbers continue to grow fast.

On Facebook, Reddit, Twitter or WhatsApp, anybody can be a publisher. Content no longer comes in fixed formats and in bundles, such as articles in a newspaper, that help establish provenance and set expectations; it can take any shape—a video, a chart, an animation. A single idea, or "meme", can replicate shorn of all context, like DNA in a test tube. Data about the spread of a meme has become more important than whether it is based on facts.

The mechanisms of these new media are only now beginning to be understood. One crucial process is "homophilous sorting": like-minded people forming clusters. The rise of cable and satellite television channels in the 1980s and 1990s made it possible to serve news tailored to specific types of consumer; the internet makes it much easier. According to Yochai Benkler of Harvard University in his book "The Wealth of Networks", individuals with shared interests are far more likely to find each other or converge around a source of information online than offline. Social media enable members of such groups to strengthen each other's beliefs, by shutting out contradictory information, and to take collective action.

Fringe beliefs reinforced in these ways can establish themselves and persist long after outsiders deem them debunked: see, for example, online communities devoted to the idea that the government is spraying "chemtrails" from high-flying aircraft or that evidence suggesting that vaccines cause autism is being suppressed. As Eric Oliver of the University of Chicago points out in a forthcoming book, "Enchanted America: The Struggle between Reason and Intuition in US Politics", this is the sort of thinking that comes naturally to Mr Trump: he was once devoted to the "birther" fantasy that Mr Obama was not born an American.

Following Mr Oliver's ideas about the increasing role of "magical thinking" on the American populist right, *The Economist* asked YouGov to look at different elements of magical thinking, including belief in conspiracies and a fear of terrible things, like a Zika outbreak or a terrorist attack, happening soon. Even after controlling for party identification, religion and age, there was a marked correlation with support for Mr Trump (see chart 2): 55% of voters who scored positively on our conspiracism index favoured him, compared with 45% of their less superstitious peers. These measures were not statistically significant predictors of support for Mitt Romney, the far more conventional Republican presidential candidate in 2012.

From fringe to forefront

Self-reinforcing online communities are not just a fringe phenomenon. Even opponents of TTIP, a transatlantic free-trade agreement, admit that the debate over it in Austria and Germany has verged on the hysterical, giving rise to outlandish scare stories—for instance that Europe would be flooded with American chickens treated with chlorine. "Battling TTIP myths sometimes feels like taking on Russian propaganda," says an EU trade official.

The tendency of netizens to form self-contained groups is strengthened by what Eli Pariser, an internet activist, identified five years ago as the "filter bubble". Back in 2011 he worried that Google's search algorithms, which offer users personalised results according to what the system knows of their preferences and surfing behaviour, would keep people from coming across countervailing views. Facebook subsequently became a much better—or worse—example. Although Mark Zuckerberg, the firm's founder, insists that his social network does not trap its users in their own world, its algorithms are designed to populate their news feeds with content similar to material they previously "liked". So, for example, during the referendum campaign Leavers mostly saw pro-Brexit items; Remainers were served mainly pro-EU fare.

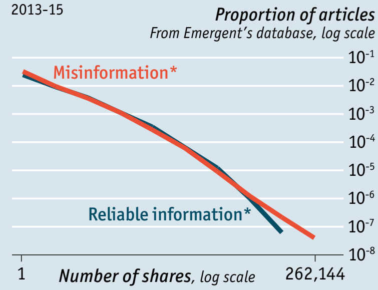
But though Facebook and other social media can filter news according to whether it conforms with users' expectations, they are a poor filter of what is true. Filippo Menczer and his team at Indiana University used data from Emergent, a now defunct website, to see whether there are differences in popularity between articles containing "misinformation" and those containing "reliable information". They found that the distribution in which both types of articles were shared on Facebook are very similar (see chart 3). "In other words, there is no advantage in being correct," says Mr Menczer.

If Facebook does little to sort the wheat from the chaff, neither does the market. Online publications such as National Report, Huzlers and the World News Daily Report have found a profitable niche pumping out hoaxes, often based on long-circulating rumours or prejudices, in the hope that they will go viral and earn clicks. Newly discovered eyewitness accounts of Jesus's miracles, a well-known ice-tea brand testing positive for urine, a "transgender woman" caught taking pictures of an underage girl in the bathroom of a department store—anything goes in this parallel news world. Many share such content without even thinking twice, let alone checking to determine if it is true.

Weakened by shrinking audiences and advertising revenues, and trying to keep up online, mainstream media have become part of the problem. "Too often news organisations play a major role in propagating hoaxes, false claims, questionable rumours and dubious viral content, thereby polluting the digital information stream," writes Craig Silverman, now the editor of BuzzFeed Canada, in a study for the Tow Centre for Digital Journalism at the Columbia Journalism School. It does not help that the tools to keep track of and ▸▸

False friends 3

Worldwide news articles shared on Facebook 2013-15



Sources: Emergent; Indiana University

*Classified by Emergent

even predict the links most clicked on are getting ever better. In fact, this helps explain why Mr Trump has been getting so much coverage, says Matt Hindman of George Washington University.

Equally important, ecosystems of political online publications have emerged on Facebook—both on the left and the right. Pages such as Occupy Democrats and Make America Great can have millions of fans. They pander mostly to the converted, but in these echo chambers narratives can form before they make it into the wider political world. They have helped build support for both Bernie Sanders and Mr Trump, but it is the latter's campaign, friendly media outlets and political surrogates that are masters at exploiting social media and its mechanisms.

A case in point is the recent speculation about the health of Mrs Clinton. It started with videos purporting to show Mrs Clinton suffering from seizures, which garnered millions of views online. Breitbart News, an "alt-right" web publisher that gleefully supports Mr Trump—Stephen Bannon, the site's boss, took over as the Trump campaign's "chief executive officer" last month—picked up the story. "I'm not saying that, you know, she had a stroke or anything like that, but this is not the woman we're used to seeing," Mr Bannon said. Mr Trump mentioned Mrs Clinton's health in a campaign speech. Rudy Giuliani, a former mayor of New York, urged people to look for videos on the internet that support the speculation. The Clinton campaign slammed what it calls "deranged conspiracy theories", but doubts are spreading and the backfire effect is in full swing.

Such tactics would make Dmitry Kiselyov proud. "The age of neutral journalism has passed," the Kremlin's propagandist-in-chief recently said in an interview. "It is impossible because what you select from the huge sea of information is already subjective." The Russian government and its media, such as Rossiya Segodnya, an international news agency run by Mr Kiselyov, produce a steady stream of falsehoods, much like fake-news sites in the West. The Kremlin deploys armies of "trolls" to fight on its behalf in Western comment sections and Twitter feeds (see page 48). Its minions have set up thousands of social-media "bots" and other spamming weapons to drown out other content.

"Information glut is the new censorship," says Zeynep Tufekci of the University of North Carolina, adding that other governments are now employing similar tactics. China's authorities, for instance, do not try to censor everything they do not like on social media, but often flood the networks with distracting information. Similarly, in post-coup Turkey the number of dubious posts and tweets has increased sharply. "Even I can no longer really tell what is happening in parts of Turkey," says Ms Tufekci, who was born in the country.

This plurality of voices is not in itself a bad thing. Vibrant social media are often a power for good, allowing information to spread that would otherwise be bottled up. In Brazil and Malaysia social media have been the conduit for truth about a corruption scandal involving Petrobras, the state oil company, and the looting of 1MDB, a state-owned investment fund. And there are ways to tell good information from bad. Fact-checking sites are multiplying, and not just in America: there are now nearly 100, according to the Reporters' Lab at Duke University. Social media have started to police their platforms more heavily: Facebook recently changed the algorithm that decides what users see in their newsfeeds to filter out more clickbait. Technology will improve: Mr Menczer and his team at Indiana University are building tools that can, among other things, detect whether a bot is behind a Twitter account.

The truth is out there

The effectiveness of such tools, the use of such filters and the impact of such sites depends on people making the effort to seek them out and use them. And the nature of the problem—that the post-truth strategy works because it allows people to forgo critical thinking in favour of having their feelings reinforced by soundbite truthiness—suggests that such effort may not be forthcoming. The alternative is to take the power out of users' hands and recreate the gatekeepers of old. "We need to increase the reputational consequences and change the incentives for making false statements," says Mr Nyhan of Dartmouth College. "Right now, it pays to be outrageous, but not to be truthful."

But trying to do this would be a tall order for the cash-strapped remnants of old media. It is not always possible or appropriate for reporters to opine as to what is true or not, as opposed to reporting what is said by others. The courage to name and shame chronic liars—and stop giving them a stage—is hard to come by in a competitive marketplace the economic basis of which is crumbling. Gatekeeping power will always bring with it a temptation for abuse—and it will take a long time for people to come to believe that temptation can be resisted even if it is.

But if old media will be hard put to get a new grip on the gates, the new ones that have emerged so far do not inspire much confidence as an alternative. Facebook (which now has more than 1.7 billion monthly users worldwide) and other social networks do not see themselves as media companies, which implies a degree of journalistic responsibility, but as tech firms powered by algorithms. And putting artificial intelligence in charge may be a recipe for disaster: when Facebook recently moved to automate its "trending" news section, it promoted a fake news story which claimed that Fox News had fired an anchor, Megyn Kelly, for being a "traitor".

And then there is Mr Trump, whose Twitter following of over 11m makes him a gatekeeper of a sort in his own right. His moment of truth may well come on election day; the odds are that he will lose. If he does so, however, he will probably claim that the election was rigged—thus undermining democracy yet further. And although his campaign denies it, reports have multiplied recently that he is thinking about creating a "mini-media conglomerate", a cross of Fox and Breitbart News, to make money from the political base he has created. Whatever Mr Trump comes up with next, with or without him in the White House, post-truth politics will be with us for some time to come. ■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Afghan refugees in Pakistan

Homecoming spleen

PESHAWAR

One of the world's largest refugee populations is being driven out of Pakistan

FOR weeks the voluntary repatriation centre run by the United Nations on the outskirts of Peshawar has been besieged by trucks laden with Afghan refugees and their worldly possessions. Inside the compound hundreds of men, children and burqa-clad women wait bad-temperedly in the sun to complete the achingly slow formalities of leaving Pakistan, a country that has hosted legions of displaced Afghans since the Soviet Union invaded Afghanistan in 1979, but now wants to be rid of them.

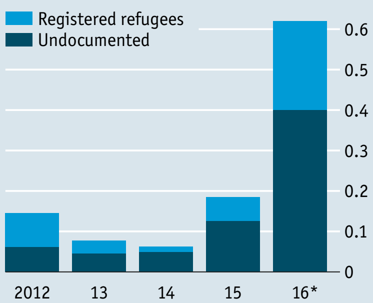
The process, which involves scanning the soon-to-be-ex-refugees' irises and issuing them with temporary travel documents, concludes with the cutting up of their "Proof of Registration" cards. Pakistan says these documents, once among refugees' most important possessions, will cease to be valid on December 31st, leaving any of the 1.5m-odd documented refugees who remain in the country then in legal limbo. As for the 1m-odd undocumented Afghans in Pakistan, the government says that from November 15th on, they will need visas to remain—something hardly any of them currently have.

Although such deadlines have been extended or ignored in the past, there are signs that the government means business this time. It is enforcing long-ignored rules that bar refugees from living outside designated camps, running businesses and owning property. It has forced banks to close refugees' accounts and mobile companies to disable their SIM cards. Landlords have been encouraged to serve notice on Afghan tenants. The police, charged with raiding shops and homes, have taken full advantage of the opportunities for extortion afforded by the crackdown.

"In the past we could go everywhere and no one would ask us about showing a visa or passport," says Noorullah Malik, an Afghan who lived happily in the city of Nowshera for more than 30 years. This week he was waiting forlornly in the line at the repatriation centre, where a policeman had tried to relieve him of one of his few movable assets, a cow.

Carry on up the Khyber

Number of Afghans returning from Pakistan, m



Sources: IOM; UNHCR

*Forecast

Many refugees seem to have decided to go home before the winter sets in. The number of registration-card holders leaving Pakistan has surged in the past three months from 1,250 in June to 67,057 in August. Officials are expecting a further surge following the end of the Eid festival in mid-September. The United Nations High Commissioner for Refugees (UNHCR) and the International Organisation for Migration (IOM) predict 620,000 registered and undocumented refugees will return to Afghanistan by the end of the year. That would be a huge increase on recent years (see chart).

The UNHCR's decision in June to double to $400 the repatriation grant paid to each returnee has helped to swell numbers. But it has also added to the strain on its budget. It and the IOM are appealing for a combined $73m just to get them through the year.

Pakistan used to counter charges that it was harming Afghans through its support for militant groups like the Taliban by touting its decades of hospitality towards Afghan refugees. But many ordinary Pakistanis see the refugees as a source of crime, unemployment and militancy. A senior police officer in Peshawar complains that the Afghans have turned an erstwhile "city of flowers" into a place of teeming slums, which harbour the most intractable redoubts of the polio virus, a disease that has nearly been eradicated elsewhere.

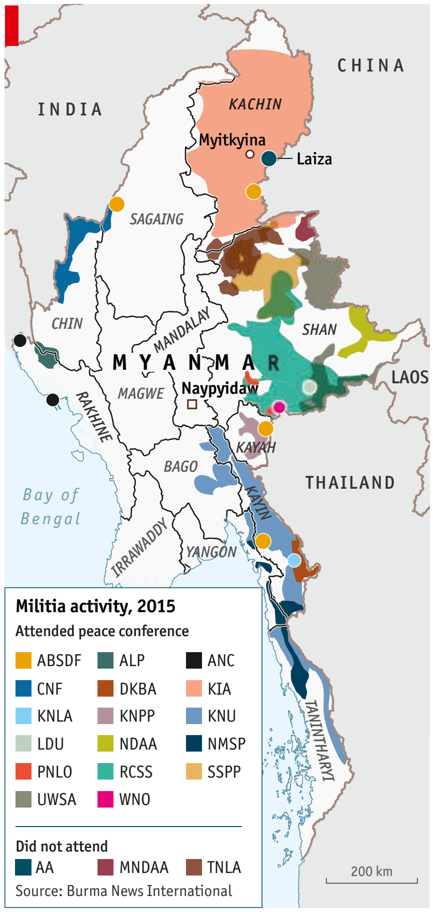
The massacre of more than 130 schoolboys in Peshawar in 2014 prompted the government to unveil a "national action plan" to repatriate all refugees, even though no Afghans have been proved to have participated in the attack. It does not help that relations between the two countries have deteriorated, as they have swapped accusations about which is most responsible for the Taliban's resurgence in Afghanistan.

The growing instability in Afghanistan, however, makes it a poor time for the refugees to return. Even with the UNHCR's extra cash the new arrivals will not find the adjustment easy. The IOM says the flood of returnees has helped to drive up rents and food prices in Jalalabad, the first big Afghan city up the road from Peshawar. In 2015 the governor of Nangarhar, the province of which Jalalabad is the capital, said he did not want returnees from different provinces to settle on his patch.

The Afghan government is still encouraging refugees to return with a public-awareness campaign featuring the slogan "Grass is green in my land". It promises to hand out land to the new arrivals. The Afghan ambassador to Pakistan recently told a gathering of refugees in Islamabad, "You belong in Afghanistan!" But the government, which provides little in the way of services at the best of times, is already struggling to deal with 221,000 people who have had to quit their homes within Afghanistan to escape fighting with the Taliban. The bitter winter looms. Aid agencies fear a humanitarian crisis.

Any problems the refugees may face on arrival in Afghanistan simply compound the hardship of having to leave their adoptive home in Pakistan. Many of them were born in exile to refugee parents, and have never set foot in the country to which they are "returning". In Peshawar long-established Afghan businesses, from carpet shops to juice bars, are shutting down. Their owners are often forced to sell property, electricity generators and whatever other assets they have at giveaway prices.

Fazle Amin, a carpet-dealer, is trying frantically to recover money from customers who bought on credit. He fears he will lose almost $2m when he leaves the country. "I don't know what I will do in Afghanistan," he says. "I have never been there and I will be a refugee in my own country." ■



Ending Myanmar's insurgencies

A long road

MYITKYINA

Myanmar's new government sets about making peace with its many ethnic minorities

IN NAYPYIDAW, Myanmar's capital, September 3rd marked the end of four days of peace talks between the government and 17 of the insurgent groups that have bedevilled the country since independence in 1948. Delegates listened to a series of optimistic closing speeches. But on the same day in Myitkyina, the capital of Kachin State, people heard a different sound: fighter jets roaring overhead. "Maybe they're on their way to bomb Laiza," said a local, referring to the town where the Kachin Independence Army (KIA), one of the rebel groups, is headquartered. It would not be the first time. Just days before the peace talks began, Myanmar's army attacked KIA positions with helicopter gunships and heavy artillery. As delegates poured into Naypyidaw from around the country, clashes continued in the states named for the Shan and Kachin minorities, showing that, for all the excitement surrounding the talks, the road ahead is long and obstacle-strewn.

At the talks Aung San Suu Kyi, the country's leader, declared that with perseverance and courage, "we will surely be able to build the democratic federal union of our dreams." Min Aung Hlaing, the army chief, promised to work towards peace. Even leaders from some of Myanmar's many ethnic minorities, who had grumbled their way to the conference, acknowledged that, for the first time, they had talked to the army and it had listened. Since their speeches were shown on television, so did Myanmar's Burman majority.

On the streets of Myitkyina, however, the event seemed less remarkable. "It's all a political illusion," said one young man at a Kachin school, who wears a T-shirt with the green and red Kachin flag. "Aung San Suu Kyi wants to show the world that she's doing great things, but there's nothing there." Another student agreed: "She only cares for Bamar [Burman] people. In Yangon there's lots of development, but look around Myitkyina: nothing has changed." That is not entirely true. Just a few years ago, when Myanmar was under military rule, displaying a Kachin flag, much less publicly deriding the country's president, would have meant arrest, or worse.

Still, Myanmar's myriad ethnic minorities, which comprise around 40% of the ▸▸

Talk is cheap

population and live mainly in resource-rich border areas, come by their cynicism honestly. In 1947 Aung San, who led the fight for independence from Britain, signed the Panglong Agreement with representatives from the country's Shan, Chin and Kachin people. It stated: "Full autonomy in internal administration…is accepted in principle." But Aung San was assassinated before he could take power, and ethnic conflict has plagued the country since, killing and displacing hundreds of thousands.

Myanmar's border regions remain drenched in an alphabet soup of guerrilla groups (see map on previous page). The army, which ruled Myanmar for more than 50 years before permitting partially civilian government earlier this year, struck deals with some of them, allowing them to administer small enclaves. But it was not prepared to accept federalism on a grander scale or to pay much attention to the grievances of ethnic minorities more broadly.

The National League for Democracy, headed by Miss Suu Kyi, who is Aung San's daughter, won a landslide election victory last year, and formed a government earlier this year. She has said that achieving peace is her highest priority. She grandly titled this week's talks "the 21st Century Panglong Conference". But she has also taken pains to dampen expectations, reminding everyone that the talks were just the first step on a long road. Miss Suu Kyi's huge mandate and personal stature give her greater credibility as a negotiator than the juntas that preceded her. All but three of the country's 20 insurgent groups attended the conference, which is an achievement in itself. (Representatives of the biggest ethnic militia, the United Wa State Army (UWSA), showed up but then stormed out, complaining about lapses in protocol.)

The talks featured no negotiations or official discussions, just around 80 speeches in which the various parties laid out their positions. The insurgents said that their fight for self-determination is not a fight for secession; they want to run their own affairs within a federal union. The army insisted that the constitution, which it wrote and foisted upon the country in a sham referendum eight years ago, already involves a degree of federalism. That is a wild exaggeration. The constitution gives Myanmar's 14 states, including seven dominated by a particular ethnic group, their own legislatures. It also allows for autonomous areas within states for smaller ethnic groups. But in all these localities most power remains with a chief executive appointed by the army. Nonetheless, to have the army accept the idea of federalism and the ethnic armies renounce separatism is progress, by Burmese standards. Another meeting is scheduled in around six months; in the meantime, the government, army and ethnic militias will negotiate a framework for more substantive talks.

That will be hard. Creating a federal system will require the army and central government to devolve far more authority than they currently do—and, more importantly, to let go of the idea that the Burmans are the country's natural rulers. It is not clear that Miss Suu Kyi is willing to do that; and even if she were, the army almost certainly would not be. The constitution shields it from civilian control and oversight. It has grown rich snatching land and resources in minority areas. Then there are groups such as the UWSA, which struck deals with the army and so have run small border areas entirely as they please for decades. Are they willing to enforce Burmese law and abandon illicit activities such as drug-smuggling?

If these questions are, miraculously, resolved, another may arise: whether Myanmar's minorities can get on with one another. The country's many and muddled ethnicities are not perfectly divided by its seven ethnically defined states and six official autonomous areas. Groups such as the Wa, Palaung and Pa-O worry that the states in which their autonomous areas are located will simply supplant the central government as the source of bias and repression. They would prefer states of their own; other groups do not even have autonomous regions. A long road indeed. ■

Japanese politics

Get the party started

TOKYO

The main opposition party hopes a new leader will revive its fortunes

IN THE dark-suited male world of Japanese politics, the front-runner in the race to lead the main opposition party is a breath of fresh air. If the young and charismatic former TV host who goes by the single name of Renho emerges from the election on September 15th as the new chief of the Democratic Party (DP), many members believe it will improve the party's fortunes. "We need a female leader for a new image," says Katsuya Okada, the outgoing leader, who supports Renho (pictured).

The party fared badly at elections in July for half of the seats in the upper house. It lost 11, leaving it with just 49 of the 242 seats in the chamber. This handed the ruling coalition the two-thirds majority in both houses needed to change Japan's constitution, a pet project of Shinzo Abe, the prime minister.

Yet a new face will not be enough to revive the DP. For one thing, opposition parties always struggle in Japan. Mr Abe's Liberal Democratic Party (LDP) has only been out of power for a total of four years since 1955. Many Japanese and much of the civil service (not to mention the party itself) see it as synonymous with the state.

A new face, but not much of a plan

Voters, meanwhile, have yet to forgive the DP for its disastrous stint in government in 2009-12. It raised taxes, feuded with bureaucrats and floundered in the wake of the Fukushima nuclear disaster. "People let the LDP off the hook for their mistakes because they know they are rascals; but they will never forgive the DP for letting them down," says Koichi Nakano of Sophia University in Tokyo.

Thanks to Mr Okada's steady hand, the party is in a better state than when it lost power in 2012. It merged with the small Japan Innovation Party in March, and struck a deal with the Japanese Communist Party before the elections in July to refrain from fielding candidates in the same constituencies, to avoid splitting the opposition vote.

Yet the pact is controversial within the DP, which has no clear ideology. Its members range from right-wing nationalists to diehard leftists. As a result, it lacks policy heft. "We have made the mistake of always opposing the government's policies, but not proposing our own alternatives," says Akihisa Nagashima, a DP lawmaker. "This leadership election is our chance to debate policies and let people know what we stand for—perhaps our last."

Mr Abe has tried to co-opt perennial opposition causes, such as lifting the wages of ordinary workers and helping women. Yet he has left ample room for the DP to differentiate itself. Many voters oppose the LDP's policy of restarting Japan's nuclear power stations, which were shut down after Fukushima, and Mr Abe's goal of scrapping the constitution's restrictions on Japan's armed forces.

Alas, policy is where Renho, a talented communicator, is weaker than her two competitors for leader. (She is also likely to come under attack from traditionalists for being half-Taiwanese). Seiji Maehara, a former leader, has weightier positions on security and foreign policy, but does not offer the change the DP craves. ("If he wins, I may as well have stayed," says Mr Okada.) Yuichiro Tamaki has ideas on helping families, but is unknown outside the party.

The absence of a strong opposition is unhealthy for any democracy, but Mr Abe's growing authority makes it especially worrying. He has largely stamped out LDP factionalism, which used to act as a check on the leader, and made reforms that give the cabinet more control over the bureaucracy. It does not help that the media is prone to self-censorship. Even some in the LDP would welcome more robust competition. "I don't necessarily want a powerful opposition, but a more credible one would improve debates in parliament and sharpen our policies," says Kuniko Inoguchi, an LDP member of the upper house. ■

The wit and wisdom of Rodrigo Duterte

Shoot from the lip

Fuck diplomacy!

THIS week Rodrigo Duterte, the tough-guy president of the Philippines, was asked how he would react if Barack Obama criticised the crackdown on drugs he has instigated, in which the police have killed 1,000 people and unknown assailants another 1,400. Mr Duterte said he would call Mr Obama a "son of a whore" and then expressed regret, through a spokesman, that Mr Obama somehow took the phrase as an insult. (Mr Obama called Mr Duterte "a colourful guy" and cancelled their planned meeting.) To be fair, Mr Duterte was speaking about Mr Obama in exactly the same way he does about everything else. Here are a few of his memorable pronouncements:

On being stuck in a traffic jam during a papal visit to Manila:
"Pope, son of a whore, go home. Don't visit any more."

On Singapore's execution of a Filipina maid:
"Fuck you…You are a garrison pretending to be a country."

In response to a question about human-rights abuses:
"Fuck you, UN, you can't even solve the Middle East carnage…shut up all of you."

On the killing of a Filipino journalist:
"Just because you're a journalist, you are not exempted from assassination if you're a son of a bitch."

Australia and China

You can't buy trust

SYDNEY

A politician's blunder exposes inconsistencies in Australia's attitudes

SELDOM have Australia's complex relations with China been more starkly exposed than in the agonies of Sam Dastyari, a prominent opposition MP. Three months ago Mr Dastyari gave a press conference with Huang Xiangmo, the head of Yuhu Group, a subsidiary of a property company linked to China's government. Contradicting both the government's line and the policy of his own party (Labor), Mr Dastyari called on Australia to "respect" China's ill-founded territorial claims in the South China Sea, according to reports in the Chinese press.

Mr Dastyari, it recently emerged, has accepted donations from Yuhu and from the Top Education Institute, a local firm run by a Chinese-Australian with close ties to the governments of both countries. Mr Dastyari used the money to pay for travel and legal advice. Yuhu also gave Mr Dastyari two bottles of Penfolds Grange, Australia's most expensive wine, worth around A$800 ($600) a bottle. From the G20 summit in China, Malcolm Turnbull, Australia's prime minister, described Mr Dastyari's behaviour as "cash for comment".

On September 7th Mr Dastyari resigned from a post within the Labor party, but not as an MP. Although he admits that accepting the money was "a big mistake", he denies any link between the donations and his remarks on the South China Sea. The donations, he points out, had been declared as required and were perfectly legal. Australia's politicians and political parties, it transpires, took A$5.5m in donations from Chinese-linked firms in the two years through June 2015, including A$500,000 from Yuhu. Many are now calling for donations from foreigners to be banned.

China is Australia's biggest trading partner, and one of its biggest sources of immigrants. Chinese demand for Australian resources, as well as ever-increasing numbers of Chinese tourists and students, have helped to underpin Australia's 25 years of unbroken economic growth. But many Australians worry that the pursuit of Chinese business is undermining their country's independence.

Mr Turnbull seems to agree. In April his government vetoed a bid by Dakang, a Chinese company, for S. Kidman and Co, a vast outback empire of cattle ranches that owns 2.5% of Australia's agricultural land. Last month it turned down a joint bid by State Grid, a Chinese government-owned company, and Cheung Kong, of Hong Kong, for a 50.4% stake in Ausgrid, an electricity-distribution network in New South Wales, Australia's most populous state.

Scott Morrison, the treasurer (the most senior finance minister), said both bids were "contrary to the national interest", without explaining how. Yet British firms own 7% of Australia's agricultural land, without apparently damaging the national interest. And State Grid already owns stakes in several electricity distributors in other parts of Australia. The rules have not changed since those investments were made but, judging by the uproar about Mr Dastyari, the mood has. ■

If you squint, you can just make out the national interest

Also in this section

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Politics in Hong Kong

The city that scares China

BEIJING AND HONG KONG

A new front opens in China's struggle against separatism

CHINA'S leaders wince at the merest hint of support for the separation of any part of their country from the "motherland". Gun-toting police officers and armies of secret ones ensure that few dare openly to express support for the notion in Tibet and Xinjiang, traditionally restive regions in the west of the country. China's rapid military modernisation in recent years has been aimed in part at deterring Taiwan, which has never been ruled by the Communist Party, from making its de facto independence a formal one.

Imagine, then, their horror at the outcome of elections held in Hong Kong on September 4th. Six of the 70 people who won seats in the territory's Legislative Council, known as Legco, were people who want Hong Kong to be more independent from China. Though their numbers are small, the emergence of such "localists" could change the way the party views the former British colony. It is no longer merely troubling for its endless calls for democracy. Now it looms as a new front in China's struggle against separatism.

Thanks to a system that China (gladly) inherited from the British, the outcome of elections to Legco is skewed in favour of pro-establishment politicians. That is ensured by the reservation of 30 seats for "functional" constituencies, namely professions, industries and other groups whose members tend to support the government (another five seats also technically belong to such constituencies, but they allow almost every adult to vote, unlike the others, which have small electorates). It was no surprise, then, that the government's backers were able to take 40 seats, a majority that will ensure most of its bills will be passed. In the previous Legco elections in 2012 they took 43.

As the Communist Party in Beijing sees it, it is the composition of the opposing camp, not its slightly bigger size, that is a cause for much anxiety. Gone from Legco are several veterans who have been vocal critics of the party (which operates only covertly in Hong Kong). But localists have now gained seats for the first time. Not only do such people flirt with the idea of independence, but they are also more ready than old-guard democrats to engage in civil disobedience. Several were leaders of the "Umbrella movement" of 2014, which involved weeks of demonstrations and sit-ins on busy roads by student-led protesters demanding more democracy.

The umbrellas' shadow

In the race for 35 seats in "geographical" constituencies (ie, those filled by proper elections), pro-democracy politicians took nearly 55% of the vote in a record turnout. But a big share of this—nearly 20% of the vote—was for localists belonging to parties formed in the wake of the failed Umbrella campaign. Such groups seem to like portmanteau or hybrid names. One of the more radical of them, Youngspiration, now has two legislators. Nathan Law of a party called Demosisto, who was a student leader during the Umbrella movement, has become the youngest ever to win a Legco seat. He calls himself a "23-year-old kid". In August Mr Law (pictured in front of a group of supporters after winning his seat with 50,818 votes) was sentenced to 120 hours of community service for inciting people to enter a fenced-off area at the start of the Umbrella protests.

Hong Kong's government, doubtless with prodding from Beijing, tried to keep supporters of independence from running. It introduced a rule requiring candidates to sign a declaration that they agree Hong Kong is an "inalienable part" of China, threatening criminal prosecution for doing so falsely. Six of the more outspoken hopefuls were thus excluded (they want to challenge this in court). But some of those now elected have expressed support for independence. All have called for "self-determination", meaning the right of Hong Kong people to decide for themselves what sort of relationship they have with China. Youngspiration wants a referendum on this within five years. Its members believe it is necessary to decide as soon as possible what will happen after 2047; Hong Kong's constitution gives no guarantee that China's "one country, two systems" deal will continue beyond that date.

China's refusal to make concessions to the Umbrella protesters has fuelled the growth of such groups, despite efforts by the government in Hong Kong to undermine support for them (recently, for example, by banning teachers from expressing support for independence in schools). It refused to budge on their demands that the chief executive, as Hong Kong's leader is known, be freely elected. China insists that candidates for the post be screened by a committee packed with loyal Hong Kongers, who can be counted on to exclude Communist Party-baiting democrats.

Support for more radical political views has also been fuelled by China's detention a few months ago of five Hong Kong booksellers for selling gossipy works on China's leaders. One of them disappeared from Hong Kong, apparently snatched by main- ▶▶

land agents. Some Hong Kongers also resent an influx of people from the mainland, blaming them for pushing up house prices, taking good jobs and stripping shelves bare on shopping trips. Localists have been at the forefront of protests against the "locusts", as some call the hordes of mainland day-trippers.

China's initial reaction to the results in Hong Kong has been guarded (beyond trying, as usual, to scrub the internet clean of any comment on the territory's democratic endeavours). Its media have barely mentioned them. But the leadership's worries are clear. A government statement said that advocating independence for Hong Kong was "a threat to China's sovereignty and security" and would damage the prosperity and stability of Hong Kong. It expressed support for any legal action taken by Hong Kong's government to stop it.

One option that China may consider is pushing Hong Kong to revive its long-shelved plans to introduce a new law against subversion. That, however, would risk a public backlash, such as occurred in 2003 when hundreds of thousands of people took to the streets in protest against the government's previous attempt to do so. It may also think about backing Leung Chun-ying, the current chief executive, for another term when elections are held next March for the post (without public input). Mr Leung is implacably anti-localist, but is also hugely unpopular. Keeping him would also risk triggering more unrest on the streets. The least likely option is that China will grant Hong Kong the democracy many of its people want. Among its many fears is that others in China, not least in its restless west, may ask why they are not allowed it, too. ■

Giant pandas

Survival of the cutest

BEIJING

Down in the bamboo forest, something stirred

GOOD news about conservation is always welcome, and never more so than when it concerns that most charismatic of charismatic mega-fauna, the giant panda. On September 5th the International Union for the Conservation of Nature (IUCN), an environmental group that links governments and NGOs, downgraded the international symbol of cuteness from "endangered" (meaning with a high risk of extinction in the wild) to "vulnerable" (ie, to becoming endangered). "Everyone should celebrate," said Lo Sze Ping, the boss of WWF-China, a group whose logo is the cuddly-looking creature.

China has made huge efforts to promote panda-breeding over the past 30 years. But those efforts have nothing to do with the animal's reclassification. They take place in captivity. The conservationists' decision was based on the health of panda populations in the wild. The numbers there, according to government surveys, have increased from 1,114 in 1988 to 1,864 in the most recent panda census in 2013. This is five times as many as the number of captive pandas.

Their increase in the wild reflects improvements in the pandas' habitat, the dense bamboo forests of China's south-west (see map). After a period of chopping down everything in sight, the country now has 67 protected panda reserves, covering about half the animals' range. Two-thirds of wild pandas live in them. The opportunity cost of such reservations is doubtless made lighter by the pandas' earning power (foreign zoos pay $1m a year to rent a pair). But the government deserves credit for decades of conservation efforts.

The result is that China now has two panda populations, both increasing: the wild one, merely threatened, and the more frequently-photographed captive one. Though fewer in number, the captive pandas are much more fertile. The wild population rose by 268 between 2003 and 2013, or 17%. The captive population more than doubled from 164 to 375. Pandas have a reputation for being hopeless at reproduction (females come into heat only a couple of days a year). But the old difficulty of getting them to breed in captivity owed at least as much to human ignorance. As knowledge of panda biology and behaviour has soared, so has the birth rate.

Unfortunately, this is making no difference to the wild population. The point of the captive breeding programme is to repopulate the wild. Pandas born in captivity undergo a two-year training process from teachers dressed in urine-soaked panda costumes, who teach them how to gather food and to be wary of people. But after years of effort only five captive-born pandas have been released. Two of those died. Two more are due to be introduced into the wild this winter.

After all this, China's government might have been expected to crow about the IUCN's decision. It refrained. The State Forestry Administration (which supervises the pandas' habitat) even came near to criticising it. The bureau pointed out that the wild panda population is fragmented into 33 subgroups, 18 of which have just ten or fewer animals, making them (the bureau says) "highly endangered". Moreover, these groups are isolated from one another. This limits their gene pool and makes them disease-prone. Furthermore, the bureau said, quoting the IUCN's research, climate change could destroy a third of panda habitat in the next 80 years.

Around the world a sad parade of animals is travelling towards extinction (sometimes because of demand for their body parts from users of traditional Chinese medicine). The IUCN recently put another iconic species, the eastern lowland gorilla, on its endangered list. So it is heart-warming to see the panda going in the other direction. But the international symbol of conservation needs to lumber much farther from the edge of annihilation. ■

Source: WWF


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Banyan | Abide with Mao

China still struggles to stuff the Great Helmsman underground

A MERE 18 years after the death of Mao Zedong, it was possible for a notable Sinologist to give his book on Chinese reforms the title of "Burying Mao". And who was to quibble? The point of all the market-led economic change that Deng Xiaoping had promoted seemed to be to put as much distance as possible between his China and the era of Mao's rule, so full of violence, trauma and human suffering. And yet. With the 40th anniversary of Mao's death this month, a Sinologist now would think twice before choosing a similar title. "Mao Unburied" is more like it.

For China still struggles to stuff the monster underground. Mao himself said he wanted to be cremated, and liberal intellectuals occasionally petition for his incineration and the return of his ashes to his hometown of Shaoshan. But his corpse still lies at the heart of the Chinese polity, in a glass sarcophagus on Tiananmen Square, attended by streams of visitors. Though most images of Mao have been removed from public places, his picture still hangs on the Gate of Heavenly Peace. It is 14 months in jail for you if you throw a bottle of ink at it. Mao would have been appalled at China's present materialism. Yet his portrait is also on every banknote. It is as if he is having the last laugh.

Taxi-drivers hang icons of Mao on their rear-view mirrors. When recently asked why, one replied that it was because Mao was a "kick-arse leader" who had had the guts to go to war with the Americans (during the Korean conflict of 1950-53). For younger Chinese, Mao has retired to the position of avuncular founder of the country. And in Shaoshan, Banyan has been to a restaurant that serves Mao's favourite dishes to hordes of tourists. It even has a shrine to the Great Helmsman. Plastic flowers are around his neck, incense and oranges at his feet—along with Mao's multiplying banknotes. The revolutionary atheist has become another god in the Chinese folk pantheon.

To be clear about his rule: he emerged as the Chinese Communist Party's leader from ruthless party purges in the early 1940s. From China's "liberation", ie, communist victory against the Kuomintang Nationalists in 1949, violence was, as Frank Dikötter, a historian at the University of Hong Kong, puts it, not a by-product but the essence of Mao's rule: a reign of broken promises, systematic violence and calculated terror. The genius of Mao's violence was to implicate ever more people in it. Between 1950 and 1952 perhaps 2m "landlords" and "rich peasants"—wholly artificial definitions, imported from the Soviet Union, for a country without big landholders—were singled out and killed. A parallel campaign was waged against "counter-revolutionaries". Mao and his accomplices laid down execution quotas for each province: up to four people per thousand. Perhaps 5m were killed between 1949 and 1957—a golden era, relatively speaking, before the horrors of Mao's Great Leap Forward and subsequent famine (up to 30m dead) and the Cultural Revolution of the 1960s and 1970s (over 1m killed). How can a man with as much blood on his hands as Adolf Hitler or Joseph Stalin be deemed acceptable?

The question is not confined to China. This month, concerts glorifying Mao were to be held by a China-linked group hiring public venues in Sydney and Melbourne. Until they were cancelled because of threats by protesters to disrupt them, city officials defended the concerts as expressions of free speech. They would surely not have done the same for events in honour of Hitler or Stalin. Elsewhere, a restaurant in London plays on the theme of the Cultural Revolution. A high-end Western but Chinese-themed department store long sold playful watches featuring Mao's arm waving to the crowds.

One answer is that a personal side to Mao shines through in his early years that inoculates against the memory of the monstrous later ones. The early Mao had a gift for empathy and friendship absent in Hitler or Stalin. He was, moreover, hugely well read, and though it is not hard to be a better poet than Hitler was a watercolourist, Mao was in fact one of the finest Chinese poets of his day. Last, as Kerry Brown of King's College, London, points out, Mao's rise to power was accompanied in the turbulent China of the first half of the 20th century by a moving personal trauma: not only the deaths of so many of his chief colleagues, but also members of his family. In 1930 his second wife was executed by the Nationalists for refusing to renounce Mao. His son, Mao Anying was killed in 1950 by an American air strike during the Korean war. The trauma engenders sympathy among those who know the story. Some suggest that the suffering Mao experienced early in his life may have numbed his senses to the destruction he later unleashed.

Mao-tied

Yet the more forceful answer must be that, whereas Hitler's and Stalin's regimes have long crumbled, China's Communists continue in power. And, says Mr Brown, the national story that Mao crafted, of bringing together a nation after a century of turmoil and humiliation at Japanese and other foreign hands, remains emotionally reassuring and satisfying for many Chinese—despite a great many holes.

It means that China's Communist rulers have to put up with Mao. His craze for permanent revolution and popular attacks on the party are anathema to President Xi Jinping. Confucius, whom Mao reviled, is much more Mr Xi's fellow, with his precepts of order, hierarchy, loyalty and uprightness. But Mr Xi has a problem. As Mr Brown puts it, a party with its roots in terror, illegality and revolution has today to present itself as the bastion of stability and justice. Mr Xi knows that Mao remains the bedrock of his power. It is why the regime allows no chipping away—recently closing the only Chinese museum dedicated to the horrors of the Cultural Revolution, and shutting down a journal that questioned Maoism. Mao positively oozed power, thrilling even Henry Kissinger. Mr Xi knows his power is merely borrowed. ■

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The Affordable Care Act

Encumbered exchange

WASHINGTON DC AND NEW YORK

Obamacare's future is not yet secure

"WE HAVE to pass the bill so that you can find out what is in it, away from the fog of controversy," said Nancy Pelosi, then Speaker of the House, of the Affordable Care Act (ACA), Barack Obama's health-care reform, in March 2010. More than six years later, that fog has yet to recede fully. Nearly half of Americans say they oppose the law, despite large majorities in favour of most of its contents when these are polled separately. Donald Trump calls the act an "incredible economic burden", to be replaced, under his presidency, with "something much better". And critics continue to insist that the ACA is heading towards an inevitable failure, a charge fuelled by recent headlines about soaring premiums and struggling insurers. Democrats, meanwhile, largely celebrate the law as a defining success of Mr Obama's presidency. Who is right?

Under Obamacare, the percentage of Americans without health insurance has fallen from 16% in 2010 to 9% in 2015. The law achieved this in three ways. First, it expanded Medicaid, government-provided insurance for the poor, to cover all those with incomes of less than 138% of the federal poverty line. Only 31 states have gone along with the expansion, because the Supreme Court ruled in 2012 that it was optional. Nonetheless, together Medicaid and the Children's Health Insurance Programme now cover 23% of the population, up from 18% in 2013.

Second, the law established government-run insurance marketplaces, or "exchanges". These offer federally funded subsidies to help those with incomes beneath 400% of the poverty line—$97,200 for a family of four in 2016—to buy insurance. Seventeen states run their own exchanges; the federally run fallback option, healthcare.gov, does the job everywhere else. About 12m Americans now buy health coverage on an exchange, 10m of them with subsidies.

The third mechanism was the most subtle. Insurance markets always redistribute from the lucky to unlucky: everybody's premiums pay for care for those who fall victim to, say, cancer or a car crash. But a thicket of regulations in Obamacare has made this redistribution more dramatic.

Before the law, insurers selling new policies to individuals could vary what they charged based on customers' sex, medical history, occupation and most other factors that correlate with health spending. Obamacare drastically limited this practice. Premiums now vary only with age, smoking habits, family size and where customers live. Discrimination is limited: for example, the old can be charged at most three times as much as the young. Insurers must accept all applicants, regardless of their health. And policies must offer "essential" coverage, which includes some things, like mammograms, which many buyers will never need.

That has made plans cheaper for the riskiest customers, at the cost of higher premiums for the healthy and young. Poorer folk, who receive subsidies, do not particularly notice. But those who are healthy and too well-off to receive subsidies are paying more for insurance. Since 2010 households with incomes over $50,000 have reported the greatest increase in spending on premiums, despite the fact that coverage expanded most among poorer people (see charts).

The regulations do more than just redistribute, argues Jonathan Gruber, one of Obamacare's architects. A ban on lifetime limits on coverage gives everyone peace of mind. And a worker with medical problems knows that if she loses her job, and with it her employer-provided plan, she can buy new coverage.

Still, concentrated increases in premiums help to explain some of the antipathy towards Obamacare. Before the law, Brian Anderson, a 30-something orthodontist from Nashville, paid $80 a month for insurance that came with a $5,000 deductible. In 2014 his insurer cancelled the plan, as it did not now comply with the law. His new plan, from healthcare.gov, provides, in his view, essentially the same coverage—the deductible is in fact higher—but costs fully $201 per month. Mr Anderson says he is glad many more people now have insurance. But the estimated 2.6m others whose plans were cancelled that year may not all be as understanding.

Yet on average, marketplace plans have proved surprisingly cheap. A recent analysis by Loren Adler and Paul Ginsburg of the Brookings Institution, a think-tank, found ▸▸

that premiums were initially 10-21% lower on the exchanges than in the pre-existing market. More competition on the exchanges may have brought premiums down a bit. But insurers also set their prices low because they failed to predict buyers' poor health.

Three things caught them out. First, it was thought that many small employers would withdraw their plans once their staff could get to the exchanges. But this has not happened much: Obamacare has killed off perhaps 2m employer plans, compared with a forecast of 6m. Second, more people than expected continue to buy plans directly from insurers. About 9m Americans are covered this way, almost as many as use the exchanges. Third, more people than expected chose to remain uninsured. Thanks to the ACA, doing so incurs a fine, though those who cannot afford coverage are exempt.

The poorer people are, the bigger the subsidy they get, and the keener they are to enroll (see chart). Poorer folk tend to be in worse health. By contrast, those who stay on their old insurance or pay a fine probably do so because they are healthy. The result is that average claims have been bigger than expected. "We have seen higher-than-expected cost from membership with chronic conditions," John Gallina, the chief financial officer for Anthem, one insurer, told investors in July.

Those who designed the ACA knew that insurers would struggle to predict the health of those enrolled. For that reason, it promised at first to redistribute cash from profitable insurers to loss-making ones. If everyone did badly—ie, if the industry accidentally underpriced insurance en masse—the taxpayer would make up losses. Similarly, if profits were excessive, the government would take most of them. This was not a new idea: a similar "risk corridor" operates as part of Medicare, government-provided health insurance for over-65s. But congressional Republicans gutted this provision in 2015.

As a result, insurers have suffered from mispricing their plans. In 2014 only 30% made a profit from the exchanges, according to McKinsey, a consultancy. Premiums have risen from their initial low base, but the early evidence suggests that even fewer insurers—perhaps one in four—profited from the exchanges in 2015. And losses seem to have grown. Profit margins are now about minus 10%, so prices are rising further. The average planned premium increase for 2017 is around 25%, according to Charles Gaba of acasignups.net, a number-crunching website.

Spiralling down

Critics have long claimed that Obamacare would face a "death spiral", in which price rises would drive away the healthiest consumers, forcing prices higher still. On the exchanges this is unlikely, because the government will bear the extra cost for those it subsidises. Price rises are inconvenient, because buyers may need to switch plans to avoid paying more (possibly disrupting their care). And it is possible that a death-spiral could affect the pricier "gold" and "platinum" options. But government support should keep the exchange market for other plans standing.

The same cannot be said of plans bought directly from insurers, without subsidies. These are also getting pricier. The only safeguard against healthy people abandoning those plans is the fact that they would be fined if they went without insurance. For a single adult, the fine is currently $695 or 2.5% of gross income, whichever is higher, up to a maximum. That may not be enough, given that even plans with big deductibles typically cost several thousand dollars a year.

The biggest threat to the exchanges is insurers leaving them. In April UnitedHealth Group, America's largest insurer, announced it was pulling out from most exchanges. It will sell in only three next year. In August Aetna, another large insurer, said it would withdraw from 11 of 15 states, citing losses of over $400m. This year one in 50 potential exchange customers lived in a county with just one carrier, according to McKinsey. Next year, thanks to insurer withdrawals, as many as one in six people will. Some entire states will be served by only one insurer; Pinal County, in Arizona, is set to have an empty exchange.

Some insurers are faring better than others. Health-maintenance organisations, in which a general practitioner oversees patients' care within a limited network of specialists and hospitals, are performing relatively well. One example is Kaiser Permanente, a not-for-profit outfit. Its insurance covers treatment at its own hospitals, tracks patients' health and tries to keep them well. But this example does not offer a quick fix. Kaiser Permanente's model requires owning hospitals and clinics, making it difficult to expand quickly.

Molina, a Californian insurer, is in one sense another success story. The company, an experienced Medicaid contractor, entered the exchanges slowly. "We did not jump in with both feet," says Mario Molina, its chief executive. It would have made a slim profit last year, thanks to its low administrative costs and pre-existing small networks of doctors. But rules requiring healthy plans to pay struggling ones meant Molina made a modest loss.

Exchanges can survive with just one insurer. It is odd to worry about monopolies when the main problem is firms' losses, especially as regulators can already limit price rises (indeed, the threat of overzealous price regulation may be helping to scare insurers away). If monopolists start to make juicy profits, there is nothing stopping others from entering, or re-entering, the market. Yet clearly it would be better to have more insurers involved. Obamacare came with a promise of a choice between different plans. In any case, every county needs at least one insurer.

The more the merrier

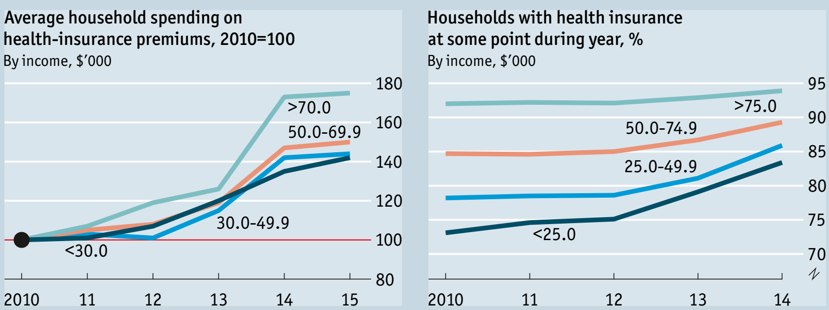
The law would work better with more people—especially healthy people—on the exchanges. The ideal way to achieve that would be to nudge Americans away from employer-provided health insurance. More than half of America's under-65s get coverage through their job, although this arrangement serves no good purpose.

The culprit is the long-standing tax exemption for employer-provided healthcare benefits. This costs taxpayers about $250 billion a year, and incentivises employers to ramp up health coverage rather than raise wages. That, in turns, inflates costs. The ACA's "Cadillac tax" on lavish plans will mitigate this eventually (it was recently delayed until 2020). It would be better to abolish the deduction completely.

The same goes for the part of Obamacare requiring firms with over 50 staff to offer insurance to their employees. This burdens firms with administrative costs and creates an unwelcome incentive for them to stay small. It has cosmetic appeal to some, because it appears to make firms foot the bill for keeping their staff healthy. But most economists agree that wages

Pain and gain

United States



Sources: Census Bureau; *The Economist*

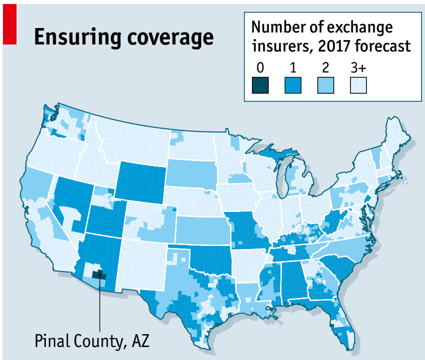
eventually fall to offset such perks.

Fewer employer-provided plans would mean more people on the exchanges. To the same end, the government could require all individually purchased plans to be bought and sold on the exchanges, as Washington, DC does. That would not improve the overall pool of risks, but it would stop insurers withdrawing from the exchanges and continuing to sell directly to wealthier—and probably healthier—customers. Finally, the fine for not buying insurance could be raised.

Unfortunately, these ideas are not politically appealing. In fact, any change requiring bipartisan co-operation will be difficult. Most Republicans want the law to fail, so that they can relax regulations and replace income-linked subsidies with a tax credit linked to age. Democrats, meanwhile, talk most about starting a publicly run insurer to compete on the exchanges, an idea Republicans hate.

The administration can tweak some rules. For instance, it is proposing to do more to prevent people from signing up only when they become ill. Insurers want the health department to improve a formula under which firms with disproportionately healthy members pay those with unusually sick ones. Marilyn Tavenner, who oversaw the launch of healthcare.gov for the administration but now heads the main insurance lobby group, says she is keen to see such changes happen before Mr Obama leaves office in January.

Ensuring coverage



Source: McKinsey Centre for US Health System Reform

The exchanges may look wobbly, but they are only one part of the reform. Even if the market shrinks and many more people opt to pay the fine, it will be hard for any politician to roll back the expansion of Medicaid. And other, less flashy parts of the law seem to be making dents in America's biggest long-term health-policy challenge: rising costs. For instance, almost one in three dollars spent on Medicare now flows through one of several promising cost-reduction programmes.

Cost-control must become the priority in the private market, too. Private health-insurance spending (including employer-provided plans) is forecast to grow by 5.6% a year over the next decade, fuelled by spending on drugs. Overall spending on health care will rise to an absurd 20.1% of GDP by 2025. If Obamacare's redistribution mechanisms survive, these rising costs will be felt more broadly. It will be easy for critical politicians to blame the ACA for the underlying trend. America will be better off if they avoid such a misdiagnosis, and search hastily for a cure. ■

The election campaign

On the trail

Minority outreach
"I didn't really know what I was getting into…Is this going to be nice? Is this going to be wild?"
Donald Trump makes his first visit to a black church

Wrong turn
"A little scheduling error."
Jill Stein, the Green Party candidate, is late to a rally after she flies to the wrong Ohio city. Columbus Dispatch

Pride goeth...
"She is sitting at 269 electoral votes guaranteed right now. I would argue she is sitting at 347 but for argument's sake we can suspend reality for a moment."
David Plouffe, Barack Obama's 2008 campaign manager, on Mrs Clinton's potential victory. Politico

The new chicken in every pot
"My culture is a very dominant culture...If you don't do something about it, you're going to have taco trucks on every corner."
The founder of Latinos for Trump is understandably confused. MSNBC

The help
"I was raised by a black nanny, there's no prejudice on my side."
A member of Trumpettes USA. Politico

Unemployment insurance
"That's not my job."
Fox's Chris Wallace will not correct false statements when he moderates one of the presidential debates. Fox News

Gritted teeth
"I'm thrilled. No, really! I wanted to welcome you onto the plane."
Hillary Clinton at last invites the press aboard and takes some questions

Ancient wisdom
"I often quote a great saying that I learned from living in Arkansas for many years: If you find a turtle on a fence post, it didn't get there by itself."
Mrs Clinton speculates that Russia is working for a Trump presidency

Rhetorical question?
"What the hell do you have to lose?"
Mr Trump's last gambit

The value of nothing
"Of course I disagreed with him, because I was running against him."
Chris Christie explains why he mocked Mr Trump's wall during the primaries, only to endorse it now. CBS News

Badge of the week
"Trump Putin '16'"
Spotted in Tampa at a Clinton rally

National security and 2016

Sewers to submarines

TAMPA

Dullness confronts fantasy when the candidates debate foreign policy

HILLARY CLINTON used flag-waving speeches in Florida and North Carolina this week, and a military-themed television forum in New York, to accuse her Republican rival, Donald Trump, of talking down the armed forces and failing to cherish the military alliances that underpin America's global standing. Mrs Clinton's hawkish instincts are sincere: several times as Secretary of State from 2009-13, she was readier to use force as a tool of geopolitics than was her boss, Barack Obama.

But politics also explains her focus on whether Mr Trump has the temperament to be commander-in-chief. Recent opinion poll averages have tightened, suggesting that Mrs Clinton has lost as much as half of the roughly eight-point lead that she opened up after the national conventions in July, and that a fifth of voters are undecided, essentially because they dislike both candidates. With millions of Republicans, notably those with college educations, expressing distaste for Mr Trump, the Democrats have much to gain from casting the property developer as a menace to America and the world.

A speech in Tampa was billed by the Clinton campaign as making a case that their nominee knows how to keep America safe, while Mr Trump is unfit to be commander-in-chief. Alas her address was lacklustre and rambling, ranging from education policy to the importance of infrastructure ("what about our water systems, our sewer systems?") before reaching foreign policy. The crowd did its bit, cheering lustily as she recalled urging the president to launch the raid that killed Osama bin Laden in 2011 ("You go girl!" shouted a woman). Mrs Clinton scolded Mr Trump for being "very loose in his talk" about when nuclear weapons should be used, and for saying that as president he would order the use of torture, which she said would imperil Americans worldwide.

There is a faint element of awkwardness when Democrats play hawk. The air force reservist chosen to introduce Mrs Clinton in Tampa was a shy former boss of an aircraft maintenance squadron, rather than a bullet-chewing warrior-type. In the crowd, Thomas Abel, a retired geologist sporting a "Vietnam Veteran" baseball cap at the Clinton rally, loyally condemned Mr Trump as frighteningly unpredictable. But he also admitted that he does not usually wear a veteran's hat or other signs of war service, and chose his headgear to make the point that not all ex-soldiers are Republicans. Another veteran at the Tampa rally, Laura Westley, a graduate of the West Point academy for army officers who took part in the 2003 invasion of Iraq, says that ex-soldiers, like all voters this year, are sharply divided by education and gender. "There's a big divide between officers and enlisted," she says, with rank-and-file troops stirred by Mr Trump's talk of "fighting and winning". Mrs Clinton's use of an insecure e-mail system as Secretary of State enrages many fellow West Pointers, she admits, who insist that, had they done the same, "they'd have lost their security clearance."

Mr Trump held his own military-themed campaign events this week, blending vague promises to increase defence spending with fact-trampling claims about a dangerous world which fails to "respect" America. Quizzed on foreign policy at a forum in Virginia Beach, Mr Trump seemed to believe that North Korea will "soon" have an aircraft-carrier (which is news to Korea-watchers) but that he will "very simply" oblige China to rein in North Korea. Turning to the fight against IS, he suggested that finding common cause with Russia against Islamic extremism would be "nice" and work better than Mrs Clinton's tough talk about President Vladimir Putin, adding: "Putin looks at her and he laughs."

Addressing supporters in North Carolina, Mr Trump abruptly backed away from repeated boasts that he has a "foolproof" plan to defeat IS, which he is keeping secret to remain "unpredictable" and avoid tipping off the enemy. Mr Trump now says that, within 30 days of becoming president, he would ask "top generals" to hand him a plan for "soundly and quickly defeating" the extremist network. His campaign unveiled endorsements from 88 retired generals and admirals, prompting Team Clinton to release a list of 95 former generals and admirals who back her, and to note that the Republican nominee in 2012, Mitt Romney, found 500 flag officers to endorse him.

A televised forum in New York, hosted by NBC News and the Iraq and Afghanistan Veterans of America, a charity, pointed up the downsides of Mrs Clinton's extensive record. A Republican member of the audience charged that she had "corrupted" national security by mishandling e-mails at the State Department, and a Democrat asked sceptically about her "hawkish" foreign policy. Mr Trump played a strongman who is above mere details, declaring that under Mr Obama "the generals have been reduced to rubble" and that America has "the dumbest foreign policy". Asked about praise from Mr Putin, he said the Russian president: "has very strong control over his country," while Mr Obama runs a "divided country"—as if democracy is rather a nuisance. He vowed to rebuild a "depleted" military while being "very, very cautious" about using it. At its core, Mr Trump's pitch is simplistic, chin-jutting, isolationism with a strong dose of wishful thinking. ■

Georgetown and slavery

Atonement

NEW YORK

How does a university confront and then atone for its ties to slavery?

ISAAC HAWKINS, along with his children and grandchildren, were among the 272 slaves sold by Maryland's Jesuits in 1838 to pay off Georgetown University's debts. The Jesuit-run university relied on money generated from the plantations the order owned. The slaves, who included babies and old people, were sold for $115,000, about $3.3m today, to plantations in Louisiana, where they laboured in dreadful conditions on cotton and sugar plantations.

Although Father Thomas Mulledy, who ran the college then, had the Vatican's approval for the sale, the Holy See imposed conditions. It insisted that families remained together and that they continued to practise their faith. This promise was not kept. More than 170 years later, John DeGioia, Georgetown's president, has apologised for the university's role in slavery. In an attempt to make amends, he announced that descendants of the Jesuit-owned slaves would be considered part of the Georgetown community, and would have preference if they applied to the university.

Your statutes are my heritage

These ideas came from the university's Working Group on Slavery, Memory and Reconciliation, which convened last year. It released a report last week recommending building a centre on slavery, establishing a living memorial and engaging with slaves' descendants. This is always tricky; most black Americans digging into their family histories, unless they know the last slave-owner's name, hit the "1870 brick wall"—earlier national censuses, taken before emancipation, did not list the surnames of slaves. But the Working Group, using the detailed bill of sale and the ship manifests, which are still in the college archives, identified most of the 272 slaves sold in 1838 by first and last name and by age.

Meanwhile, a team of genealogists led by Richard Cellini, a tech entrepreneur and Georgetown alumnus who runs the Georgetown Memory Project—an independent nonprofit researching the Georgetown slaves—has traced more than 200 of the 272 and has identified some 2,500 living and dead descendants. Judy Riffel, one of the genealogists, notes that even today descendants bear the names of their slaves' forefathers, such as Nace (a form of Ignatius, founder of the Jesuits). Many are still Catholic. About 900 of the 1,200 residents of Maringouin, a small town in Louisiana near one of the plantations, are descendants. Family lore often hinted that they originally came from "up North."

Last year Georgetown students also demanded that Mulledy Hall should be renamed. Mr DeGioia says that it will now be Isaac Hawkins Hall, after the first slave listed in the bill of sale.

Lexington | Land made for you and me

The controversies that go with creating new national monuments

IN GENERAL, any law that presidents mostly use in their second terms has unusual power to cause rows. Take the American Antiquities Act of 1906, giving presidents the right to protect landmarks and landscapes by declaring them national monuments—in the process bypassing Congress, which must approve new national parks and formal "wilderness" reserves. Safely past his last election, Barack Obama has been using the act with a will in recent weeks, creating a new national monument in the woods of Maine and more than quadrupling the size of a marine monument north-west of Hawaii, itself declared by George W. Bush during his second term. In all, Mr Obama has created more than two dozen national monuments, protecting more square miles of land and sea than any predecessor.

If these actions delight some, they alarm others—notably folk who run cattle, mine, log or otherwise exploit nature's bounty in picturesque bits of America. One such place is the Owyhee basin of eastern Oregon, a remote landscape of wild rivers and vertiginous cliffs, and high desert edged with red and pink rocks. Before Mr Obama steps down, environmentalists, outdoor-leisure companies (including Keen, an Oregon-based shoe-maker) and some Democratic politicians want him to create an Owyhee Canyonlands National Monument covering as much as 2.5m acres.

Lots of monument-backers say that their main concern is possible oil and mineral extraction on what are today federally owned rangelands overseen by the Bureau of Land Management (BLM), not grazing cattle. But ranchers are deeply wary. Bob Skinner, whose family reached the Owyhee basin in 1863, is so alarmed that, one morning earlier this summer, he took Lexington up in his own light aircraft on an endearingly transparent mission: to badmouth a landscape that, deep down, he clearly loves. That's lava from an eruption 600 years ago, Mr Skinner shouts over the Cessna's engine, pointing to an otherworldly expanse of crusted black rock. Terrible, razor-sharp lava, he scowls: "Will cripple a dog in ten minutes." A deep canyon is "pretty", he concedes. But as he putters 100 feet above flat, sagebrush-scented steppes that lie beyond it, he demands: "Once you've seen one mile of it, what's more of it?" He is echoed by Larry Wilson, an elected commissioner for the surrounding region, Malheur County, also along for the ride. Temperatures can exceed 100 degrees down there, says Mr Wilson: "This isn't the kind of stuff that draws tourists." Should any hikers try their luck, Mr Wilson adds doomily, the county has a tiny search-and-rescue budget. As the steppes roll on below, the men point out dirt roads that they fear might be barred to motor vehicles in a national monument, or creek-crossings that might be closed, forcing ranchers on 60-mile detours. Perhaps most of all, ranchers fear that a monument will open the door to endless lawsuits by environmental groups.

The West has long seen arguments over land. Mr Skinner's grandfather, as a boy, was posted to watch for free-roaming sheep that could strip pastures bare, until a 1934 act regulated grazing. The 1970s and 1980s saw "sagebrush rebels" chafing against the federal government, which owns half of all land west of the Rockies. The Skinner Ranch lies a short drive (by Oregon standards) from the Malheur National Wildlife Refuge, a remote spot occupied by armed anti-government militants early this year to protest against the jailing of two local ranchers for setting fires that spread to government property, and to challenge the feds' legal right to own land at all—an occupation which ended with a protester's death in a stand-off with FBI agents. Some Republicans, including Congressman Rob Bishop and Senator Mike Lee of Utah and Senator Ted Cruz of Texas, want federal lands transferred wholesale to the states. There are eco-absolutists, too, who call ranchers crony capitalists, exploiting too-cheap BLM grazing permits: some would ban cattle outright from public lands.

Still, on the ground, compromise does not sound impossible. Mr Skinner sympathises with his ranching neighbours jailed for arson; but he has no truck with anti-government radicals, and thinks that the BLM has every right to exist. Nor does he think local control a panacea. Though rural Oregon is conservative, political power resides where most people live, in such left-leaning cities as Portland. If Democrat-run Oregon took over land management from the feds, Mr Skinner thinks ranchers' problems would be "multiplied tenfold". He also suggests that, if federal officials called for a smaller reserve, perhaps covering 48,000 acres, many locals would be willing to talk.

A young neighbour, Elias Eiguren, says militants hurt the ranchers' peaceful, law-abiding cause. Most came from out of state, he sighs: "Those people look like us, but aren't us." The local congressman, Greg Walden, walks a fine line. He has joined fellow-Republicans in seeking to bar new national-monument designations, but has not endorsed sweeping transfers of federal land to the states. Mr Walden says the right way to protect precious places is with legislation passed by Congress, to ensure individual rights are protected from bullying, far-off majorities. Alas, a polarised Congress has passed hardly any public-lands bills in recent years.

The rural-urban canyon

Malheur County (population, 30,000) held a referendum in March, with 90% of votes cast opposing a national monument. Mr Wilson thinks his county's wishes should weigh "very heavily". Local voices must be "respected", agrees Neil Kornze, director of the BLM. But public lands are owned by all Americans: 60m visit them to hike, camp or river-raft there each year. Decades ago, Mr Kornze notes, his bureau's badge showed five working men: a surveyor, a miner, a cowboy, a logger and an oilman. Now, reflecting public priorities, it shows a pretty mountain and a river. Managing that change will require national, state and local leaders to find common ground: a seemingly monumental task. ■

Also in this section

A Mexican minister falls

The cost of an unwanted guest

MEXICO CITY

Donald Trump's visit has upended Mexican politics

TO SAY things have been going badly for Enrique Peña Nieto, Mexico's president, would be an understatement. Recent embarrassments include allegations that a Miami-based company paid property taxes for his wife, revelations that he plagiarised part of his university thesis and an ill-judged rendezvous with Donald Trump. On September 7th Mr Peña tried to put the unpleasantness behind him by accepting the resignation of the finance minister, Luis Videgaray, his most important deputy, who had hopes of becoming president in 2018.

Most observers assume Mr Videgaray took the fall for suggesting Mr Trump's visit in the first place. The court paid by Mr Peña to the Republican ranter (pictured) appalled the vast majority of Mexicans. Even before all that, Mr Peña had the lowest approval ratings of any president this century. Mr Videgaray saw the visit as a way to reassure investors who fear a President Trump would abrogate the North American Free-Trade Agreement or block remittances from Mexican workers in the United States. He misjudged the political cost.

Not at the top table

Corruption Perceptions Index, 2015

Selected countries, 100=least corrupt

Source: Transparency International

But Mr Videgaray was under pressure for other reasons. He has allowed public-sector debt to rise by more than 10% of GDP since 2012; Standard & Poor's, a rating agency, said in August that it might mark Mexico down. Mexicans, who see their salaries in dollar terms, are angry about a slide in the value of the peso. Mr Videgaray had an embarrassment of his own involving the acquisition of a house from a firm that sought contracts from the government (before he was finance minister, he notes).

In parting with him, Mr Peña is cutting loose the architect of the reforms for which his presidency is likely to be remembered. They include the introduction of competition in electricity and in the oil sector, long seen as an inviolable bastion of Mexican sovereignty, and a reform of taxes.

Mr Videgaray's departure is unlikely to change the course of those reforms. His successor, José Antonio Meade, who has served two presidents as the minister in charge of finance, energy, foreign affairs and, most recently, social development, is more technocrat than politician. As *The Economist* went to press he was due to present the budget for next year that Mr Videgaray had prepared. It is expected to aim for a deficit lower than this year's (probably 3% of GDP) and for a small primary surplus (ie, before interest payments).

Mr Peña's use of a scapegoat does not answer the most pressing questions he faces: how to avoid irrelevance in the final two years of his term and prepare his Institutional Revolutionary Party (PRI) for the next election. The government's reforms are moving ahead, with varying success. Energy is making progress; an education reform has been slowed by radical teachers. But Mr Peña has had little to offer Mexicans who are increasingly angry about sleaze, rising violence and the overall feebleness of the rule of law. The country's corruption rating, as measured by the researchers of Transparency International, is stubbornly and embarrassingly poor for a democracy whose economy is the 15th largest in the world (see chart).

The administration "needs a reset", says Luis Rubio of CIDAC, a think-tank. A credible fight against lawlessness would be one option. But few analysts expect that to happen. A new "anti-corruption system" established in the summer could help fight that scourge. But it cannot by itself change a political culture that perpetuates corruption, and it may take years to show results. Mr Peña seems short of ideas for curbing violence.

Mr Rubio thinks the president could still redeem the next two years by enacting an electoral reform, which would take effect before the vote in 2018. One common proposal is the introduction of a runoff in the presidential election. Under the current system, heads of state are chosen with a single round of voting which means that a candidate can prevail with much less than half the vote (Mr Peña, for example, ▸▸

Avocado wars

Rich, creamy and rare

How anti-globalists ruin guacamole

IF THE avocado has an original *terroir* or habitat, Costa Rica can't be far from it. About 500 years ago, when Spanish explorers penetrated the Mesoamerican forest, they found people eating a tasty, nutritious fruit with lime-green flesh which looked quite unlike any edible plant they had ever seen. In due course its cultivation proved a stellar success in places from Florida to Israel to New Zealand. It became a feature of Australian beach-parties and London dinners.

Why then are people in Costa Rica moaning that they can't get enough of this lovely food, or at least not at the right price or quality? "Steak is now cheaper than avocado!" fumes a tweet from a Tico, as the country's people are called.

Put it down to a clunky piece of protectionism. Last year the government slapped a ban on the import of Hass avocados—the most popular kind worldwide—from nine countries, including Mexico, which was the main supplier and raised the matter at the World Trade Organisation. That variety has a high oil content and a creamy texture, good for guacamole. Its rough dark skin is durable, and ideal for shipping. Avocados grown in Costa Rica tend to be of the smooth, green-skinned sort that go well in salads.

The import ban was supposedly a precautionary step against sunblotch, an infection that can hop from one species to another. Costa Rica's producers have hailed the measure as an overdue boost to their efforts to satisfy all local palates. But that will take a long time: Mexico's pre-ban sales of Hass were about 12,000 tonnes a year and Costa Rica produces about 2,000 tonnes of all types. Moreover, Ticos now have a taste for the Hass variety, both raw and mashed. Restaurants in Costa Rica say about a fifth of the avocado they serve is wasted, because customers prefer Hass to anything local.

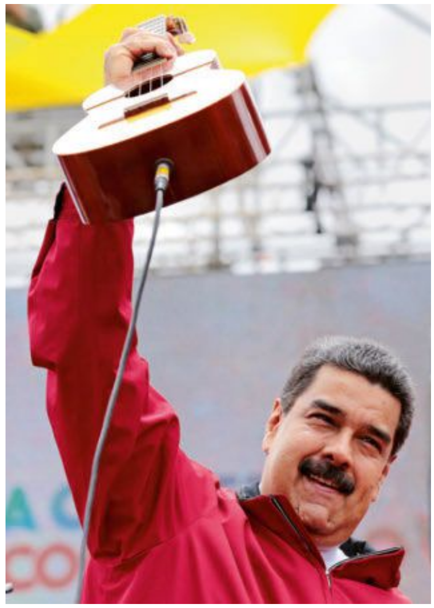
You can still get Hass in Costa Rica if you are rich or desperate. Imports are allowed from Chile (at up to twice the price Mexican ones used to fetch), and also from Peru, though Ticos grumble about the taste. And like most trade curbs, this one helps smugglers. Border police have seized truckloads of the fruit crossing the frontier with Panama. Some get through.

In recent days, perhaps as a way of assuaging local palates while still protecting growers, the government has started the process of authorising imports from the Dominican Republic, which can offer cheap, year-round production: mostly of the green-skinned sort, but also increasing amounts of the oil-rich kind. So a few more Costa Ricans will soon be able to have their Hass and eat it. ■

won with just 38%). Diminishing support for traditional parties such as the PRI, coupled with the emergence of smaller challengers, makes it more likely that the next president will win with a small share of the vote, with dire consequences for his or her legitimacy. The introduction of a second round would be a neat way of solving that problem.

Even if Mr Peña does not attempt to change the rules, the political world's attention is now likely to turn to the next presidential race. Mr Videgaray's downfall removed one major contender from the race. The promotion of Mr Meade improves his presidential prospects. There is speculation that Manlio Fabio Beltrones, who resigned as head of the PRI after it suffered setbacks in state elections in June, may now make a comeback. The centre-right National Action Party is in the opening stages of a struggle among presidential aspirants.

Moderate Mexicans fear Mr Peña's failings will open the door to Andrés Manuel López Obrador, a left-wing populist who was runner-up in the last two presidential elections. (A two-round election would make that less likely, and that is one reason why some people support it.) With Mr Videgaray gone and Mr Peña lamed, the identity of the next president could be the only decision of consequence to be taken over the next two years. ■



Venezuela's hapless leader

Chávez without the charm

CARACAS

Nicolás Maduro's bumbling brings a messy end to his presidency closer

WHATEVER his awful defects, Hugo Chávez showed it when he was riding high as Venezuela's firebrand leader. So too did Fidel Castro when he played a similar role in Cuba. A strongman in a crisis needs charisma. Nicolás Maduro, Venezuela's current president, has none.

Take, for example, the moment on September 2nd when his motorcade passed through the gritty municipality of Villa Rosa on the island of Margarita. This used to be a red district, whose residents mostly backed the ruling leftists in December's elections. But that support is vanishing. Margarita, like the rest of the country, has seen months of food and power shortages and, in particular, a lack of running water. When locals heard the president was coming, they reacted with a show of *cacerolazo*—banging pots and pans.

Hearing the commotion, Mr Maduro tried working his charm on the masses as his predecessor might have done. But the jeering grew. After some brusque exchanges, he set off on a sort of defiant jog through the crowd. But it looked more like running away. At one stage he seemed to lash out at a saucepan-wielding lady.

This farce, recorded on mobile phones, soon went viral on social media, thanks to sharing by a prominent opposition journalist, Braulio Jatar. He has since been arrested and, supposedly coincidentally, charged with money-laundering. The incident capped a disastrous few days for the

president. On September 1st the opposition held a march, dubbed the "taking of Caracas". Despite government closures of roads and transport, as many as 1m protesters took to the streets. Their ostensible aim was to accelerate a "recall referendum" which could oust Mr Maduro: the pro-government electoral authorities are deliberately stalling. But, perhaps more significant, the march was a vivid demonstration that the Chavista movement is now outnumbered by the opposition.

Mr Maduro seems unable to accept that. During the "taking of Caracas", he held his own rally. Tens of thousands of his supporters were there; many had been bused in by government vehicles. He derided the rival event, insisting that only 35,000 people had showed up. Wielding a guitar at one point, he used even cruder language than usual. On daytime TV, he called the head of the national assembly, Henry Ramos Allup, a "motherfucker". In a bid to exaggerate his support, a huge TV screen was mounted behind the podium. Officials tweeted images of a big red-shirted march. It emerged that these actually showed another rally, from 2012, when Chávez was alive. A national assembly staffer who tried flying a drone over the opposition march, to show its size, was jailed.

A decree by the government-appointed supreme court to invalidate all future decisions by the national assembly has made a political solution elusive, at least while Mr Maduro hangs on. Will his cronies ditch him? Vladimir Villegas, an ex-ambassador who hosts talks between government and opposition, hinted at this. He told a Colombian newspaper, *El Espectador*, that those in power were struggling with the "new reality" that their term could be finite. Some might see Mr Maduro as dispensable, he said: a movement would not be sacrificed for "an already worn-out leadership." ■

Bello | The impeachment country

Does the ousting of Dilma Rousseff weaken or strengthen Brazil's democracy?

AS WELL as its five football World Cup victories and the world's largest rainforest, Brazil has just acquired another unique distinction. It is the only country to have impeached two presidents in just 24 years. In the first case, that of Fernando Collor, who resigned in 1992 on the brink of being condemned for corruption, impeachment commanded near-universal support, and could be read as a sign of democratic vigour. In the case of Dilma Rousseff, ousted by the Senate by 61 votes to 20 on August 31st, judgments are far more mixed. Even some who did not sympathise with Ms Rousseff think her ousting sullies democracy. They worry that Brazil has devalued impeachment, turning it into a means to dump an unpopular ruler—and, in this case, replace her with her unequally unpopular vice-president, Michel Temer.

Some of the arguments Ms Rousseff deployed in two days of evidence before the Senate were mere propaganda. No, her impeachment was not a coup, of any description. It took place over nine months, in strict accordance with the constitution and supervised by the supreme court, a majority of whose members were nominated by Ms Rousseff or Luiz Inácio Lula da Silva, her predecessor and the founding leader of her left-wing Workers' Party (PT).

The offence Ms Rousseff was accused of—using credits from public banks to swell the budget without the permission of Congress—is a "crime of responsibility" under Brazil's impeachment law of 1950. But there the difficulties start. Her defenders are right that this charge was a relatively minor, technical matter. The lawyers who filed the impeachment petition hit upon it because there is no evidence that Ms Rousseff was personally corrupt. That is not true of Eduardo Cunha, the former Speaker of the lower house of congress. He accepted the petition, she plausibly claims, as an act of vengeance because she refused to help him evade expulsion over corruption allegations. It is troubling, too, that many of those who voted to oust her are accused of misdeeds. And Mr Temer, a 75-year-old political insider, hardly embodies the regeneration his country's rotten politics need.

Yet that is not enough to turn the moral tables in Ms Rousseff's favour: many of the "coup-plotters" had been for a decade allies (and several were ministers) of the president and her predecessor. Their corruption, if proved, is venal and personal. More sinister is that of the PT, which organised a vast kickback scheme centred on Petrobras as part of a "hegemonic project that involved growing control of parliament, of the judges and…of the media", as Fernando Gabeira, a left-leaning former congressman, wrote in *O Globo*, a newspaper. Ms Rousseff chaired Petrobras's board (in 2003-10) and then ruled the country while this scheme flourished. Her claim to know nothing of it, nor that her campaign guru in the election in 2014 was paid with bribe money, smacks of negligence.

On its own, the Petrobras scandal didn't doom her. When Mr Cunha launched the impeachment last December, most political analysts expected it to fail. The subsequent stampede against the president owed everything to her own incompetence and to public opinion, which was enraged, too, by her catastrophic mishandling of the economy. Above all, she failed to build alliances in Congress, which need not always involve back-scratching. The crisis of governability in Brasília intolerably prolonged the economic slump, undermining some of the social progress made under Lula. It would have been resolved less divisively by Ms Rousseff resigning or by a fresh election. But she refused to step down, and an early election is constitutionally difficult.

So Brazil is where it is. And it offers some lessons. One is that Ms Rousseff has paid the ultimate price for her fiscal irresponsibility (which went far wider than those disputed credits). That ought to be a salutary warning to Latin America's more spendthrift politicians. Second, Brazilians want to hold their governments to account. Mr Temer will lose all legitimacy if he yields to pressure from his friends to rein in the Petrobras investigation or helps Mr Cunha avoid justice.

The third lesson is that in Brazil, with its strong parliamentary tradition, no president can govern against Congress. When Ms Rousseff brandishes her 54m votes in the presidential election of 2014 as a defence, she forgets that they were for Mr Temer too, and that the senators have an equally valid democratic mandate. Brazil has thus offered a tutorial in constitutional theory to the likes of Nicolás Maduro, Venezuela's dictatorial president. The legacy of a divisive impeachment is not all bad.

Also in this section

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Labour laws in the Gulf

From oil to toil

MANAMA

Forcing the private sector to hire locals is hard, and misguided

AT City Centre mall, Bahrain's largest, Bahrainis buy, while foreigners operate the tills. Michelle is from the Philippines, and lowers her voice to explain why there are so few Bahrainis working alongside her. "They are lazy," she says. Whereas she needs to work hard to keep her job and the visa that goes with it, they can do whatever they want, which isn't much.

As part of a government plan to boost indigenous employment, employers in Bahrain are given targets for the proportion of locals they must hire. The targets vary: in grubby or boring sectors, requirements are lower—large building-maintenance firms can get away with a 5% "Bahrainisation" rate. Sectors with more prestige, like banking or finance, face higher targets, of 50% for larger companies. Small clothes shops face a quota of 30%. Michelle points to the store opposite, which employs some Bahraini staff on the shop floor. They don't even want to stand up when the customers come in, she grouses—they know they are there purely to keep the government happy, and are not likely to be fired.

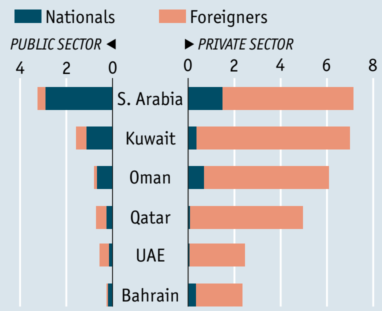
Meanwhile, in a room whirring with cash-counting machines at the Bahraini central bank, all the staff are local citizens, robed in their long white national dress. Half of Bahraini nationals with jobs work for the government. This model, of locals stuffing the public sector and private firms hiring foreigners, is common across the six members of the Gulf Co-operation Council (GCC)—Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE). In Saudi Arabia, Bahrain's big neighbour, two-thirds of nationals with jobs were on the public payroll in 2015, according to Jadwa Investment, a Saudi research firm. Whereas other emerging markets and developing countries devoted around 5% of GDP to public-sector wages, a report from the IMF found in 2015 that in the GCC (plus Algeria) they splashed out closer to 12%.

But sliding oil prices since mid-2014 have slashed Gulf countries' revenues by at least 10% of GDP, swelling deficits and making the old model even less sustainable than it was before. With an extra 3.8m young people expected to enter the labour market between now and 2021, the pressure to find more private-sector jobs for nationals will be huge.

Spot the difference

Employment of national and foreign workers

By sector, 2013 or latest available, m



Sources: National statistics; IMF; WEO; Haver Analytics

Some countries are less worried than others. In Qatar and the UAE, nationals are so thin on the ground that there are probably not enough of them to fill government positions, says William Scott-Jackson of Oxford Strategic Consulting. In Oman and Bahrain, the situation is less comfortable, though at least unemployment among Bahrainis remains fairly low. Most is at stake in Saudi Arabia, where the unemployment rate is already 11.6% and only 40% of adult citizens are in the labour force. For Saudi women, the participation rate is a dismal 18%.

The tyranny of high expectations

The trouble is that young Gulf Arabs have come to feel entitled to government jobs. Terms are generous and duties light, dulling the incentive for bright graduates to invest in skills needed by the private sector, such as engineering. Few Saudis would consider working in shops or restaurants, let alone on building sites.

The other, deeper, problem is weak demand from the private sector for Gulf nationals. The lure of the public sector makes them expensive, and immigration laws tying foreigners to their employers make non-nationals extra-cheap (see next article). Solving either problem would mean tinkering with a fragile social contract between oppressive regimes and populations who tolerate them as long as they put food on the table.

Under pressure, some governments are trying harder to force private companies to hire locals. Oman has extended its list of jobs for which foreigners may not get visas. It now includes marketing, cleaning and camel-keeping. Saudi Arabia plans to expunge foreigners from human resources and telecoms (and appears to be expunging a fair few businesses in the process). In ▸▸

December the Saudi government will tweak its "traffic-light" system, which imposes harsh penalties on firms that employ fewer women, or Saudis in senior roles, than the government wants.

Such quotas are textbook examples of bad economic policymaking. They have existed in the GCC for a few decades now. They corrupt the work ethic of those taken on purely to meet the quotas. One restaurant owner tells of a Bahraini employee who took a holiday whenever he wanted, then demanded extra compensation when he was fired. He will think twice before hiring another Bahraini, he says. Employers don't like being told to hire people for reasons other than ability and willingness to do the job. So some of them cheat: for example, by adding phantom citizen-employees to their payroll.

Some companies claim to see the quotas as no problem. Jamal Fakhro, managing partner for KPMG in Bahrain, boasts that 60% of his employees are Bahraini, and that in the banking sector the figure is 70%—above what the government requires. But these are exceptions. The quotas create an incentive to give nationals low-wage jobs (which some will not bother to do). Firms treat this as a cost of doing business, like a tax, says Steffen Hertog of the London School of Economics.

Yet a survey by GulfTalent found that, in 2014, 95% of employers in Oman reported that the quota system was a real challenge, as did 84% in Saudi Arabia and 55% in Bahrain. Such heavy-handed regulation is also nightmarish to enforce. In Bahrain, even with between 15,000 and 19,000 inspections a year, it takes five years for the government to visit each employer.

One way to make locals more attractive to employers would be to reduce the pay gap between them and foreigners. Wage subsidies for nationals have worked in the past, but money for them is scarce. The Saudi government recently announced huge increases in visa charges for foreign workers. Bahrain this year allowed employers to ignore the employment quotas if they pay the government a fee for each foreign worker they hire.

The new charge, set at around 15% of the cost gap between locals and Bahrainis, is too low, says Ausamah bin Abdulla al-Absi, head of the Labour Market Regulatory Authority (LMRA), which introduced the scheme. He hopes to increase the charge gradually and nudge employers away from their model of importing vast quantities of low-skilled labour and making their profits in low-productivity sectors. Mr Absi's vision, which is more likely to rebalance the GCC economies than blunt quotas, requires time. Some see the low oil price as a blessing in disguise, a means of forcing through change. But after decades of living on petro-welfare, change may come as a shock to many. ■

Migration in the Gulf

Open doors but different laws

MANAMA

Because migrants in the Gulf have few rights, locals let more of them in

MUHAMMAD DEV arrived in Bahrain three months ago from India, leaving behind his wife and baby. He misses his family, and calls them daily. But driving a taxi along Bahrain's humid highways, he earns more than double what he did back home. "That's why I'm staying here and they are happy," he says.

News about migrant labourers in the Gulf states usually focuses on abuses. A recent case involves thousands of Pakistani and Indian construction workers who have been stranded in Saudi Arabia after a cash-strapped employer stopped paying them but refused to let them leave the country. Many are owed months of back pay. The Saudi government has promised to give them plane tickets home, and insists that this is a one-off. It is not.

Under the *kafala* (sponsorship) system used in Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (collectively, the Gulf Co-operation Council or GCC), migrant workers are tied to their employers. They may not switch jobs or, in some cases, leave the country without their employer's permission. Many have their passports confiscated, though this is illegal.

The power that the *kafala* system gives to employers squashes wages. A study by Suresh Naidu of Columbia University, Yaw Nyarko of New York University, Abu Dhabi, and Shing-Yi Wang of the Wharton School of Business found that in the UAE wages for foreigners were 27% lower than they would be if firms had to compete with each other for labour.

High pay, few rights

Yet still migrants flock to the Gulf. According to the Gulf Labour Markets and Migration programme, a research body, roughly half of the 50m people in the GCC are non-citizens. In Qatar and the UAE, it is more than 85%.

One reason for the long queues of Indians at the Qatari embassy is obvious: wages are much higher in the GCC than at home. Unpublished research by Michael Clemens, from the Centre for Global Development, compares migrants who moved to the UAE with those who had their contracts cancelled at the last minute because of the property-price crash in 2008. Those who moved earned 250-350% more. Many migrants send money home, which pays school fees and helps relatives start businesses. Having a household member working in the UAE made Indian households around 30 percentage points more likely to own a family business.

Another paper, by Glen Weyl of Microsoft Research and Yale University, finds that by letting in so many migrants the GCC countries do more (per head) to reduce global income inequality than richer OECD countries, which send loads of aid but keep their borders relatively closed. Were the OECD countries to open their borders to the same extent as Kuwait, which has two migrants for every native, global inequality could be cut by a quarter. That is politically impossible in the West. So why is it possible in the Gulf?

Mr Weyl argues that it is the *kafala* system itself that makes Gulf citizens tolerate ultra-high levels of immigration. Precisely because it grants migrants so few rights—they can never become citizens, nor share in the generous local welfare state—Gulf nationals do not feel threatened by them. On the contrary, they like having other people to mop their floors and sweat on their building sites.

Some Gulf states are trying to curb the most coercive elements of the system. Bahrain and the UAE have scrapped exit visas and allowed migrants to switch jobs. The Saudis are trying to crack down on exploitative middle men. Human Rights Watch, a watchdog, urges construction firms to treat workers better than the law requires. But the basic deal that Gulf states offer to migrants—you can work, but you will never be one of us—remains unchanged. ■

Extremism in Jordan

Muzzling mosques

BAQA'A CAMP

Jordan's novel approach to Islamist militancy

WHEN is a mosque not a mosque? In Jordan on a Friday, it turns out. To stop militant preachers ascending the *minbar* (pulpit), Jordan's leaders have come up with a novel approach. Each week, ahead of the main day of prayer, they temporarily order the closure of unlicensed mosques—over a third of the 6,000-odd in the country. Other measures being phased in require preachers to recite only approved sermons sent to them by mobile phone, and insist that only registered and government-trained imams may preach. "The Friday sermon is potentially a dangerous media channel," explains the kingdom's religious-affairs minister, Wael Arabiyat.

The government has reason to be fearful; support for jihadist groups is widespread once you get outside the plush parts of western Amman. In the covered market of Baqa'a, the largest and grimmest of Jordan's ten Palestinian refugee camps, shoppers exchange news of Islamic State's latest doings when getting their groceries. From Othman bin Affan mosque, a preacher condemns rulers for obstructing the religious obligation of *jihad* and the defence of the Sunni realm—whether against Israel or Syria's Bashar al-Assad. "The *jihad* begins from here," says one al-Qaeda supporter over mint tea in an elegant Amman café. "Half a million Jordanians are convinced of our cause." Some 4,000 Jordanians, he says, have left for the Syrian front. Per head, says the Soufan Group, a New York-based consultancy, more people from Jordan have joined Islamic State's fighters than from any other Arab state bar Tunisia.

The loss of their Palestinian, Syrian or Iraqi homelands makes Jordan's refugees ready converts. But if the routes to foreign *jihad* are closed off, warns an IS sympathiser in Baqa'a, they may honour the obligation in Jordan instead. In June, a Baqa'a refugee walked into the fortress-like local intelligence headquarters and shot five of its agents dead. "Most of us cheered," says a resident, urging his neighbours to stage a wake for the assassin's execution. "There's a war within Islam," says an official. "If we don't fix the problem within Islam, it's not America or Britain who will go first." Jordan, he means, will be the first victim.

In the past the authorities opted for negotiation. Two years ago they released two leading jihadists, Abu Muhammad al-Maqdisi and Abu Qatada al-Filastini, in an attempt to co-opt their followers into their own war on Islamic State. More recently, though, they have gone for round-ups. Hundreds of cells have been broken up. And so far this year 1,100 Jordanians have been hauled before military courts on terrorism charges. Amjad Qourshah, a university lecturer in *sharia* studies who once taught in Britain, is spending his third month in detention for a video he made two years ago questioning Jordan's security alliance with America and Israel. From his mosque in southern Amman, where he preaches weekly to 3,000 followers, Sheikh Muhammad al-Wahhash has been summoned to the religious-affairs ministry for "a final warning". He says he is under suspicion for denouncing government policy on Palestine.

Some think better public services would help. Thanks to the priorities of private benefactors and Gulf donors, many villages with unpaved roads and ramshackle schools sport multiple mosques. Others wonder whether the security measures are the right tools. "People say you're attacking Islam," says Bassam al-Omoush, a former Jordanian minister who teaches at Jordan University's Sharia College and insists on delivering his own, unapproved, sermons. "Shut down nightclubs, not mosques." ■

Driving in Johannesburg

Bad robots

JOHANNESBURG

A green light for thieves in South Africa's biggest city. Literally

IN 1927 an industrialist named Isidore Schlesinger installed Johannesburg's first traffic light. It drew crowds of onlookers, but was short-lived: an errant motorist soon knocked it down. Today the city's "robots" (as they are called in South African English) are still unreliable, especially when it rains. Traffic updates on talk radio include a rundown on which robots are out. Drivers must get used to dodging other cars at malfunctioning eight-lane intersections.

The Johannesburg Roads Agency (JRA), which manages the robots, blames ageing infrastructure and technology that is easily damaged by summer thunderstorms. Frequent power cuts don't help. "Pole-overs" (vehicles crashing into traffic lights) are a big headache, too. On average, Johannesburg drivers damage 81 robots a month.

But the biggest problem is robot robbers. Like power lines and manhole covers, traffic lights attract thieves who sell the metal for scrap. Some will cut down the entire pole to get a bit of copper wire. In one theft, caught on video, a man hacks away at a robot's cables with a pickaxe while two others stand guard, scrambling into the bushes whenever a car goes by. Damage to robots has cost the city 12.7m rand ($900,000) in the past three years, says the JRA.

To deter thieves, some metal parts have been replaced with nylon and plastic. Cables are being made with thinner (and so less valuable) copper wire. The 70 most frequently vandalised traffic lights have been fitted with CCTV cameras and vibration detection, "so we can tell when someone's trying to cut down a pole", explains Darryl Thomas, head of the JRA's department for mobility and freight. But technology can also attract thieves. A remote monitoring system, using SIM cards, proved a disaster. Within months, thieves had stripped them all and run up huge phone bills using them. Also stolen, in 2013, were 200 back-up batteries installed in robots to keep them on during power cuts.

The city is taking drastic action. New legislation, which came into effect in June, makes infrastructure theft a major crime. In some cases jail sentences can be as long as for murder.

Somalia

Most-failed state

MOGADISHU

Twenty-five years of chaos in the Horn of Africa

AT THE Coconut Beach Hotel, which opened last month, new guests are served coconut smoothies when they arrive. The rooms do indeed have a view of the ocean. What betrays where the hotel is, in Mogadishu, the war-torn capital of Somalia, are the two dozen guards in football shirts loafing around the doors clutching AK-47s. At the top of the stairs sits a machine-gun nest pointing at the gate. Aisha Abdulle Hassan, the proprietor, explains that she has invested $2m in the business. She is confident that it will soon be highly profitable. But she is taking no chances: "Our security is as tight as we could make it," she says. "Only Allah knows if it is enough."

Hotels are booming in Mogadishu. This is not thanks to tourists—only the most daring or idiotic would take a holiday in Somalia. Rather, the demand comes from power-brokers, who meet in them to discuss how to create a new government. This year Somalia is meant to hold elections, as part of the UN-led reconstruction effort. But even as peacemakers blather inside air-conditioned conference rooms, battle continues to rage outside. Hotels have become a target for militants. On August 30th a car bomb blew up outside one in Mogadishu, killing at least 15 people. After a quarter-century of costly foreign intervention, Somalia is still Africa's most-failed state.

At no point since 1991, when the despot Siad Barre was overthrown by rebels, have Somalis had a government worthy of the name. Officials from Mogadishu cannot safely visit much of the country, let alone govern it (even excluding Somaliland, a region in the north that has been de facto independent since 1991). War, famine and terrorism have prompted legions of Somalis to flee. A sixth of them—2m out of a population of perhaps 12m—now live abroad. For those who remain, life expectancy is just 55 years, and barely a third can read.

Since 2007 Somalia has been occupied by armies from neighbouring countries, who—beginning with the Ethiopians in 2006—invaded to eject an incipient Islamist government in Mogadishu. The result was the creation of a Western-backed Somali transitional government, and a new enemy, al-Shabab, a splinter group from the Islamists. Al-Shabab immediately resorted to guerrilla war. In an effort to keep the jihadists at bay, Western governments pay for AMISOM, a force of 22,000 foreign soldiers operating in Somalia under a joint UN and African Union mandate.

Today, the Islamists control little in the way of towns. But Somalia remains deeply insecure. In Mogadishu, fearing kidnap or worse, foreigners generally confine themselves to the international airport—a sprawling compound protected by thick fortifications and Ugandan soldiers. Travel outside means taking a risk in a taxi or enlisting an armoured car. In other parts of the country, especially in the south, AMISOM troops live in fortified camps with thin supply lines, while al-Shabab wander into villages and operate as they please.

That is not to say there are no successes. At Villa Somalia, the bullet-pocked Italian-built Art Deco presidential palace, Mohamed Sheikh Hassan Hamud, the police commissioner, says that things have got better. A few years ago, at least one police officer was dying every day, he says. Today, it is five to ten a month. But his officers still cannot do much beyond escorting VIPs and guarding government buildings. Asked what he does to protect businesses from attacks, Mr Hamud answers: "We cannot protect them. They must have their own security." That strengthens al-Shabab, because most firms choose to pay off the militants rather than risk attack.

Somalia has a federal system, which means in practice that outside the capital the central government controls almost nothing. It collects just $200m in taxes each year, UN officials reckon, mostly from the port in Mogadishu, and spends almost all of it on its MPs and the presidency. Elsewhere Somali statelets operate more or less independently—respecting Mogadishu in theory only. Some, such as Puntland in the north, are fairly well organised, with police and security forces. Others are little more than warlords' fiefs.

Wish you were here?

The Somali National Army (SNA) is meant to keep people safe and hold the country together. Most independent observers agree with one UN official, who jokes that it "doesn't actually exist", at least as a cohesive force. British instructors brought in to train SNA soldiers have ended up training AMISOM instead. SNA commanders cannot say who or where their troops are, let alone what they are doing. There are soldiers, but they often desert and mostly owe their loyalty to clan leaders, not to Mogadishu.

This sets the context for the elections due this year. With no money and no army, the government can exert influence only with the consent of regional leaders. This is why elections involving people from all parts of the country and all Somalia's major clans are vital. Somalia's president, Hassan Sheik Mohamud, was selected in 2011 by MPs who in turn were selected by a group of around 135 clan elders. But though his term comes to an end on September 10th, negotiations about the structure of new elections, due by the end of the year, have dragged on endlessly.

Even if elections pass off well, it is unclear that they will deliver much legitimacy. One problem is that the entire process is dominated by diaspora Somalis. Some 55% of MPs have foreign passports, and while Mr Mohamud himself has never lived abroad, almost all of his advisers are either British or American Somalis. They are not always popular. For the moment, elections are the only hope, as donors' patience is wearing thin.

In February the EU, AMISOM's main funder, cut 20% from its budget for peacekeeping in Somalia. That followed a series of attacks on AMISOM troops which have led contributors to wonder whether it is worth it. Kenyan troops have all but stopped fighting this year. Uganda had planned to pull its troops out by the end of 2017, though President Yoweri Museveni is now considering keeping them in place.

A full withdrawal is unlikely. Compared with a decade ago, Somalia's problems are more contained. Piracy has all but stopped; al-Shabab are a guerrilla army, but not a conventional one. People are generally not starving. All that would be undone quickly if the foreign soldiers left. But the real prize—a Somalia with a functioning government and safe streets—seems as distant as ever. ■

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Turkey's Gulen purges

A conspiracy so immense

ISTANBUL

Turkey's post-coup crackdown has become a witch-hunt

ISTAR GOZAYDIN, a professor at Gediz University in Izmir, felt the sting of Turkey's purges earlier than most. She was fired days after July's failed coup, not by the government but by her own university. She had tweeted articles opposing reinstating the death penalty and condemning mob violence. "Perhaps [school officials] thought they could escape intervention by suspending me," she says. They could not. Two days later Gediz and 14 other universities were shut down over alleged links to the Gulen community, or *cemaat*, a shadowy Islamic movement that was in part responsible for the coup.

Most foreign analysts think an alliance of officers from different backgrounds took part in the plot to topple Turkey's president, Recep Tayyip Erdogan. But the government blames the *cemaat* exclusively, and most Turks agree. The purge that Mr Erdogan has launched against the group and its sympathisers has swept up over 100,000 people. Last week 50,000 civil servants were dismissed by decree. Soldiers, journalists, academics, airline pilots and businessmen have all been targeted.

Increasingly the crackdown resembles a witch-hunt, far bigger than Senator Joe McCarthy's purge of suspected communists in America in the 1950s. Its latest casualties include a pop singer arrested for publishing columns in a Gulenist newspaper and a dancer sacked by the national ballet for allegedly selling his home through a Gulenist bank (which he denies). The authorities have shut thousands of schools, businesses and foundations. According to one minister, the state has seized more than $4 billion-worth of Gulenist assets.

Meanwhile the purge is spreading to Turkey's conflict with its Kurdish minority, which over the past year has led to heavy fighting in the country's south-east. The government now plans to suspend 14,000 teachers over alleged links to the outlawed Kurdistan Workers' Party (PKK). Once a witch-hunt starts, it is hard to stop.

A simple country preacher

The rise of the *cemaat* has its roots in the long struggle between the official secularism established by Kemal Ataturk, Turkey's founding father, and Islam. The imam who founded the movement, Fethullah Gulen, was born in 1941 in eastern Turkey. By the early 1970s poor students were flocking to his impassioned sermons, infused with Sufism and Turkish nationalism. His wealthier acolytes set up a network of foundations, charities, newspapers and schools which pumped a stream of graduates (almost all men) into Turkish business and government, testing the boundaries of Kemalism's anti-Islamist dogma.

In 1999, two years after the army ousted an Islamist prime minister, Mr Gulen wisely left for America. Soon thereafter, he was charged in absentia with subverting Turkey's secular order. A videotape showed him urging followers to seize control of the state. "You must move within the arteries of the system, without anyone noticing your existence," Mr Gulen said on the tape. "You must wait until you have all the state power."

The victory of Mr Erdogan's Islamist Justice and Development (AK) party in the elections of 2002 cleared the way for Mr Gulen's rehabilitation. In 2006 a Turkish court acquitted him. Mr Gulen, by now ensconced in a complex in rural Pennsylvania, became a spokesman for enlightened Islam, preaching interfaith dialogue and the value of science. Teachers and volunteers linked to the *cemaat* fanned out across the globe, blazing a path for Turkish contractors and diplomats. (Turkey had 12 embassies in Africa in 2009; today it boasts 39. Trade with the continent has tripled since 2003.) Under AK, Gulen sympathisers snapped up government jobs by the thousands, replacing the secular old guard and establishing what Turks now call a "parallel state".

They then began to hound their opponents. Starting in 2007, Gulenist prosecutors orchestrated show trials that put hundreds of army officers, thousands of Kurdish activists, several journalists and the chairman of a football club behind bars. Gulenist newspapers cheered the arrests. In a recent interview with a Turkish daily, Ilker Basbug, a former army chief arrested in 2012, said he had warned Mr Erdogan about the *cemaat*. "I told him, we are facing this threat today, you will face it tomorrow," he said. Mr Erdogan turned on the movement only after its bureaucrats turned against him in 2012, by trying to arrest his intelligence chief. A year later, he accused Gulenists of choreographing a corruption scandal involving AK politicians. The coup may have been prompted by government plans to purge Gulenists from the army.

In the months since, Mr Erdogan's government has been rewriting history by pinning its mistakes on Gulenists in its midst. It now blames the show trials, the collapse of peace talks with the PKK in 2015, and the ▸▸

army's long reluctance to intervene against Islamic State militants on the *cemaat*. With the government exercising emergency powers, there is virtually nothing to check Mr Erdogan's crackdown. The new interior minister compares the Gulenists to a plague, and has vowed to fight them "until not a single member is left".

The paranoia is spilling across borders, too. In the Netherlands, schools linked to the movement have hired security guards after parents complained of threats against them and their children. In Bulgaria, the government deported an alleged Gulen financier to Turkey over the objections of its own courts. Turkey's state-run news agency, Anadolu, is churning out country-by-country blacklists of entities and people it claims are linked to the *cemaat*. A Turkish prosecutor recently accused the Vatican of appointing Mr Gulen as a "secret cardinal" in the 1990s.

Secular Turks have no love for the Gulenists, who targeted them in their own purges in the 2000s. They have supported the government's crusade against the *cemaat*, most visibly at a national unity rally in August in Yenikapi, a square in Istanbul. But as people with no real links to the Gulenists are purged, other opponents of AK, and even some of the party's supporters, are starting to fear they may be next. "This is not what we understood as [the spirit of] Yenikapi," said Kemal Kilicdaroglu, the leader of the main opposition party, the CHP, on September 3rd. That misunderstanding may cost Turkey dearly. ■

Spain's coalition talks

Ageing caretakers

MADRID

With a government still out of reach, a third election looms

Somebody has to run this place

BACK in June, after Spain's second indecisive election in six months, many people expected Mariano Rajoy (pictured), the prime minister, to form a new government quickly. Although his conservative People's Party (PP) did not win a majority, it remained the largest party, with 137 of the 350 seats in parliament, and was the only one to increase its share of the vote. But summer has come and gone and Spain's political stalemate is no closer to ending.

In two parliamentary votes, on August 30th and September 2nd, Mr Rajoy fell short of securing a mandate, with 170 votes in favour but 180 against. These votes started the clock for a third election, once seen as unthinkable. If no one can secure a majority by the end of October, parliament will be dissolved and Spaniards will face a Christmas election.

For this, most commentators put the blame squarely on Pedro Sánchez, the leader of the opposition Socialists. His 85 deputies hold the balance of power. But he refuses to allow enough of them to abstain to give Mr Rajoy his mandate. He accuses Mr Rajoy and the PP of betraying Spaniards' trust and of burdening the country with austerity and corruption.

Mr Rajoy argues that in 2011-15 his government took the tough measures required to return Spain's economy to growth. Year-on-year GDP growth was 3.1% in the second quarter; for the European Union as a whole it was just 1.8%. Last month Mr Rajoy struck an accord with Ciudadanos, a new liberal party, to crack down further on corruption, reform the judiciary and restore social spending.

So what now? The PP has brushed off suggestions that Mr Rajoy might step down in favour of another of its leaders. The pressure will remain firmly on Mr Sánchez to bend. He hinted that he might seek to form a government himself, with Podemos, a new far-left party. But he failed to do that after the election in December, and the numbers now do not add up.

The party leaders are still struggling to adapt to a new political world, in which a two-party system has given way to a fragmented parliament, while Catalan and some Basque nationalists are set on independence rather than deals in Madrid. The Socialists are split. Several of the party's regional leaders support abstention; others favour continued opposition. Mr Sánchez's calculation seems to be that the Socialists would gain in a third election at the expense of Podemos, which may have peaked. Several corruption trials involving former PP officials are due to start in the autumn, which may hurt Mr Rajoy.

This is a risky course for the Socialists. Mr Rajoy rightly charges that Mr Sánchez's blocking of a government "carries a steep bill which all Spaniards will have to pay". Spain has already marginalised itself from the EU's discussions about its post-Brexit future. Without a government, it will be unable to approve a budget for 2017 or meet promises to the EU to cut its fiscal deficit from 5.1% of GDP in 2015 to 3.1% in 2017.

Some Socialists are muttering about forcing Mr Sánchez to shift his stance or go. They have the increasingly shrill support of *El País*, a newspaper that generally backs the party. The pressure will mount if the Socialists do poorly in regional elections in the Basque Country and Galicia on September 25th. That might induce them to let Mr Rajoy form a government before the late-October deadline. But the chance of a third election is rising steadily. ■

Ireland and Europe

Upsetting the Apple cart

Europe's most Europhile country is on the warpath with Brussels over tax

FEW of Europe's economies have had a more miserable decade than Ireland. Since being hit hard by the financial crisis, it has endured nearly ten years of austerity. But on August 30th there was what, at first, looked like good news: the European Commission ordered Ireland to collect €13 billion ($14.7 billion), a sum almost equal to 6% of annual GDP, in unpaid taxes from Apple, an American tech giant.

Yet instead of dreaming of ways to spend the money, most senior Irish politicians were apoplectic with rage when the ruling was debated in parliament on September 7th. "We will fight it at home and abroad and in the courts," thundered Ireland's finance minister. "This is not a commission finding that stands by a small country," said the *taoiseach* (prime minister). "It cannot be allowed to stand."

Such anti-Brussels views have suddenly become surprisingly common across the Irish establishment. Fianna Fail and Labour unanimously supported the government, led by Fine Gael, in its decision to appeal. "They should write a letter to Europe and tell them to fuck off," advised Michael O'Leary, the forthright boss of Ryanair, Ireland's largest indigenous firm.

Mainstream parties appear to be in line with the broader mood. A poll published by Amarach Research, a consultancy, on September 5th found just 24% of the Irish public opposed appealing against the commission's ruling. Those who want to keep the money are mainly Eurosceptics, including Sinn Fein, a nationalist party. They do so more to bash the political mainstream than for any newfound love for the EU, says Brian Hayes, a Fine Gael MEP.

The Irish see little point in dunning Apple for back taxes. The company did pay shockingly little on its profits—just 0.005% in 2014. Yet were Ireland to collect the €13 billion, the EU ruling allows other countries to claim a share if they think Apple's activities took place on their turf. And the company might well pack up and leave.

Many believe that the EU is using the ruling as a way to attack Ireland's low corporate tax rate of 12.5%. This regime is important for Ireland's economic model, says Dan O'Brien, the chief economist of the Institute of International and European Affairs, a Dublin think-tank. Alongside EU membership and friendly business laws, it is how Ireland attracted the foreign cash that transformed a country of poor farmers into a wealthy knowledge economy. Multinationals lured by the low rate provide a fifth of private-sector jobs. They also produce 14% of tax revenues, well above the OECD average of 8%.

A shaky economy urges caution against moves that alienate foreign investors. On September 6th the governor of the central bank said that Ireland is "especially exposed" to "international shocks". GDP grew by a record 26% in 2015, but that was inflated by multinationals moving in. The domestic economy is expanding at only around 3% a year.

The appeal process will probably take years. Irish politicians are likely to pursue it through the courts to the bitter end. "There's more at stake for them now than there was during the bail-out negotiations of 2010," Mr O'Brien says. France and Germany failed to force Ireland to increase its 12.5% rate back then, but their leaders openly say that a common European rate is still their goal. And after Brexit, Ireland's only big ally in the battle against tax harmonisation, Britain, will disappear from the table.

The Irish have consistently been among the EU's most Europhile members in polls. But a bitter court battle over Apple's taxes will sour relations between Dublin and Brussels for years. ■

Homeopathy in Germany

Not a molecule of sense

BERLIN

A push to disabuse Germans of a homegrown form of quackery

IT MAY not be as ancient as acupuncture, but homeopathy is the closest thing Germany has to a native alternative-medicine tradition. Practitioners line the high street. Upper-class Germans swear by it. Unusually, Germany gives homeopathy a privileged legal status. Whereas other medicines must meet scientific criteria, homeopathic remedies need not, and health insurers are explicitly allowed to reimburse for their use. This bothers sceptics such as Norbert Schmacke, a professor of medicine and the author of a book explaining why homeopathy is nonsense. "If you believe that water has memory," as homeopaths do, you "might as well also believe in unicorns", he says.

Such objections have been raised for much of the two centuries since Samuel Hahnemann, a Saxon doctor, invented homeopathy. He believed that "like cures like"—ie, that tiny doses of a toxin can heal the patient. And he did mean tiny: homeopaths dilute their chemicals into water or sugar to concentrations of 1 part to billions or even trillions. Usually not a single molecule remains in the preparation. Yet believers claim that this dilution makes the remedies stronger, provided that practitioners use the proper shaking technique.

Homeopathy's renaissance started in the 1970s, when it was rediscovered by West Germany's glitterati, including Veronica Carstens, the wife of a former German president. A big lobby sprung up. As homeopathy spread internationally, so did the controversies. Australia's medical-research council last year came out firmly against the technique; Britain and Switzerland are still debating.

Nobody denies that some people are sincerely convinced they benefit from homeopathy. This is thanks to the placebo effect—the more one believes, the bigger the effect. But no respectable scientific study has ever shown anything beyond that. That is why a group of German professors and doctors, including Mr Schmacke, met in Freiburg earlier this year to issue a declaration. Homeopathy is "a stubbornly surviving belief system", they argue, which "cannot explain itself" and relies on "self-deception" by patients and therapists.

At a conference in Bremen in May, the homeopathy lobby struck back, publishing a meta-analysis of research that supposedly proves homeopathy works. It contains old studies already debunked, the sceptics pointed out. As that fight rages on, politicians are becoming bolder. In August Josef Hecken, the chairman of the committee that governs what public health insurance can cover, said he favours banning homeopathy from the list. None of this will sway the faithful. "I'm not worried because I know that it works," says Cornelia Bajic, the homeopathy lobby's leader. She trusts her experience as a practitioner, she says, as well as the hordes of people showing up for treatment. In other words, if people think it works, it must work. Some might term such reasoning "superstition".

Not as bad as leeches

Donald Trump and the Russians

Brazen meddling

MOSCOW

The Kremlin prefers a Trump victory, but its feelings are mixed

THE plan was, as Donald Trump might put it, "yuuuge": a statue of Christopher Columbus taller than the Statue of Liberty, donated by the Russian government, to be built on the banks of New York's Hudson river. "It's got $40m-worth of bronze in it," Mr Trump bragged of the design by Zurab Tsereteli, a Moscow-based monumental sculptor, in 1997. But the project never came to fruition. The statue found a home only this year, in Puerto Rico (see picture).

Beautiful, I'm telling you

Now Russia is hoping Mr Trump's run at the American presidency will prove more successful, and the Kremlin appears to be trying to give him a boost. American officials believe Russia hacked the e-mails from the Democratic National Committee (DNC) that appeared in July on WikiLeaks. The *Washington Post* reports that American spooks are investigating "a broad covert Russian operation" to sow distrust in the elections. Michael Morell, a former deputy director of the CIA, suggested that Mr Trump had become an "unwitting agent of the Russian Federation".

That may be taking things a bit far. Moscow clearly prefers Mr Trump, largely because it hates Hillary Clinton's interventionist foreign-policy views. But many Russian officials are worried by the disruptive potential of a Trump presidency. "If he ends up in the White House, does it mean he'll actually begin to fulfil all his chaotic promises?" asks Valery Garbuzov, head of the Russian Academy of Science's Institute for the USA and Canada.

Vladimir Putin is clearly pleased with Mr Trump's praise for him. ("He's been a leader, far more than our president," Mr Trump said this week.) And the Kremlin is thrilled by Mr Trump's statements deriding NATO, applauding Brexit, and suggesting that America might not defend allies threatened by Russia. "His views on America's role in the world completely align with the hopes that Russia has always had," says Fyodor Lukyanov, a Russian foreign-policy expert.

Stylistically, too, Mr Trump is Mr Putin's type: a man ready to make a deal. Like Silvio Berlusconi, the former Italian leader and pal of Mr Putin, Mr Trump seems unlikely to put politically correct talk of Western values ahead of mutual interests. That he may harm the Western alliance in the process is a welcome bonus. "Trump will smash America as we know it, we've got nothing to lose," writes Konstantin Rykov, a former Duma deputy.

Mr Putin's circle has also been encouraged by Mr Trump's use of advisers sympathetic to Moscow. His former campaign chief, Paul Manafort, previously worked for Ukraine's ex-president, Viktor Yanukovych, a Kremlin ally. Carter Page, a foreign-policy adviser to the Trump campaign, made a speech in Moscow this summer denouncing America's "hypocritical focus on... democratisation". Late last year another adviser, General Michael Flynn, a former head of the Defence Intelligence Agency, popped up in Moscow at an anniversary dinner for RT, the Kremlin-backed broadcaster. He spent part of the evening seated next to Mr Putin.

Yet, as with many of Mr Trump's proposals, it is unclear how committed he is to his pronouncements on Russia policy, if at all. There is no evidence that his campaign has received Russian money. Mr Trump's business interests in Russia amount to little, though not for want of trying: his multiple attempts to crack the Moscow property market, beginning with a trip to the Soviet Union in 1987, all fell through. If anything, this suggests a lack of well-placed Kremlin connections rather than the opposite. His most successful venture involved bringing the Miss Universe pageant to Moscow in 2013. While Mr Trump hoped Mr Putin would attend—tweeting "Will he become my new best friend?"—the Russian president never made it.

Foreign-policy professionals in Moscow understand the risks of Mr Trump's unpredictability. "If Trump wins, it's an equation where everything is unknown. There, x times y equals z," says Konstantin Kosachev, head of the Russian senate's foreign-affairs committee. While Mrs Clinton is seen as fiercely anti-Russian, she is a familiar figure, and even commands grudging respect. "As a rule, it is easier to deal with experienced professionals," wrote Igor Ivanov, a former foreign minister, in a recent column in *Rossiskaya Gazyeta*, a government newspaper.

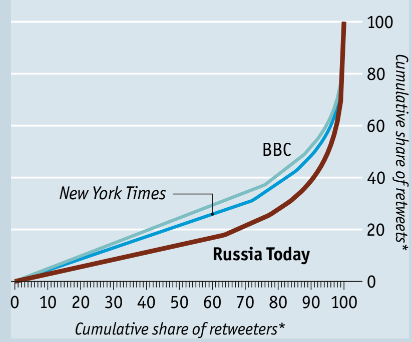
Regardless of who takes the White House, Russia's presence at the centre of American electoral politics is celebrated in Moscow. While Russian officials deny allegations of meddling, the accusations also reinforce the sense of Mr Putin's power. The focus on Russia in the American campaign is "a true acknowledgment that Russia has returned to the international arena as a real factor in world politics", says Mr Kosachev. That, perhaps even more than Mr Trump's victory, is what the Kremlin truly craves. ■

Tweetganda

RT, the pro-Kremlin TV network, spits out a tweet every two minutes, many of them shared hundreds of times. Are they shared because human beings find them witty and persuasive? Perhaps not. An analysis of over 33,000 tweets from three news outlets shows that RT gets its retweets from relatively few followers. A similar pattern holds for who "likes" its posts on Facebook. Of the 50 accounts that most often retweet RT, 16 have such a regular pattern that they are probably "bots"—ie, computer programs—or chronic insomniacs. Many of the rest are extremely fond of Donald Trump.

Distribution of retweets of news organisations' posts

July-September 2016, %



Sources: Twitter; *The Economist*

*Based on 33,000 tweets from each news company's three biggest English channels

Charlemagne | Unshrinking the continent

Europeans see themselves as mouse-sized. They need to man up

LIKE all good B-movies, "The Incredible Shrinking Man" is deeper than it seems. After his body's growth is sent into reverse by a wayward encounter with a radioactive cloud (yes, this is 1957), Scott Carey, the film's hero, finds his relationships destroyed and his self-esteem dripping away. Richard Matheson, the screenwriter, said it was a "metaphor for how man's place in the world was diminishing". Today he might say the same for the old continent. Beleaguered by crisis and shorn of confidence, Europe seems to be shrinking by the day.

It might seem an odd time for such a claim. This week came news that the euro zone grew by 1.6% in the second quarter compared with a year earlier, and the European Union, lifted by a pre-referendum Britain, by 1.8%. This, as Eurocrats wasted no time pointing out, was a good clip faster than the United States. In most countries budget deficits are under control, and after years of austerity the euro zone is at last enjoying the mildest of fiscal expansions. Outside Italy its banks are in better shape. A pan-EU investment scheme launched, to much scepticism, by the European Commission last year is starting to show results.

Yet draw the camera back and the picture looks gloomier. The American economy dug itself out of its hole long ago. But according to calculations by the Peterson Institute for International Economics, an American think-tank, output in 11 EU countries has yet to recover to 2007 levels. Large economies, like France and particularly Italy, are struggling. The IMF has downgraded its forecasts for the euro zone, warning of the risks posed by Brexit. Unemployment remains over 10%, twice the American rate. And there is precious little thinking about long-term challenges like ageing, infrastructure or education.

Towards the end of the film, Carey, now reduced to a few inches, laments that creatures like domestic cats and spiders have become enemies that seem "immortal". Today in Europe unexpected changes, from genetically modified food to Uber, are too often perceived first as threats. "Even the slightest headwind seems to be framed as the beginning of the next big crisis," said Jeroen Dijsselbloem, head of the Eurogroup of finance ministers, this week. After battling crisis for so long, Europeans now see it everywhere.

Take migration. The refugee deal the EU signed with Turkey in March has brought numbers under control. The agreement's deeper promise was to resettle refugees to Europe in an orderly fashion. Yet the EU has lost interest in that pledge, and remains entirely focused on preventing another migrant surge. In Germany politicians are revisiting last year's arguments over open borders rather than grappling with the challenges of integration. The upcoming presidential campaign in France looks set to be dominated by inward-looking concerns about identity, security and burkinis. In most of the depopulating countries of eastern Europe it is impossible even to begin a serious debate about migration, including the legal sort. And Europeans conflate migrants with their obsessive fear of terrorism, which, though a real threat, is less prevalent than it was in the 1970s.

Or take trade. TTIP, a proposed trade-and-investment agreement with the United States, is on life support after taking a beating from politicians across Europe. A "next-generation" deal concentrating on regulations and standards rather than tariffs was always going to be a tough sell. But rather than seek to shape negotiations with their most important ally, many Europeans now prefer simply to write the thing off. Even a trade deal with Canada, concluded two years ago and now awaiting ratification in Europe's parliaments, may fall foul of opposition in Germany and Austria. Bashing international trade—by one account responsible for one in seven jobs in the EU—has become a favoured sport for European populists of both left and right.

Like Carey, what Europe desperately needs is growth. Yet Europeans train their sights on the sources of growth and shoot them down, one by one. Easing digital trade within the EU might provide a boost. Yet the highlight of the European Commission's much-ballyhooed proposals to deepen the digital single market may be a tired plan to help publishers charge search engines for linking to their stories. Tackling labour- and product-market rigidities could lift euro-zone GDP by 6% over the next decade, according to the OECD, a club of mainly rich countries. But politicians are too scared; instead they blame stagnation on the budget limits imposed by Brussels. It is not hard to see why. This summer a mild labour reform in France triggered weeks of protests.

Hormones needed

Slow growth, small declines in unemployment and an absence of crisis have started to feel like grand achievements. The heavy lifting has been done by the European Central Bank, which has bought €1 trillion ($1.1 trillion) of sovereign debt during 18 months of quantitative easing. That monetary stimulus lets leaders postpone reform in sclerotic economies like Italy and Portugal. Spain, where youth unemployment has been over 40% since 2010, is held up as a success. From time to time a powerless European dignitary will proclaim such figures a disgrace. A think-tank will lament European inaction. And then everyone moves on.

It is not that Europe's crises are imaginary. From Russia to refugees to Brexit, they are real enough. Polls show that European voters worry more about immigration and terrorism than about economic insecurity, and their leaders must respond. But they should not allow fear to cloud their judgment. Europe is not as small and helpless as it seems to think it is. With 7% of the world's population, the EU accounts for 22% of its economic output. It still wields considerable soft power. At the end of "The Incredible Shrinking Man", Carey comforts himself with the thought that however much his body may diminish, he will at least retain his own little place within the universe. With luck, Europe can muster a little more ambition. ■

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Britain and the European Union

So what will Brexit really mean?

Theresa May's ministers are carefully avoiding specific answers. But she is systematically disowning many of the Brexiteers' promises

SOME 77 days have passed since Britain voted on June 23rd to leave the European Union. Yet this period has been strangely reminiscent of 77 years ago, after Neville Chamberlain declared war on Nazi Germany: a phoney war. Theresa May, the prime minister, has created a new Department for Exiting the EU and put three leading Brexiteers (pictured) in charge of the process. But little else has happened. Article 50 of the EU treaty, which would kick off negotiations, has not been invoked. And Mrs May's mantra, "Brexit means Brexit", has become a tired cliché.

David Davis, secretary of state for the new department, had another go in Parliament on September 5th. Brexit, he explained helpfully, meant leaving the EU. He added that this implied taking back control of borders, laws and taxpayers' money. He brimmed with cheer about the opportunities it would bring. Yet when asked specific questions—Would Britain quit the EU's single market? What migration controls would it seek? Would it stay in Europol? When would negotiations start?—he gave only vague answers.

That may be quite sensible, for a reason he also offered: that it is more important to get Brexit right than to do it quickly. His department is a work in progress. He has 180 officials and a further 120 in Brussels, but he needs more. As he spoke, he was flanked by his two Brexiteer colleagues, Boris Johnson as foreign secretary and Liam Fox at the Department for International Trade. The three men have been having the usual turf wars and squabbles over exactly what Brexit should entail.

Tellingly, two hints at answers emerged this week in Asia, not Westminster. In China for the G20 summit, Mrs May disavowed several pledges made by Brexiteers before the referendum. She said she was against an Australian-style "points" system for EU migrants (though mainly because it might let in too many, not too few). She refused to back Leavers' promises to transfer saved EU budget payments to the National Health Service or scrap VAT on fuel bills. The not-so-subtle message was that, though the three Brexiteers may be nominally in charge, the real decisions will be taken by her and by Philip Hammond, her chancellor, both of them Remainers.

A tip from Tokyo

These two may have welcomed a second Asian intervention: the unusual publication by Japan's foreign ministry of a Brexit paper. Japanese companies, it said, were huge employers in Britain, which took almost half of Japan's investment in the EU last year. Most of that came because Britain is a gateway to Europe. The paper advised Mrs May to try to retain full access to the single market, to avoid customs controls on exports, to preserve the "passport" that allows banks based in London to trade across Europe and to let employers freely hire EU nationals.

These interventions worry Tory Brexiteers, who fret that having won a famous victory in June, they could lose the war. Their fear is that, given the choice, Mrs May and Mr Hammond will lean more to staying in the single market than to taking back full control of migration, money and laws. Mr Davis said this week that having access to the single market was not the same as being a member of it, and added that giving up border control to secure membership was an "improbable" outcome. But he was slapped down when Mrs May's spokeswoman said the remark was only Mr Davis's personal opinion. He also talked of retaining as much of the status quo as possible, not least in areas like security and foreign-policy co-operation.

The case for staying in the single market is simple: economists say this will minimise the economic damage from Brexit. A "hard" Brexit that involves leaving the single market without comprehensive free-trade deals with the EU and third countries would mean a bigger drop in investment and output. Brexiteers claim that many countries want free-trade deals and the economy is proving more robust than Remainers forecast. Michael Gove, a leading Brexiteer and former justice secretary, scoffed that *soi-disant* experts predicting economic doom had "*oeuf* on their face".

Yet Mrs May is less complacent, acknowledging that it will not be "plain sailing" for the economy. Domestic business and financial lobbies are pressing to stay in the single market. As for trade deals, although she won warm words at the G20 summit from Australia's prime minister, Malcolm Turnbull, she was told firmly by Barack Obama and others that bilateral ▸▸

deals with Britain would not be a priority. The climate for free-trade deals is not propitious these days, and Mr Fox's department is bereft of experienced trade negotiators.

Mrs May has ruled out an early election and a second referendum. She refuses to provide a "running commentary" on her Brexit plans. And she insists she can invoke Article 50 without a parliamentary vote. Yet she is being urged by some to delay, since it would set a two-year deadline for Brexit that can be extended only by unanimity among EU leaders. In a thoughtful paper for the think-tank Open Europe, Andrew Tyrie, chairman of the Treasury committee, says the government should first decide what sort of Brexit it wants, adding that its leverage is greater before it pulls the trigger. He suggests waiting until the French election in the spring or even the German one in September.

Yet Mrs May might not be allowed to wait by her own party, let alone by fellow EU leaders eager to get Brexit out of the way before the European elections in mid-2019. The phoney war may soon turn hotter. ■

The National Health Service

Accident and emergency

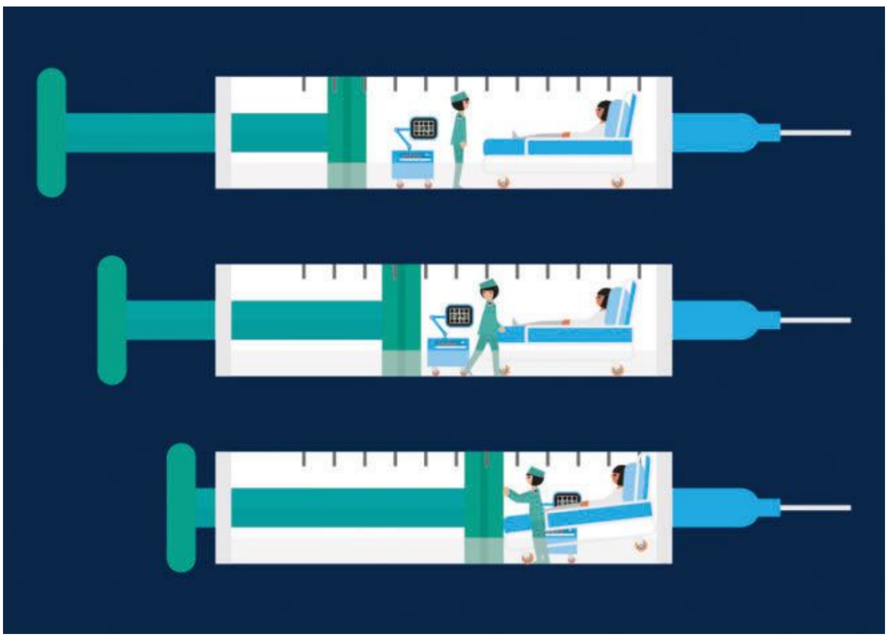
BIRMINGHAM, CASTLE CARY AND SALFORD

The NHS is in a mess. But reformers believe that new models of health care, many pioneered in other countries, can fix it

SALLY EVANS is 75 years old. She lives on her own in a bungalow in Castle Cary, a market town in Somerset, where she loves to knit and tend her garden. Both hobbies are harder than they were; Mrs Evans has a bad back and, like two-thirds of British adults, she is overweight. She also has diabetes, high cholesterol, chronic heart failure, high blood pressure, hyperthyroidism, incontinence and gout. All of which are made worse by a waning memory.

Like health-care systems around the world, the National Health Service (NHS) is struggling to provide good care at low cost for patients such as Mrs Evans (not her real name). Its business model has not kept up with the changing burden of disease. For as more people enter and live longer in their dotage, demand increases for two costly types of care. The first is looking after the dying. About 25% of all hospital inpatient spending during a person's lifetime occurs in the final three months. The second is caring for those with more than one chronic condition. About 70% of NHS spending goes on long-term illnesses. More than half of over-70s have at least two and a quarter have at least three. In south Somerset 50% of health and social-care funding is spent on 4% of people.

The same pattern is found across the NHS, and it is struggling to cope. The pressures on the service once felt only in winter are now present throughout the year (see chart 1 on next page). Performance against waiting-times targets for cancer treatment and emergency care has deteriorated. The British Medical Association, a doctors' trade union, is threatening strikes in October, November and December as part of a year-long dispute over a new contract. Jim Mackey, chief executive of NHS Improvement, a health regulator, puts it bluntly: "The NHS is in a mess."



When it was established in 1948, the NHS was the first universal health-care system free at the point of use. It is the institution of which Britons are most proud. No other country's health service would have had a slot in the opening ceremony of an Olympic games, as the NHS did in 2012 in London. And yet it is of middling quality. England has a few world-leading hospitals. It vaccinates more people against influenza and screens more women for cancers than most rich countries. But its performance on standard measures of quality—such as survival rates from cancers, strokes and heart attacks—compares badly.

If one fallacy about the NHS is that it is the envy of the world, as its devotees claim, another is that it is a single organisation. In fact it is a series of interlocking systems. Public health, hospitals, general practitioners (or GPs, the family doctors who provide basic care outside hospitals) and mental-health services all have separate funding and incentives. Social care, which includes old-folks' homes and the like, is run by local councils, not the NHS.

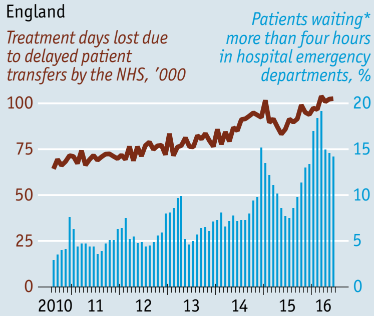
Governments have relentlessly tinkered with this complex system. Since 1974 there has been a reorganisation of the English NHS about once every two years. (Scotland, Wales and Northern Ireland have their own autonomous services.) The most important was in 1990 when the Conservative government introduced an "internal market". Before the change, regional health authorities had been responsible for almost every aspect of running hospitals. The reform divided the bureaucracy in two. Henceforth one part of the NHS would be responsible for buying services from hospitals and another would be in charge of running them. The subsequent Labour government encouraged more competition and made it easier for private hospitals to provide NHS treatment. It also unleashed a tsunami of targets.

The Health and Social Care Act, passed by the Conservative-led coalition in 2012, was described by a former head of the NHS as a reform so big it could be seen from space. But it has changed little on Earth. Today 209 "Clinical Commissioning Groups" are simply the latest parts of the NHS to purchase services from providers of care, usually hospitals. Paul Corrigan, a former adviser to Tony Blair, says the NHS is still a system set up to fix acute problems, not to treat long-term conditions. He compares recent reformers to someone "trying to connect their iPhone to a landline".

One aim of the 2012 act was to prevent ministers from micromanaging the NHS. But the reality is closer to the ideal of Aneu-

Vital signs 1

England

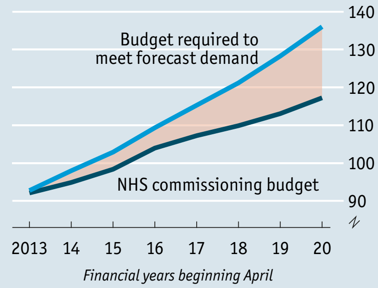


*From arrival to admission, transfer or discharge

Source: NHS England

Operating costs 2

England, £bn



Source: Nuffield Trust

rin Bevan, the post-war Labour health secretary who wanted the echo of bedpans hitting the floor in Tredegar to reverberate in Whitehall. Most Monday mornings, Jeremy Hunt, the current health secretary, gathers officials to go through the indicators for each NHS trust, line by line. Afterwards hospital bosses are told to shape up.

But pep talks can only go so far. To fix the NHS requires changes in three areas. First, funding. Second, hospitals' efficiency. And critically, third, reducing demand for unnecessary treatments through better public health and joined-up care.

Since 1948, spending on the NHS has grown by an average of 3.7% per year. From 2010-11 to 2020-21 growth is set to average 0.9%. On a per person basis the budget will hardly budge—a big departure from the 2000s, when it shot up by 70%. NHS finances are "in a much worse position than they have ever been", says Chris Ham of the King's Fund think-tank.

"It is all about the money," adds Jennifer Dixon of the Health Foundation, another think-tank. No other rich European country is going through as steep a deceleration in funding. Britain-wide spending on health as a share of GDP in 2014-15 was 7.3% (£134 billion or $180 billion), lower than in most of its peers. It is projected to fall to 6.6% by 2021. If demand grows as forecast by the NHS, and it makes no efficiency savings, the service faces a shortfall of about £20 billion by 2020-21 (see chart 2).

It is already on the verge of crisis. Several hospital divisions face closure, according to Chris Hopson, head of NHS Providers, which lobbies government on behalf of the local trusts that run services. Nearly nine out of ten hospital trusts ended the last financial year in deficit. Their costs rose as their income fell, a result of the government reducing the amount it paid per treatment. When companies are in the red they eventually go bankrupt. When trusts are in the red they are typically bailed out and told to improve. Since most of them are in trouble, in July the NHS opted to "reset" trusts' financial and performance targets.

Rising patient frustration may force the government to increase funding. But historically the public has been keener to fetishise the NHS than pay for it. Polls suggest that only a minority of people would be prepared to pay more in general taxation to boost its funding.

This has led some wonks to propose a dedicated "NHS tax". Though the Treasury is almost genetically sceptical of hypothecated taxes, the idea is popular among health officials and, more surprisingly, Conservative MPs. Andrew Haldenby of Reform, a think-tank, suggests that there could be charges for services such as seeing a GP, as is the case in about two-thirds of members of the OECD rich-country club. Though this idea is controversial, the NHS has since 1952 charged for seeing a dentist and for prescriptions. "There is no Rubicon to cross," says Stephen Dorrell, a Conservative former health secretary.

Then there is a more radical option: ditch the taxpayer-funded model altogether and replace it with health insurance. Typically the French, Swiss or German model of universal social insurance is pitched, as opposed to the American model. This is not a new idea; William Beveridge, who proposed a national health service during the second world war, preferred it. Its supporters argue that in countries that mandate health insurance, more money is spent on health and outcomes are better, partly as a result of competition between providers. One recent paper calling for social insurance in Britain is entitled: "What are we afraid of?"

"An administrative mess" is the answer. After the chaos of the 2012 reforms there is little appetite for a shift in funding models. Most officials, and not only in the health department, believe that the cost of moving to social insurance would outweigh its benefits. They argue that what you spend is what you get: Britain spends less on health and its outcomes are worse than those of its peers. "Social insurance is a red herring," says one senior Conservative.

Tightening the tourniquet

So the NHS must do more with what it already spends. A sign of inefficiency is the 6,000 patients in English hospitals who are ready to go home but not yet discharged, up from 4,000 in 2013. They cost the service hundreds of millions of pounds per year and obstruct others from treatment. The bed-blockers themselves are harmed, too. Elderly patients lose up to 5% of muscle strength for every day they are laid up in hospital. Some delays are the result of council cuts: about 400,000 fewer old people receive social care than in 2010, meaning that hospitals are sometimes used as expensive alternatives to care homes. But most are due to how hospitals are run.

A review published in February by Patrick Carter, a Labour peer, concluded that "most [hospitals] still don't know what they buy, how much they buy, and what they pay for goods and services." There is huge variation in costs and outcomes. For hip replacements, hospitals pay between £788 and £1,590 for similar prosthetics. Rates of deep-wound infection, an avoidable complication, vary from 0.5% to 4%. Reducing the average to 1% would improve the lives of 6,000 patients per year and save £300m. Some trusts always use the recommended "cemented" fixation method for replacements, others for only one in 50 operations. And implementation of good ideas takes too long—about 17 years for scientific discoveries to enter day-to-day practice, by some estimates.

This is not helped by the way hospitals are paid. The NHS tariff system rewards repeat activity rather than innovation. Iain Hennessey, a paediatric surgeon at Alder Hey hospital in Liverpool, wanted to use Skype to show parents remotely how to remove their children's dressings. Yet he was prevented from doing so because the tariff price for a "telemedicine consultation" was too low. Patients instead came into hospital for more expensive treatment. Sir David Dalton, head of Salford Royal hospital, says such practices reflect the NHS's "institutionally low tolerance to risk".

This conservatism is also apparent in its approach to its workforce. The English NHS is the biggest employer in Europe. It employs 1.4m people, or 5% of England's workers. Staff costs account for more than two-thirds of hospitals' budgets. But England has more shortages of hospital staff than other rich countries. In 2013-14 the NHS spent £3.3 billion on agency staff to cover gaps. Overtime costs rose, too. A consultant in Lancashire last year earned £374,999 in overtime. His basic salary: about £89,000. This is because the pay and volume of NHS employees are still centrally planned many years in advance via a system one official calls "Soviet".

Some of these problems would be fixed by recognising that there are too many hospitals. Across the world hospital chains are scaling up. Simon Stevens, the NHS's chief executive, cites health firms such as Apollo in India, Helios in Germany and several American outfits that have saved money through shared staffing, back-office functions and procurement. Specialised care is better at scale. "Surgery is about practice and volume," explains Mr Hennessey of Alder Hey. When Denmark reduced by two-thirds the number of hospitals that perform colorectal cancer surgery, post-operative mortality rates after two years improved by 62%. In Germany, higher-volume cancer-treatment centres have fewer complications than others. Fewer people have died of strokes in London since it merged 32 specialist sites into eight.

"England has great attachment to the general hospital but it is a broken model," says Sir David of Salford Royal. In a recent review for the government, he suggests that the 154 trusts that run hospitals should be reduced to 40-60 larger ones. It could be made easier for high-performing trusts to take over bad ones, and for private providers to take over failing hospitals.

Under the knife

Yet making up the funding shortfall through efficiency savings alone would require a bigger gain in productivity than any in the history of the NHS. And the fundamental problem remains that demand for hospital services is outpacing what the NHS is supplying. Referrals to hospital have risen by 20% since 2009-10, about three times as much as NHS spending.

Curbing demand will be critical to the NHS's long-term viability. This is partly about public health. Mr Stevens has described obesity, for example, as "the new smoking". About one-third of English children are overweight, compared with an average of one-fifth across the OECD. Nevertheless, funding for public health is falling and the new government has slimmed down plans to reduce child obesity.

This will only increase pressure on the NHS. In response, it will need to rein in demand for expensive hospital treatment by changing how non-hospital care is organised. Since the NHS is largely free at the point of use, governments have managed demand via GPs, who act as gatekeepers to hospital and prescriptions. And yet most GP practices are "artisan shopkeepers in an age of Amazon", according to one Whitehall official. They are ill-equipped to deal with rising demand.

If hospitals have suffered from relentless overhauls, GPs have received malign neglect. Though the vast majority of contacts between patients and the NHS are carried out by GP practices, they receive only about one-tenth of the NHS budget. The deal between GPs and the NHS is one of the most complex public-sector contracts in the world. Their funding is based on the number of patients in their area (adjusted for demographics) and whether the GPs meet targets set by the government. A study published in May by the *Lancet*, a medical journal, concluded that this framework of targets had not led to any "significant changes in mortality". Gwyn Harris, medical director of Modality partnership, a group of GPs, goes further. Under what he calls an "inverse pay law", those GPs who spend more on services which might keep patients out of hospital, such as a home visit by a nurse, make smaller margins. The worst doctors have the best returns.

On average, the framework made GPs some of the highest-paid family doctors in the world when it was introduced in 2004. But since then it has become less generous. GPs' real-terms income has fallen by one-fifth. This, and poor planning, has led to a shortage of them. England needs 5,000 more in the next five years. The NHS is mulling a deal with Apollo, whereby the Indian health-care firm supplies enough doctors to fill the gap.

Improving the GP system so that it can cope with rising demand will require it to move away from its artisan model, embrace technology and work more closely with hospitals and other parts of the health service. A few GP sites are already expanding. In Birmingham, 17 practices run by Modality cover 65,000 patients. Its GPs are salaried rather than partners, following a trend seen elsewhere in the world (most American doctors were self-employed a decade ago, whereas now less than a quarter are). Modality has a single call-centre for booking patients. Nurses and doctors often attend to patients by phone or video-link. This has reduced no-shows while allowing GPs to spend more time on complex cases. Sarb Basi, Modality's managing director, thinks that in 20 years there will be just 50 GP providers in England.

GP practices are also belatedly embracing technology. Only 2% of people use the internet to contact their doctor. But two practices in Essex, for example, are trialling Babylon, an app that uses machine learning to diagnose symptoms. Others are cleverly using data. When Paul Mears became chief executive of Yeovil hospital he used customer segmentation techniques learned in previous jobs at British Airways and Eurostar. This helped him to realise that unless south Somerset's fragmented systems worked together to deal with the costliest 4% of patients, he would need three new wards to keep up with demand.

To integrate them he launched Symphony, which cares for Mrs Evans. It is one of the NHS's "Vanguard" projects, many of which are trying to integrate historically separate parts of the system. Symphony took inspiration from the Esther Project in Sweden, in which care for complex patients is organised around their timetables, not those of doctors. Symphony has introduced "care co-ordinators" and "health coaches" who spend hours with patients to work out bespoke care plans. This makes patients feel more in control and has reduced admissions.

Nevertheless, the people who run Vanguard projects worry that they cannot transform care without overhauling how money flows through the health system. Budgets remain fragmented. Doctors face competing incentives. Like Mr Stevens, Mr Mears thinks that the future of the NHS lies in Accountable Care Organisations (ACOs). These are increasingly popular ways of organising health care in countries like America, Germany and Singapore. In each case a single provider is responsible for all health care in its area. It is paid for outcomes, not activity. It is given a budget, adjusted for the health of the population. And so long as it meets its targets, it keeps the margin. Mr Stevens wants half of the NHS to use a version of the model by 2020.

The move from "volume to value"—that is, from paying providers for the procedures they carry out to paying them for the outcomes they achieve—has helped to stem the cost of Medicare, the American health system for pensioners. The expansion of ACOs as part of Obamacare led to reduced mortality rates and savings for providers of about 1-2%. But Dan Norton-Jones, a visiting fellow at Harvard, warns that the potential for savings is greater in systems like Medicare, where there is no cap on spending.

And yet ACOs reflect a growing belief that if you want radically to improve health care you have to change how you pay for it. They will not solve all the problems of the NHS, some of which are inherent in its taxpayer-funded model. But perhaps its business model may yet catch up with how illness is changing. The NHS should forget being the envy of the world, and instead learn from it. ■

Race relations

Slavery's legacies

SÃO PAULO

American thinking about race is starting to influence Brazil, the country whose population was shaped more than any other's by the Atlantic slave trade

ALEXANDRA LORAS has lived in eight countries and visited 50-odd more. In most, any racism she might have experienced because of her black skin was deflected by her status as a diplomat's wife. Not in Brazil, where her white husband acted as French consul in São Paulo for four years. At consular events, Ms Loras would be handed coats by guests who mistook her for a maid. She was often taken for a nanny to her fair-haired son. "Brazil is the most racist country I know," she says.

Many Brazilians would bristle at this characterisation—and not just whites. Plenty of *preto* (black) and *pardo* (mixed-race) Brazilians, who together make up just over half of the country's 208m people, proudly contrast its cordial race relations with America's interracial strife. They see Brazil as a "racial democracy", following the ideas of Gilberto Freyre, a Brazilian sociologist who argued in the 1930s that race did not divide Brazil as it did other post-slavery societies. Yet the gulf between white Brazilians and their black and mixed-race compatriots is huge.

Brazil took more African slaves than any other country, and now has nearly three times as many people whose ancestors left Africa in the past few centuries as America does. Yet black faces seldom appear in Brazilian newspapers outside the sports section. Few firms have black bosses. The government has not a single black cabinet member; its predecessor, which called itself progressive, had one—for equality and rights. On average black and mixed-race Brazilians earn 58% as much as whites—a much bigger gap than in America (see chart on next page).

The gap in Brazil, as in America, used to be even wider. Much progress has come from anti-poverty schemes, which, though colour-blind in design, benefit darker-skinned Brazilians more, since they are poorer. More recently, Brazil has started to try explicit racial preferences (known in America as "affirmative action"). But American ideas cannot simply be transplanted to Brazil. Differences in how the two countries were colonised, and how the slave economy operated, led to distinct ideas of what it means to be "black"—and different attitudes to compensatory policies and whom they should target.

Of the 12.5m Africans trafficked across the Atlantic between 1501 and 1866, only 300,000-400,000 disembarked in what is now the United States. They were quickly outnumbered by European settlers. Most whites arrived in families, so interracial relationships were rare. Though white masters fathered many slave children, miscegenation was frowned upon, and later criminalised in most American states.

As black Americans entered the labour market after emancipation, they threatened white incomes, says Avidit Acharya of Stanford University. "One drop" of black blood came to be seen as polluting; laws were passed defining mixed-race children as black and cutting them out of inheritance (though the palest sometimes "passed" as white). Racial resentment, as measured by negative feelings towards blacks, is still greater in areas where slavery was more common. After abolition, violence and racist legislation, such as segregation laws and literacy tests for voters, kept black Americans down.

But these also fostered solidarity among blacks, and mobilisation during the civil-rights era. The black middle class is now quite large. Ms Loras would not seem anomalous in any American city, as she did in São Paulo.

Colour card

In Brazil, unlike America, race has never been black and white. The Portuguese population—700,000 settlers had arrived at the start of the 19th century—was dwarfed by the number of slaves: a total of 4.9m arrived. Portuguese men were encouraged to consort with African women. Since most came without wives, such unions gained some legitimacy. Their offspring, referred to as *mulatto*, enjoyed a social status above that of *pretos*. They worked as overseers or artisans, but also doctors, accountants and lawyers. A *mulatto*, Machado de Assis, was regarded as Brazil's greatest writer even during his lifetime in the 19th century.

Mixing led to a hotch-potch of racial categories. In 1976 the Brazilian Institute of Geography and Statistics (IBGE) recorded 134 terms used by Brazilians to describe themselves, mostly by skin colour. Some were extremely specific, such as *branca* ▸▸

suja (literally "dirty white") or *morena castanha* (nut-brown). The national census offers just a few broad categories—as in America, which offers five, though these days America's also allows you to tick as many as you like and add a self-description. Tiger Woods, a golfer, calls himself "cablinasian" (a portmanteau of caucasian, black, American Indian and Asian).

Both black and white Brazilians have long considered "whiteness" something that can be striven towards. In 1912 João Baptista de Lacerda, a medic and advocate of "whitening" Brazil by encouraging European immigration, predicted that by 2012 the country would be 80% white, 3% mixed and 17% Amerindian; there would be no blacks. As Luciana Alves, who has researched race at the University of São Paulo, explains, an individual could "whiten his soul" by working hard or getting rich. Tomás Santa Rosa, a successful mid-20th-century painter, consoled a dark-skinned peer griping about discrimination, saying that he too "used to be black".

Though only a few black and mixed-race Brazilians ever succeeded in "becoming white", their existence, and the non-binary conception of race, allowed politicians to hold up Brazil as an exemplar of post-colonial harmony. It also made it harder to rally black Brazilians round a hyphenated identity of the sort that unites African-Americans. Brazil's Unified Black Movement, founded in 1978 and inspired by militant American outfits such as the Black Panthers, failed to gain traction. Racism was left not only unchallenged but largely unarticulated.

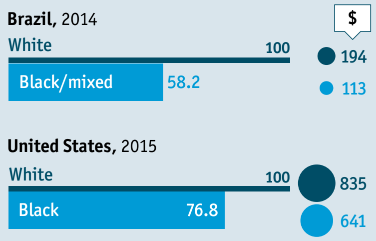
Now Brazil's racial boundaries are shifting—and in the opposite direction to that predicted by Baptista de Lacerda. After falling from 20% to 5% between 1872 and 1990, the share of self-described *pretos* edged up in the past quarter-century, to 8%. The share of *pardos* jumped from 39% in 2000 to 43% in 2010. These increases are bigger than can be explained by births, deaths and immigration, suggesting that some Brazilians who used to see themselves as white or *pardo* are shifting to *pardo* or *preto*. This "chromatographic convergence", as Marcelo Paixão of the University of Texas, in Austin, dubs it, owes a lot to policy choices.

The first law signed by Luiz Inácio Lula da Silva, a white former metalworker who was Brazil's president in 2003-10, required schools to teach about Brazil's African slaves. He introduced a "Black Consciousness Day" on November 20th, on which day in 1695 the leader of a slave rebellion died. In 2004 an Afro-Brazil Museum opened in São Paulo. A few states and cities now have racial quotas when hiring, as do the diplomatic service and federal police.

Brazil's public universities—which are more prestigious than private ones—have also introduced admissions preferences based on race and class. In 1997 barely one in 50 young *pretos* or *pardos* were studying at university or had graduated. That share rose rapidly as the economy improved and incomes rose, and from the early 2000s a handful of public institutions began to reserve some places for non-white students. In 2012 the supreme court ruled the practice constitutional. Shortly afterwards Lula's successor, Dilma Rousseff, brought in racial quotas at all 59 federal universities and 38 technical schools. The effects are already visible on campuses. A study published in August found that between 2010 and 2014 the share of students at federal universities who described themselves as *pretos* or *pardos* jumped from 41% to 48%.

Far from equal

Average weekly earnings as % of whites'



Sources: IBGE; BLS; Thomson Reuters; *The Economist*

There were fears that those admitted under quotas would struggle, as some think they have in America. The test that American students take to enter university is a good predictor of academic success, and American colleges typically admit black and Hispanic students with much lower scores than whites or Asians. This sets them up to fail, argue Richard Sander and Stuart Taylor in their book, "Mismatch". They think that under race-neutral policies more would graduate. Though narrowly approved by the Supreme Court, affirmative-action policies are unpopular in America. Two-thirds of Americans disapprove of the use of race as a factor in college admissions, according to Gallup.

In Brazil, the picture is different. For the few able to afford private schools and intensive coaching, getting into public universities used to be relatively easy. Entrance exams were poorly designed and old-fashioned; though they have been updated, they are still a crude measure of ability. This is perhaps why hard-working, ambitious *cotistas*, as students admitted under quotas are known, are able to hold their own. The first universities to adopt quotas have found that *cotistas* had lower grades on entry but graduated with degrees similar to those of their classmates.

From this year half the places in all Brazil's public universities will be reserved for students who have attended state schools, which prosperous ones seldom do. Half these quota places are reserved for applicants whose family income per person is no more than 1.5 times the minimum wage; and black, mixed-race and indigenous Brazilians are granted quota places in proportion to their share of the local population. The policy has wide support: a poll in 2013, soon after the law was passed, found that two-thirds of Brazilians approved.

Naturally, some people game the system. A study in 2012 by Andrew Francis of Emory University and Maria Tannuri-Pinto of the University of Brasília (UnB) found that some mixed-race but light-skinned applicants to UnB, which introduced quotas in 2004, thought of themselves as white but said they had black heritage to improve their chances of getting in. Once admitted, some reverted to white identity. But not all, as "curly clubs" springing up on previously straight-hair-obsessed campuses attest.

Brazil has a long way to go before it has a black middle class to rival America's. A study in 2009 by Sergei Soares found that if the incomes of black and white Brazilians continued to evolve at 2001-07 rates, they would converge by 2029. But a subsequent severe recession has almost certainly pushed this further into the future. Employers continue to favour lighter-skinned job applicants. Less than a quarter of the officials elected in the federal and state races in 2014 were *preto* or *pardo*. "Decolonising your mind is tough," sighs Ms Loras, whose experiences in Brazil have turned her into a black activist.

But there are hints that an American-style black consciousness is emerging in Brazil—and not only on campuses. In February Ms Loras counted 17 black models on the covers of glossy magazines. Two years earlier, she says, there were hardly any. She is publishing a children's book about famous black inventors. In America such titles are common; in Brazil hers will be the first. According to Renato Araújo da Silva of the Afro-Brazil Museum: "We Brazilian blacks are finally learning to be black." ■

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A.P. Moller-Maersk

Profits overboard

COPENHAGEN

The shipping business is in crisis. The industry leader is not exempt

THE collapse of Hanjin Shipping, a South Korean container line, on August 31st brought home the extent of the storm in shipping. The firm's bankruptcy filing left 66 ships, carrying goods worth $14.5 billion, stranded at sea. Harbours around the world, including the Port of Tokyo, refused entry for fear of going unpaid. With their stock beyond reach, American and British retailers voiced concerns about the run-up to the Christmas shopping period.

Hanjin is not alone. Of the biggest 12 shipping companies that have published results for the past quarter, 11 have announced huge losses. Several weaker outfits are teetering on the edge of bankruptcy. In Japan three firms, Mitsui OSK Lines, NYK Line and Kawasaki Kisen Kaisha, look vulnerable. Activist investors are now pressing for them to merge to avoid the same fate as the South Korean line.

Even the strongest are suffering. France's CMA CGM, the world's third-largest carrier, announced a big first-half loss on September 2nd. Maersk Line, the industry leader, and the largest firm within A.P. Moller-Maersk, a family-controlled Danish conglomerate, will be in the red this year, having lost $107m in the six months to June. The industry could lose as much as $10 billion this year on revenues of $170 billion, reckons Drewry, a consultancy.

Two powerful forces have rocked the industry. The first is the ebbing of world trade since the financial crisis. Two-thirds of global seaborne trade by value is carried in containers, but in 2015, for the first time since they were invented in the 1950s, (apart from the 2009 recession), global GDP grew faster than worldwide box traffic. Insipid economic growth and moribund trade liberalisation play their part; so too do shifts in manufacturing. Multinational firms are increasingly building factories in local markets; General Electric, for example, now makes engine parts where they are needed rather than shipping them from America.

The second factor is a surge in the size of the global container fleet following a ship-ordering binge that began around 2011. Overcapacity has crushed freight rates. Sending a container from Shanghai to Europe now costs half what it did in 2014, according to figures from the Chinese city's shipping exchange.

Shipping has been through many crises but few as severe as this one. The industry may still resist doing what many recommend, which is to tackle overcapacity directly by scrapping vessels. But the depth and length of the downturn mean that firms will start doing things differently.

Eyes are trained on changes at Maersk Group in particular, which has long set the course for the industry. The Danish line has probably lost only $11 per container moved this year, less than the $100 figure for companies like Hanjin, but that is still unacceptable to its bosses and to the family that owns it. They are considering splitting up the conglomerate, and are due to announce details this month.

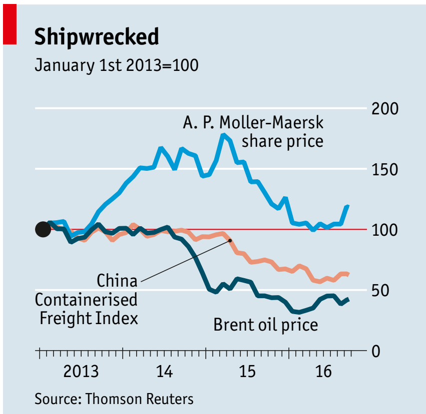
Maersk Group has invested in all sorts of assets since the 1960s: supermarkets, airlines and recently oil drilling, as well as shipping. The idea was to construct a hedge against falling freight rates and spikes in oil prices. When fuel is dear, squeezing container profits, drilling for oil and gas would keep it afloat, or so the thinking went. But since 2014 oil prices and freight rates have fallen together, throwing both the shipping and energy units into a sea of red ink (see chart on next page).

In June Maersk Group's chairman, Michael Pram Rasmussen, fired Nils Smedegaard Andersen, its CEO, and replaced him with Soren Skou, the head of the container line. Mr Andersen, a former boss of Carlsberg, a Danish brewer, and the first CEO to be brought in from outside the company, was keen on retaining some diversification. Mr Skou, who has worked in shipping since he joined the group in 1983, is believed to be more sceptical.

Breakers ahead

The main part of his review of the group's operations will seek to determine whether it should break itself into two: a separate, publicly listed shipping business, encompassing Maersk Line and the group's port terminals and logistics arms, and another listed firm concentrating on its oil exploration and drilling businesses. That would reassure investors, worried that their money is being used to prop up failing divisions. It could widen its pool of potential investors as well as boost its value, says Neil Glynn of Credit Suisse, a bank.

The outcome of the review is still far from certain, but it is thought likely that Maersk Group will end up more focused on its roots in shipping. Mr Skou, who remains CEO of Maersk Line as well as the overall group, has said he wants to see the group's revenues grow, and its oil division ▸▸



will struggle to play its part in this. One short-term but serious problem for Maersk Oil, for example, is that production could halve by 2018 because its licence to operate Qatar's largest offshore oil field is expiring in July next year.

Maersk Line, in contrast, starts from the position of being the biggest shipping firm in the world. Yet it too has lots of work to do if it is to boost revenues and profits from shipping. A favoured cost-cutting strategy among shipping firms so far has been to form alliances. In January 2015 Maersk Line and Mediterranean Shipping Company (MSC) launched 2M, a partnership to share space on their vessels. This April four others got together, followed by six more in May. These three groups now account for nearly three-quarters of the global market. But alliances do not solve the problem of overcapacity and they have not stopped freight rates from falling.

Another tack has been to build bigger ships. "When oil prices were high we built bigger ships and pioneered slow steaming to save bunker costs," says Soren Toft, Mr Skou's COO and right-hand man. Maersk Line built 20 huge "Triple-E" class vessels that could carry just under 20,000 containers each; its biggest rivals, MSC and CMA CGM, followed its lead. But with fuel prices much lower—in 2015 they accounted for less than 13% of Maersk Line's costs—the savings are slim. After the last Triple-E ship entered service last year, it cut back on ordering new vessels.

Maersk Group's big new idea is to make its existing ships smarter. Mr Toft says Maersk Line will focus on using these ships better by embracing the "age of digitisation". This is an area in which shipping lags well behind other sectors, such as aerospace. Whereas a modern jetliner creates several terabytes of data a day, it takes the average cargo ship 50 days to produce a single one. Most ships do not even have basic sensors to ensure their hatches are closed before leaving port. Until very recently the industry resisted using data properly, says Martin Stopford, president of Clarkson Research, part of a shipbroker. Now it cannot afford to ignore systems that offer the chance of reducing costs by up to 30% by better co-ordinating the interaction of ships and shore, he says.

Maersk Line is retrofitting its ships to collect more data. Last year it installed sensors on its containers that track their location and contents. That makes it easier for port terminals to handle them, so ships can leave and start earning money again more quickly. Software also works out how to stack containers on ships more efficiently.

Empty containers are another drain, costing shipping lines up to $20 billion a year, according to BCG, another consultancy. Maersk Line is not the only one using data to deal with this problem. Japan's NYK saved over $100m by getting better at spotting and using empty containers. A new website called xChange, which started operating last November, allows shipping lines to swap spare containers among themselves to maximise efficiency.

The Danish firm's three-year-old analytics team has also worked on discovering the optimal speed and course for its ships. They are trying to cut its big repair bills, too. The hope is that predictive maintenance could achieve this quickly. Instead of waiting for ship engines to break down, sensors will report when they need care.

What Maersk Line does in digitisation is likely to be followed by the rest of the industry in fairly short order. As an executive at one of Maersk Line's rivals admits: "We just watch what Maersk does and copy it." And although few shipping outfits have the resources to build ever bigger ships, even the smallest of them can learn to use data better. Data crunching alone will not save the industry from the current storm; that will require ships to be scrapped. But it may prepare it better for the next one. ■

Auditors aren't so bad

Box ticked

NEW YORK

The rich world is not suffering an outbreak of accounting fraud

IF YOU peer into the world of accounting in any given month, it is easy to get the impression that an epidemic of skulduggery and incompetence has broken out. Consider the month of August. A whistleblower at Monsanto, an American seeds firm, received a reward from the Securities and Exchange Commission, after spotting that the firm was misreporting its earnings for Roundup, a weedkiller. T. Rowe Price, an asset manager, launched a lawsuit against Valeant, a drugs firm which it accuses of fraud and misleading accounting.

The list goes on. PricewaterhouseCoopers, one of the Big Four accounting firms, settled a case involving Colonial BancGroup, a lender it audited which went bust after suffering fraud. The boss of Monte dei Paschi di Siena, an Italian bank, said that he was under investigation as part of a probe into false accounting. Shares in Orbital ATK, an American defence firm, tanked after it said it had made accounting mistakes, and an internet firm called ComScore replaced its top brass amid problems with its numbers.

The obvious conclusion is that the accounting industry has failed to clean itself up since 2001-03, when Enron and WorldCom, among others, blew up in spectacular style because of book-cooking. Those two American firms were worth a combined $250 billion at their peak, and their collapse also brought down their auditing firm, Arthur Andersen.

In fact the opposite is true: accounting scandals have become less of a problem. With over 10,000 listed firms in Europe, America and Canada, bad apples are inevitable. But the impact of recent blow-ups has been far lighter than at the turn of the century. WorldCom overstated its profits by a colossal $7 billion. Enron puffed up its shareholders' equity by $1 billion. Parmalat, an Italian food firm that folded in 2003, had a $15 billion hole in its accounts.

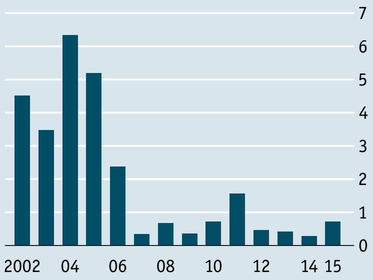
Today's scandals are smaller. When companies admit to fraud or mistakes, their books are restated, making comparisons straightforward. Valeant's restatement, announced in February, was a modest $58m, while Monsanto's was $48m. Tesco, a British supermarket that confessed in 2014 to an accounting scandal, exaggerated its profits by about $350m. One important measure, which is the scale of the single largest restatement by an individual firm in America in any given year, has shown a marked decline in the size of the corrections, points out Don Whalen of Audit Analytics, a data provider and research firm (see chart on next page).

In the dark days of 2000-01, investors worried that no firm in America could be entirely trusted. If you look at the sum of losses across the economy due to accounting fraud now, the number is low. The figure in 2015 was $2.7 billion, or 0.3% of total corporate profits, suggesting there is no systemic problem.

There are plausible reasons why auditing and book-keeping might have improved so much. Sarbanes-Oxley, a corporate-governance law passed in America in 2002, has bite: it requires chief executives and chief financial officers personally to certify accounts. The spread of a common international accounting rule book in Europe has raised standards. The grisly collapse of Arthur Andersen may have led the other big accounting firms to behave better. During the financial crisis, auditors, along with regulators, pushed big banks to write down the value of subprime securi- ▸▸

More accountable

Largest negative accounting revisions to net profits in US, $bn



Source: Audit Analytics

ties to realistic prices, often to squeals of protest from bosses and politicians.

There is still no room for complacency. It is quite possible that huge undiscovered frauds are taking place. The incentive structure of the accounting industry remains suspect: accounting firms are paid fees to audit their customers, but they often earn more by selling various advisory services to them. The rise of opaque private markets for trading the shares of private firms—including Silicon Valley "unicorns"—seems ripe for fraud.

And in many big emerging economies, including China and India, the state of accounting rules and of the auditing business is still murky. In Japan an accounting scandal at Toshiba, a conglomerate, which led to a restatement worth $1.9 billion last year, dented faith in accounting and in the local affiliate of EY, another Big Four audit firm. Yet to argue that there is a crisis in the quality of financial information that investors get about Western firms is to be guilty of a misleading overstatement. ■

Reliance Jio

Free speech

MUMBAI

India's mobile-phone operators get a daunting new rival

IN THE end it was even worse than they had feared. For months now, India's dozen mobile-phone operators have been pondering just how aggressively Mukesh Ambani, the boss of Reliance Industries and India's richest man, would gatecrash their market with the launch of Jio, his new 4G telecoms operation. They certainly expected the thousands of billboards adorned by Shah Rukh Khan, a ubiquitous Bollywood star. Heavily discounted prices were predictable, too. But the news that, from September 5th, anyone paying as little as 149 rupees ($2.20) a month would be able to make free phone calls and browse the internet a bit was a genuine shock. The share prices of rival firms tumbled.

Telecoms incumbents are right to worry. Reliance has been able to use billions in cash from its main oil and refining businesses to invest over $20 billion in the infrastructure required to deliver high-speed connectivity across India. And Mr Ambani understands the industry extremely well. He built a network from scratch in the early 2000s, although that firm eventually went to his younger brother, Anil, in 2005 after the pair fell out.

For the elder brother's bet to pay off, Indians will need to continue flocking online at speed through their mobiles. Smartphones are in the early stages of becoming ubiquitous. Most of India's nearly 400m internet users go online through them. But many people on small incomes use expensive data services sparingly, if at all, downloading content only when they have access to free Wi-Fi. New Jio customers will get as much internet as they want free of charge until the end of the year, and cheap access thereafter. Reliance is also promising free (for a time) access to Bollywood films and music.

The incumbents expected Jio's data rates to be lower than what they charge now. Heavy data users will probably be able to roughly halve their bills. But the huge impact is on voice traffic, which makes up around 70% of operators' revenue. What had been a gentle decline in phone bills as Indians moved to data (including to make calls over the internet) is now likely to be much steeper. India's already low average revenue per user will probably fall by 10-15% over the next year, say analysts at Fitch, a ratings agency.

As for Reliance, it is said to have factored in at least two years of losses. Mr Ambani says he wants Jio to dash to 100m users, beyond the 70m-80m that most analysts think the firm will need to turn a profit. Only 5% of phones used in India now can access 4G, so most of Jio's customers will be people upgrading their handsets. Reaching 100m quickly will require roughly one in three new smartphones to be from Jio.

If Mr Ambani can pull it off, it would leave little for the 12 other networks. A round of consolidation could result. That might not be good news for the government. A spectrum auction later this month had been expected to raise 5.6 trillion rupees—more than corporation tax brings in over an entire year. Prospective bidders may now ask whether spending that kind of cash is worth it. Many of them are indebted and making low returns.

If other telecoms firms aren't making good profits, how can Reliance do so? Rivals argue that Mr Ambani will probably put up data tariffs for all his new customers as soon as the freebie offer ends. But privately they concede he is doing what they

Ambani dials up the pressure

once did. They invested stacks of cash in the latest technology, tolerated low prices and hoped that enormous volumes would get the figures to add up. The formula may work if Indians continue flocking to the internet. Whatever happens, India's march online has been given a big shove. ■

Smartphones

Still ringing bells

Slowing growth and less innovation do not spell the end of an era

APPLE'S events have often been compared to religious worship. Evangelical fans watch as the company's darkly-clad boss—first Steve Jobs, now Tim Cook—presents shiny new iSomethings in front of a screen showing colourful slides reminiscent of stained glass. Yet Apple's latest event, on September 7th, was a less rapturous affair. The iPhone 7, the firm's new smartphone, will come with a better camera, a faster chip and a brighter display, but will otherwise not be much of an improvement. The main novelty is that it no longer has a conventional jack for headphones, which have to plug into the charging port or be wireless (conveniently, Apple also introduced new untethered "AirPods", which will cost $160 a pair).

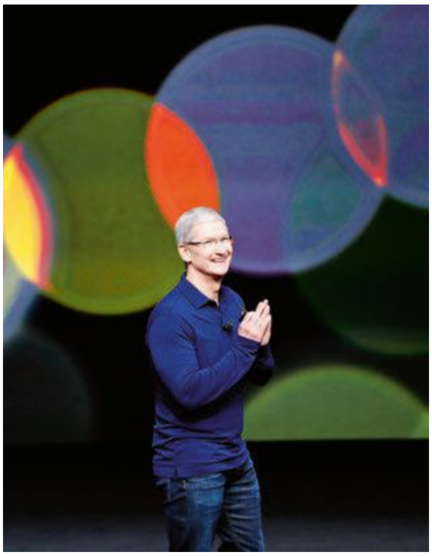
This lack of sparkle will disappoint devotees, but the new iPhone neatly encapsulates the mood in the smartphone market. After almost ten heady years, dating from the release of the first iPhone in mid-2007, both growth and the pace of innovation have slowed markedly in recent months. Prices have fallen, too. Some people are starting to talk of an end to the smartphone era, much as when the reign of personal computers came to an end a few years ago.

Worldwide sales of smartphones are now barely growing. The devices are now good enough for most users' needs, and smartphone penetration rates in rich countries have reached 90%. But the absolute numbers are still mightily impressive. Some 1.46 billion units will be shipped this year, reckons IDC, and perhaps 1.76 billion in 2020.

Such numbers make the smartphone by far the world's most popular electronic device. It is true that sales of "wearables", such as smartwatches and fitness bands, have taken off: they should reach $14 billion in 2016, according to CCS Insight, another research outfit. But that is dwarfed by smartphone sales of $347 billion. So-called "smart speakers", such as Amazon's Echo, which allows users to play music, turn on the lights and, of course, order stuff from the e-commerce giant by using voice commands, will be popular. But they seem unlikely to become a must-have. Virtual- and augmented-reality gear is not yet ready for the mainstream consumer; and it may never be as convenient as a device that users can slip into their pockets.

If smartphones remain at the top of consumers' want-lists, how will the market evolve? Hardware innovation will be more incremental, says Ben Wood of CCS Insight. New phones will have better screens, faster processors and new materials. But another area promises rapid progress: artificial intelligence. Mr Wood expects firms to invest a lot in order to improve their digital assistants, such as Apple's Siri or Google Now, so that handsets can become truly smart, combining data from the devices to make it easy to, say, book a restaurant with just a few words.

The need to invest will fuel consolidation, reckons Francisco Jeronimo of IDC. The likely candidates to rule the industry are Apple, China's Huawei and South Korea's Samsung. (The recall by Samsung of 2.5m phones after battery fires shouldn't linger long in customers' minds.) Most other brands will disappear or serve small niches. It would be unwise to predict, as some do, that the leading smartphone makers are on their way to becoming hasbeens. Apple may even be planning something miraculous for next year's iPhone anniversary. Keep the faith. ■



And on the 7th day...

Fashion retailing

Passé

The fashion industry grapples with bad timing

NEW YORK CITY has just begun its sacred rites of retail. For its fashion week, which started on September 7th, tents go up, guests emerge from black cars, models sulk down catwalks and the wealthy and celebrated clap in unison. The point of all this is for designers to declare what will be "in" next spring. But for much of fashion retail, it is increasingly clear that something is out of place.

For a sense of the problem, consider what happens when the week-long schedule of shows ends. Designers start making the clothes that retailers have ordered, with delivery scheduled four to six months later. But consumers see collections online instantly. "Fast fashion" shops such as Zara, which is part of Spain's Inditex, rapidly produce clothes "inspired" by what appeared on the runway. When the originals arrive in stores, they feel tired.

This has produced clear winners and losers. The world's two biggest clothes retailers are now Inditex and TJX, according to Euromonitor, a research firm. TJX buys excess inventory of brand-name clothes and resells them at low prices. Traditional department stores, meanwhile, are struggling, partly because outdated frocks and coats languish on racks and then have to be sold at a discount.

The challenge is widely understood. Now the industry is finally starting to deal with it. In March the Council of Fashion Designers of America (CFDA) and the Boston Consulting Group suggested alternatives to the current, slow retail cycle, some of which have been championed by fashionistas. A small band of designers are testing new business models this week in New York, or plan to at fashion week in London later in the month. The idea is to show clothes and sell them at the same time. It may seem obvious, but the shift is not easy for designers, suppliers, fashion magazines and retailers that have worked for so long around the old calendar. Most designers are sticking to it, with minor adjustments. During February's fashion week in New York, for example, Michael Kors and Tory Burch showed only a very few looks that were available immediately.

Others are going further. On September 7th Tom Ford staged not a "spring" runway show, as is customary, but a party streamed live online, featuring clothes from his autumn 2016 collection that are available for sale now. Rebecca Minkoff, another designer, will present her collection on the street outside her Manhattan store, with guests invited to shop for the runway looks immediately. Because retailers have already decided which of its clothes to stock, the fashion show can promote specific items to boost their sales. It becomes a more closely co-ordinated activity, says Uri Minkoff, the company's chief executive.

British designers are adapting, too. Burberry's show in September will for the first time present only clothes that are available immediately. The company has pulled its entire fashion-design process forward by about six months, with clothes conceived, samples produced and presentations to editors and retailers all concluded much earlier. The catwalk event will not be a business event for the garment trade but a marketing event for consumers.

But old habits die hard. The CFDA is exploring whether retailers might stock more clothes when people like wearing them. But many stores and designers still expect them to buy fur coats in July. And some in the industry are sceptical. Pascal Morand, who oversees Paris's fashion week, approves of selling clothes that consumers can wear now. But he also worries about designers listening too much to what people want. "Consumers favour incremental innovation," he says, whereas the most exciting designs defy the norm and are often adopted by consumers only gradually. ■

The space business

Mission, interrupted

An expensive rocket accident puts pressure on SpaceX

ROCKET scientists love their jargon, and it seems to be infectious. On September 1st, when a Falcon 9 rocket belonging to SpaceX, a private rocketry firm, blew up on the launchpad at Cape Canaveral, in Florida, the emergency services announced that the mission had undergone a "catastrophic abort". It happened while the rocket was being fuelled for a pre-launch engine test. No one was hurt, although windows were rattled several miles away. A communications satellite costing $200m that was mounted on the rocket, in preparation for the planned launch on September 3rd, was destroyed in an instant.

The blast is a setback for SpaceX, a firm founded by Elon Musk, an entrepreneur who also runs Tesla, an electric-car maker. With contracts to fly cargo and supplies to the International Space Station (ISS) for NASA, as well as a thick book of orders from private satellite firms, it is the flag-bearer for a growing, buccaneering "new space" industry. The explosion was SpaceX's second big failure in 15 months: on June 28th 2015, an uncrewed Falcon 9 rocket exploded halfway to the ISS.

The immediate consequence is financial. The wrecked satellite belonged to an Israeli firm named Spacecom, which is the object of a takeover deal by Xinwei Technology Group, a Chinese company. That deal had been contingent on the satellite making it successfully into orbit. Spacecom's shares fell by 40% after the explosion. The satellite was insured, but Spacecom is nonetheless reported to be demanding compensation from SpaceX. The explosion also damaged the launchpad, leaving it unusable, although SpaceX has access to two others. The firm pointed out that it still has contracts for around 70 launches.

Its reputation could also be damaged. The list of mishaps is lengthening. SpaceX has flown 29 Falcon 9 missions to date. Besides the two total failures, the fourth flight, in 2012, suffered an engine failure in mid-launch. The rocket was able to carry on to its rendezvous with the ISS, but its secondary payload—another satellite, owned by a firm called Orbcomm—could not be successfully deployed. Potential customers, attracted by the firm's super-low launch costs—it charges far less than its main competitors—may now start wondering about its reliability.

History suggests that rockets do become more reliable over time: the European Ariane 5, for instance, suffered two complete failures and two partial ones in the early part of its life, but has now gone through 72 launches and 13 years without mishap. And SpaceX's machines are blazing entirely new technological trails. The Falcon 9 is the first-ever reusable rocket. Its first stage is designed to fly back to land on an ocean-going barge, a fiendishly difficult process that the firm seems now to have mastered. Mr Musk hopes that will allow him to cut prices even further.

A waste in space

But the accident may delay the firm's ambitious future plans. The post-mortem will tie up engineers at a time when the company already has a great deal on its plate. SpaceX had been due to launch nine other Falcon rockets before the end of the year. All those launches have now been postponed. In the early months of next year the firm is due to attempt the first launch of the Falcon Heavy, a new machine derived from the Falcon 9 that will be, by some distance, the most powerful rocket in the world today. That date could well slip. In addition to its contract with NASA to supply the ISS, SpaceX is soon due to start flying astronauts. The first mission is scheduled for some time in 2017.

In the aftermath of the explosion, NASA, one of SpaceX's biggest customers, declared its support for the firm. SpaceX itself has said it intends to go back to flying rockets as soon as possible. Mr Musk is not in the rocket business only to make money. He has always been clear that the ultimate goal of SpaceX is to lower the cost of space flight to the point where it is financially feasible to establish a human colony on Mars, as an insurance policy against potentially catastrophic events on Earth. Exploding rockets hurt that aim, as well as profits, so the pressure for a successful launch next time will be intense. ■

German firms in America

Making eyes across the ocean

German firms are increasingly keen on buying American rivals

NO GERMAN firm has paid a higher price for shopping abroad than Daimler-Benz with its disastrous $43 billion merger with America's Chrysler. When they did their deal in 1998, the carmakers claimed it was a smart manoeuvre in the face of industry consolidation. In fact, after culture clashes and much wasted effort, it fell apart within a decade. Eighteen years on, the record will be broken if Bayer, a drugs and chemicals giant best known for its pharmaceutical products such as aspirin, succeeds in its bid for Monsanto, the world's biggest seed producer. Whether the outcome would be any better is another question.

Bayer first made an unsolicited bid for the American firm in May. A deal now looks close. Monsanto has spent the summer playing hard to get; this week it succeeded in getting Bayer to raise its offer again, to a whopping $65 billion (including debt). The German firm is responding to a wave of consolidation in the global chemicals and seeds industry. Earlier in the year ChemChina, a state-owned Chinese firm, agreed to pay $43 billion for Syngenta, a big Swiss firm that sells chemicals to farmers. Buying Monsanto would give Bayer control of the world's biggest seller of seeds and crop sprays.

A deal may come before Bayer's boss, Werner Baumann, is due to meet shareholders later this month, or talks could drag on. But doubts exist over the prospects for the acquisition, even if a deal is agreed. The price offered by the German firm looks remarkably high. Monsanto's revenues have been sliding because of generally low crop prices and questions over the efficacy of one of its best-known products, a weedkiller. Antitrust concerns also loom large: regulators would certainly be lobbied by farmers wary of rising input costs. Other chemical firms, such as BASF, another German company, are hoping for rich pickings on the assumption that regulators would eventually force a merged Bayer and Monsanto to sell off businesses worth billions of dollars.

Bayer is likely to push on regardless. Unlike Daimler, it has a proven record of successful acquisitions in America, beginning some 150 years ago with an investment in a coal-tar dye factory in upstate New York. It bought two more firms in the 1970s. Recent deals have been grander. In 2014 it bought the consumer-care business of Merck, an American drugmaker, which makes sun- ▸▸

block and anti-allergy medicines, for $14.2 billion, and absorbed the unit well.

Whatever happens, German managers are widening their horizons. In July, investors in Deutsche Börse approved a planned $27 billion deal to buy the London Stock Exchange. Years of German firms punching below their weight in America appear to be over. Revised official estimates published in June now count Germany as the third-largest foreign direct investor, holding 10.8% of the total stock of $2.9 trillion of foreign direct investment. It came seventh on the list just a couple of years ago.

That leap partly reflects new efforts to identify the nationality of the groups that are the ultimate beneficial owners of American assets (German buyers based in Luxembourg, for example, are now counted as German). But most of the rise is due to cash-rich German firms striking deals. In 2014 Siemens, an engineering conglomerate, SAP, an IT firm, and Infineon, a semiconductor maker, among others, each made deals worth billions of dollars. The pace has not slowed. In November last year Merck, a German life-sciences giant (confusingly, nothing to do with Merck in America in the present day), wrapped up a $17 billion purchase of Sigma-Aldrich, a chemicals and biotechnology firm.

The traffic is not all one way. In August America's Praxair and Germany's Linde said they hope to merge and create a firm worth $60 billion, a giant of the industrial-gas industry, in which Praxair would probably dominate. The consolidation of industries such as chemicals and industrial gases offers one straightforward explanation for some of this activity across the Atlantic. But German bosses' renewed confidence is also a factor. What explains that? Perhaps painful memories of the fiasco of DaimlerChrysler are fading away at last. ■

German power companies

Breaking bad

E.ON and RWE split their clean and dirty businesses

GERMANY'S largest utilities, E.ON and RWE, used to be known in the stock-market as "widows' and orphans' paper", so dependable were their profits and dividends. Those days are long gone. Since 2011, when the government stepped up its support for wind and solar energy and decided to abandon nuclear power after Japan's Fukushima disaster, the share prices of both firms have plunged by two-thirds.

That is why both firms are splitting in two. Their aim is to free up their renewables businesses, allowing them to thrive relatively unencumbered by debts, while underpinning their earnings with boring but reliable returns from running electricity down pylons, poles and wires. Dirtier power-generating assets, exposed to the vagaries of climate politics and commodities prices, are being put into separate companies. In a culmination of this process, on September 12th E.ON plans to spin off Uniper, a new firm into which it has separated its coal- and gas-fired power stations. Later this year RWE will pull off a similar split, albeit in a different way.

The manoeuvres highlight the huge jolt Germany's *Energiewende*, or green-energy transition, has dealt to the business model of what were once two of Europe's most highly regarded utilities. "If I had proposed this [split] ten years ago, I would have been the laughing stock of the stock exchange and people would have sent me to the mental home," says Johannes Teyssen, E.ON's chief executive.

In its listing on the Frankfurt Stock Exchange, Uniper will issue 53% of its shares to E.ON shareholders, leaving E.ON with the rest. Uniper says it will offer investors a chance to bet on the changing nature of energy markets. Coal- and gas-fired power plants are being replaced by wind and solar as the main sources of electricity, but they will carry on playing a potentially lucrative backup role, goes the pitch. E.ON, in contrast, will seek a greener sort of investor. "Across Europe companies want to get rid of the "bad" fossil-fuel business. E.ON is the most radical," says Roland Vetter of PraXis Partners, a utilities specialist.

RWE has followed a different route to the same destination. Instead of keeping its renewables, grid and local businesses, it has moved them, as well as many of its staff, into a new company, Innogy, which it will partially float. A tenth of Innogy shares will be listed in Frankfurt by the end of the year. The dirtier power plants will remain with the rump RWE.

Plenty have reservations about the coming listings. Some describe Uniper as a "bad utility", much like the "bad banks" that were set up after the financial crisis of 2008-09 to hold dud loans. Others believe that E.ON is wildly optimistic about the value of the assets it has transferred to Uniper. The unit is held on E.ON's books at a value of about €12 billion ($13.5 billion), but may be worth no more than €3 billion-5 billion when listed. "In the short term at least, the outlook for those plants is terrible," says Emanuel Henkel of Commerzbank. To make matters worse, the company is not promising a fixed dividend beyond 2016. What's more, it may turn out to be too small for index funds, which may force many investors to dump their new shares in short order.

E.ON's own shares may perform no better. Initially the parent company had hoped to offload its nuclear-power plants and the cost of decommissioning them onto Uniper, marking a clean break with conventional power generation. But the government prevented that, on the ground that E.ON was ducking out of its responsibilities. Instead it will be required to provide the biggest share of a €23.3 billion decommissioning fund to be set up by the government, which will also require contributions from RWE and two other nuclear-power providers. To finance its share, E.ON may have to raise equity of its own. It will also remain tied to Uniper's fossil-fuel fortunes because of its 47% stake.

RWE may have slightly better prospects with Innogy's IPO, because the latter is much more clearly a clean-energy company, which is likely to attract new investors, and because it has learned from E.ON's mistakes, says Mr Vetter. But the green-energy credentials of both the new E.ON and Innogy are open to question. In the past E.ON and RWE sought to slow Germany's energy revolution rather than championing it. Mr Teyssen admits that the company once thought "windmills" were something "out of the Middle Ages".

In their favour, they both have vast numbers of customers who could be persuaded to embrace renewable energy. Mr Teyssen prefers to see his company not as a dinosaur fighting extinction, but as a bird—the descendant of a dinosaur—flying into a bright future. Provided, that is, it doesn't crash into a power pylon. ■

Schumpeter | Shhhh!

Companies would benefit from helping introverts to thrive

MOST companies worry about discriminating against their employees on the basis of race, gender or sexual preference. But they give little thought to their shabby treatment of introverts. Carl Jung spotted the distinction between introverts and extroverts in 1921. Psychometric tests such as the Myers-Briggs Type Indicator consistently show that introverts make up between a third and a half of the population. Susan Cain's book on their plight, "Quiet: The Power of Introverts in a World that Can't Stop Talking", has sold more than 2m copies; the TED talk based on the book has been viewed just over 14m times. And yet, if anything, the corporate approach to introverts has been getting worse.

The biggest culprit is the fashion for open-plan offices and so-called "group work". Companies rightly think that the elixir of growth in a world where computers can do much of the grunt work is innovation. But they wrongly conclude that the best way to encourage creativity is to knock down office walls and to hold incessant meetings. This is ill-judged for a number of reasons. It rests on a trite analogy between intellectual and physical barriers between people. It ignores the fact that noise and interruptions make it harder to concentrate. And companies too often forget that whereas extroverts gain energy from other people, introverts need time on their own to recharge.

The recent fashion for hyper-connectedness also reinforces an ancient prejudice against introverts when it comes to promotion. Many companies unconsciously identify leadership skills with extroversion—that is, a willingness to project the ego, press the flesh and prattle on in public. This suggests that Donald Trump is the *beau idéal* of a great manager. Yet in his book "Good to Great", Jim Collins, a management guru, suggests that the chief executives who stay longest at the top of their industries tend to be quiet and self-effacing types. They are people who put their companies above their egos and frequently blend into the background.

Many of the most successful founders and chief executives in the technology industry, such as Bill Gates of Microsoft, and Mark Zuckerberg of Facebook, are introverts who might have floundered in the extroverted culture of IBM, with its company songs and strong emphasis on team-bonding. In penalising other people like them, firms are passing over or sidelining potential leaders. At all levels of company hierarchies, that means failing to take full advantage of employees' abilities.

What can companies do to make life better for introverts? At the very least, managers should provide private office space and quiet areas where they can recharge. Firms need to recognise that introverts bring distinctive skills to their jobs. They may talk less in meetings, but they tend to put more thought into what they say. Leaders should look at their organisations through the introverts' eyes. Does the company hold large meetings where the loudest voices prevail? That means that it is marginalising introverts. Does it select recruits mainly on the basis of how they acquit themselves in interviews? That could be blinding it to people who dislike performing in public.

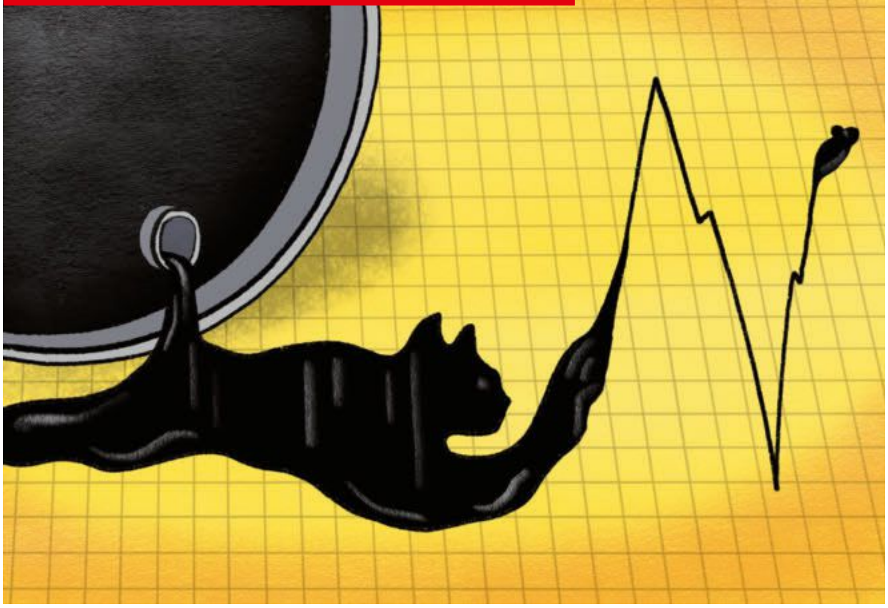
Some of the cleverest companies are beginning to look at these problems. Amazon has radically overhauled its meetings to make them more focused. Every meeting begins in silence. Those attending must read a six-page memo on the subject of the meeting before they open their mouths. This shifts the emphasis from people's behaviour in the meeting to focused discussion of the memo's contents. Google has downplayed the importance of interviews in recruiting and put more emphasis on candidates' ability to carry out tasks like the ones that they will have to do at the firm, such as writing code or solving technical problems.

Managers cannot be on top of the very latest research on personality types. Nonetheless, they should pay more attention to the way that groups of people interact when it comes to designing teams. One study that looked at operations lower down an organisation shows that extroverts are better at managing workers if the employees are just expected to carry out orders, but those who tend towards introversion are better if the workers are expected to think for themselves.

Extrovert five times a day

Introverts must also work harder at adapting to corporate life, since work is essentially social. They could communicate over the keyboard rather than in meetings, or by arranging smaller gatherings rather than rejecting them altogether. This is important for climbing the ladder. Karl Moore of McGill University in Montreal, who has asked over 200 CEOs about introversion on the radio show he hosts, says that introverts who make it to the top usually learn how to behave like extroverts for some of the time. Claude Mongeau, the former CEO of Canadian National Railway, for example, set himself the goal of acting like an extrovert five times a day. In any case, the majority of people are on a spectrum of introversion to extroversion. Mr Moore thinks that quieter people can make as much impact as full extroverts, if they give themselves time to recharge. He sets his students the task of "networking like an introvert" or "networking like an extrovert" to broaden their perspectives.

In "Quiet", Ms Cain concludes that business has long been dominated by an "extrovert ideal", thanks to a succession of corporate fashions—whether the 1950s model of the "organisation man", who thrived by asserting himself in meetings and inside teams, or today's fad for constant communication. Fortunately, some trends do now push in the other direction. The field of technology, an industry where introverts are common, has made it easier for everyone to communicate at a distance. The aim of enlightened management is not to tilt an extrovert-oriented company rapidly towards the introverts. It is to create a new kind of firm, in which introverts, extroverts and all the in-betweeners are equally likely to flourish. Call it the ambivert organisation. ■



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Investing in commodities

Of mice and markets

A surge in speculation is making commodity markets more volatile

A GAME of cat and mouse appears to be taking place in the oil market. The felines are big producers who want prices to go higher, the rodents speculators betting that they will fall. Twice this year, in the first quarter and the third, hedge funds and others have taken out record short positions on futures of West Texas Intermediate (WTI), an American crude-oil benchmark, only to be mauled by (so far empty) talk among members of the OPEC oil cartel and Russia of a production freeze. The resulting scramble by funds to unwind their short positions has fanned a rally in spot oil prices (see left-hand chart).

This reminds Ole Hansen, head of commodities research at Denmark's Saxo Bank, of currency intervention by central banks. It often works best, he says, when speculators are positioned heavily in the opposite direction. He mischievously pictures Saudi Arabia's deputy crown prince, Muhammad bin Salman, watching a screen on his desk each week when America's Commodity Futures Trading Commission (CFTC) reports speculative positions, poised to pounce.

Not long ago there were fewer mice to catch: in 2012-14 volumes in commodity futures and options markets as a whole were relatively muted, as China's economy slowed and prices of materials from copper to coal tumbled. Now volumes have bounced back. The Chicago-based CME says the volume of energy futures and options traded on its exchanges has risen by 21%, year on year, in 2016. Those of metals are also up strongly. Barclays, a bank, says that inflows into commodity-based exchange-traded products (ETPs), index funds and other investments have surged too. Led by gold and oil, this year they are at their highest for seven years (see right-hand chart).

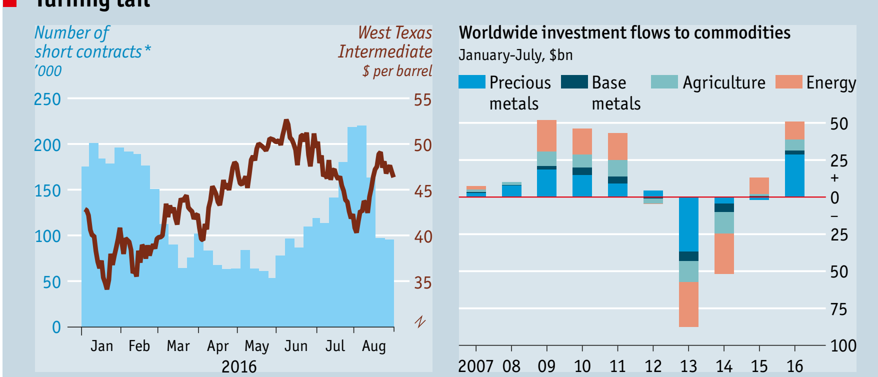
The last time investment flowed heavily into commodities was at the tail end of the China-led supercycle, in 2009-12. But back then, says Erik Norland of the CME, the pattern was different. Commodity markets were dominated by investors making one-way bets that prices would rally. Moreover, producers saw no need to hedge their exposures because prices (and hence their profits) were rising.

Lately, however, markets have become harder to read. In oil, for instance, the heightened volatility appears to have attracted hedge funds, which for the first time have been the most active investors in futures markets all year, according to CFTC data. Kevin Norrish, head of commodities research at Barclays, describes today's investors as more tactical than strategic. They are not investing out of confidence in the asset class as a whole. One example is their enthusiasm for gold, considered a safe-haven asset amid concerns about Brexit and America's presidential election.

Saxo's Mr Hansen reckons the low yields offered elsewhere in financial markets are also piquing interest in commodities. The cost of buying a tonne of copper and storing it for sale, for example, is less daunting when interest rates are negative.

The low-yield world may also be driving brave, or foolhardy, retail investors into commodity ETPs. The biggest beneficiaries this year have been gold funds. In America almost $12 billion has poured into one ex- ▸▸

Turning tail



Sources: Barclays; Bloomberg
*NYMEX light sweet crude oil futures

change-traded fund, State Street Global Advisors' SPDR Gold Shares; the total invested in all such oil funds is just $1 billion. Yet oil has also attracted some devil-may-care day traders prepared to risk everything for a quick buck. Mr Hansen points out that a particularly hair-raising ETP, the family of so-called 3X, or triple-leverage, notes linked to WTI prices, has surged in popularity this year, even though the fund is designed to multiply losses as well as gains. Investors in that are probably chasing volatility, rather than thinking about the boring details of supply and demand.

Such bets may be adding to the choppiness of markets. During the commodities boom, speculators were often wrongly blamed for pushing food and energy prices to stratospheric heights, when the true cause was China's thirst for scarce raw materials. Since then, the new mines, oil wells and fields of grain carpeting the planet to meet that demand have started to produce goods just when the appetite for them has dulled, pushing down prices. But speculators are jumping on anything that may suggest large changes in supply, which may cause exaggerated price swings. For instance, they have placed big wagers on rising coffee prices this year, because of weather-related crop damage in Vietnam, Indonesia and Brazil. Prices of robusta and arabica coffee are near 18-month highs.

Some believe inflows into commodities have already peaked. The pattern in recent years has been to divest in the autumn. But with the presidential election looming and uncertainty about American interest rates high, further volatility may be in store. Moreover, Saudi and Russian officials are again talking about stabilising oil markets as they prepare for a meeting later this month, which could make waves. The choppier markets are, the more speculative money they may attract. ■

Buttonwood | Acclimatising

Getting more sophisticated about green investing

IT'S not easy being green, especially if you're a fund manager. A decade or so ago, when mainstream politicians such as Britain's David Cameron were petting huskies and embracing environmental issues, the stocks of renewable-energy producers were in vogue. But as in the dotcom boom a few years earlier, share prices ran way ahead of the potential for profits. An exchange-traded fund in global clean-energy stocks, set up by iShares in 2008, has lost investors 79% since its launch. Over the longer term, an analysis by Gbenga Ibikunle and Tom Steffen in the *Journal of Business Ethics* found that European green mutual funds had significantly underperformed their conventional rivals between 1991 and 2014.

The rise in shale-oil and -gas production, and the accompanying decline in energy prices, have spelled double trouble for green investors. On the one hand, they have reduced the incentive for governments to favour renewable-energy producers—and thus dented the prospects of some green stocks. On the other hand, they have also hit the share prices of conventional oil and gas companies, which environmental funds tend to avoid.

That decline has given succour to a campaign joined by a number of investors—mostly from the public and charitable sectors—to boycott the shares of fossil-fuel producers. Such investors cannot be accused, at least in the short term, of breaking the "fiduciary duty" that fund managers owe to their clients to generate the best possible return.

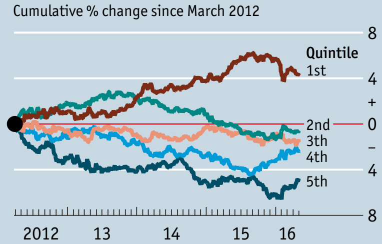
In a new paper, BlackRock, a big fund-management group, argues that there are more sophisticated approaches to greenery than boycotting oil and coal companies, or piling into wind-turbine manufacturers. For example, investors could own a portfolio as close as possible to a given index, but choose the greenest companies within each sector. BlackRock reckons that it is possible to create a portfolio which tracks the MSCI World Index with an annual error of just 0.3% a year, yet comprises companies with carbon emissions 70% lower than the index as a whole.

Carbon positive

MSCI World Index

Companies grouped by change in carbon intensity*, share-price performance v index

Cumulative % change since March 2012



Sources: BlackRock Investment Institute; MSCI

*Annual carbon emissions divided by annual sales

Another option is to look at the figures companies report for their own carbon emissions. BlackRock found that over the period from March 2012 to April 2016, the firms that had reduced their carbon emissions most beat the MSCI World Index by 4%; those that had shown the smallest improvement underperformed the index by nearly 5% (see chart).

Although the world has struggled to reduce its carbon emissions, it would be a mistake for investors to believe that green policies cannot cause upheaval in individual industries. BlackRock points to the revolution in lighting. The phasing-out of incandescent light bulbs, induced by regulation, has spurred investment in light-emitting diode (LED) bulbs; the price of LEDs has fallen by 90% since 2010. Improvements in battery technology may yet transform the power industry, BlackRock thinks, by making it easier and cheaper to store energy from renewable sources such as wind and solar power.

There are other climate-related risks that investors need to consider. In America the frequency of extreme weather events that cause at least $1 billion-worth of damage has risen sharply since 2000; that has implications for insurers. Extreme weather can cause short-term shocks to economic activity; rising temperatures can dent productivity growth.

Nevertheless, even as the impact of environmental change is felt, short-term factors can still cause problems for investors keen on greenery. China and America may have ratified the Paris climate-change agreement on the eve of the G20 summit this week but there is plenty of resistance to green policies that are perceived to be expensive. Barack Obama has succeeded in boosting the use of renewable energy in America but has had to use executive action to bypass Republican opposition in Congress.

As mainstream politicians fend off attacks from the populist right and left, the task of cutting emissions may get even harder. In Britain, for example, Mr Cameron has been and gone, and Theresa May, his successor, has abolished the Department for Energy and Climate Change. Even if Hillary Clinton defeats Donald Trump, a climate-change denier, in America's presidential race, she seems likely to face a sceptical Congress. The undemocratic government of China may find it easier to meet its targets.

Although they may be confident about their long-term analysis, therefore, environmental investors will need internal fortitude. Owning a green portfolio means enduring stormy moments.

Economist.com/blogs/buttonwood

The G20 and the world economy

Agreeing to disagree

HANGZHOU

The global economy has many ailments and few easy remedies

AT ITS first leaders' summit, the Group of 20's raison d'être was clear. Held shortly after the collapse of Lehman Brothers in late 2008, the forum of big economies reassured a worried world simply by putting on a show of unity. But as the worst ravages of the financial crisis have faded, the G20 has struggled to find the same sense of purpose. This year's summit in Hangzhou, in eastern China, which ended on September 5th, pulled leaders' attention in many different directions.

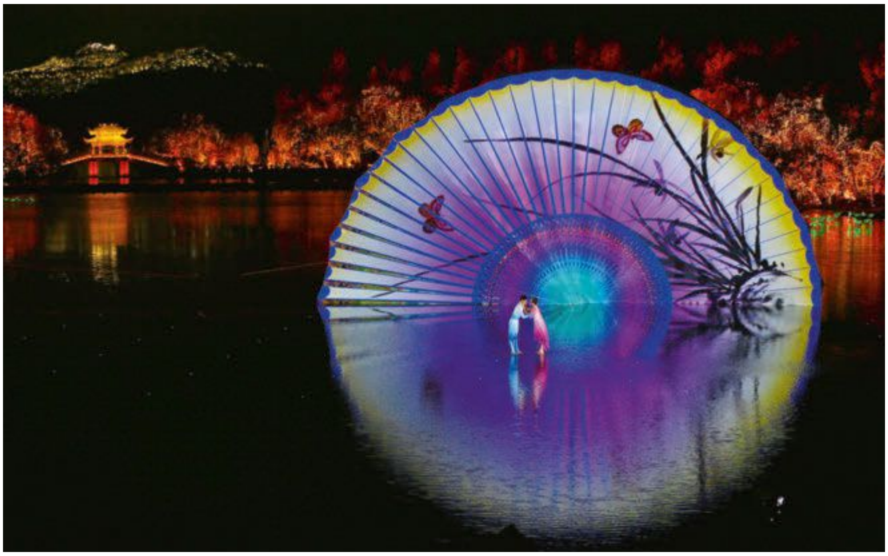
It was preceded by another display of co-operation: America and China ratified the Paris climate-change agreement. Then work began on a long list of problems, including simmering trade disputes, overstretched central banks, corporate tax avoidance and a populist backlash in several countries against globalisation. The final communiqué ran to more 7,000 words, not counting several lengthy appendices.

This sprawl frustrated some participants, who wanted a sharper focus on growth. The IMF noted that 2016 will be the fifth straight year of global growth below 3.7%, its average for nearly two decades before the crisis. The G20 economies are likely to miss a target they set themselves in 2014, of lifting their combined output by 2% over the IMF's then forecast for 2018.

Judging the G20's success by growth outcomes is unfair, though, when most of its big members are holding back. America is contemplating a second interest-rate rise. Germany remains sceptical of stimulus. China is at present more intent on defusing financial risks than on ginning up GDP.

And there is a more positive reading of the G20's spread: that it is evolving to tackle, if not quite solve, the range of problems that bedevil the global economy. Although the G20 seems unwieldy, it also has an advantage: flexibility. Lacking a permanent bureaucracy, it can switch emphasis annually, depending on which country is in the chair.

China put "innovation" at the heart of its G20 agenda. Vague as that sounds, it was sensible. First, debating whether to rely more on fiscal or on monetary policy to promote growth only gets you so far. In the longer term, progress depends on improved productivity—getting more out of existing resources. Second, at least some of the anger directed at globalisation stems from anxiety about new technologies, such as artificial intelligence, that threaten established patterns of employment.



Great show, shame about the substance

There is no simple answer: the G20 promised to share technology with poor countries and to develop training for workers. But getting the world's leading economies to think collectively about the downside of innovation was better than nothing.

On specific disputes, alas, little progress was made in Hangzhou. Both America and Europe pushed China to do more to curb its industrial overcapacity, especially in steel. China countered that weak global demand was as much the problem as oversupply. The proposed solution—to establish a forum to monitor global excess steel capacity—was a classic example of agreeing to disagree.

Yet the summit was also a timely reminder of why there is no substitute for such gatherings. Days before it began the European Commission ruled that Apple had underpaid taxes in Ireland, by up to €13 billion ($14.7 billion). That has raised the prospect of a transatlantic tax war, with America hinting at retaliation. Such a conflict would undermine one of the G20's main achievements: it was a request from the group in 2012 that led the OECD, a club of rich countries, to draft guidelines that make it harder for companies to shift profits to their favoured tax regimes. The Apple case will roll on, but in the meantime the G20 committed itself to more co-ordination on taxes. Within two years, most countries will automatically share information about taxes levied on non-residents, narrowing the scope for evasion.

To those visiting for the summit, China sought to present an image of strength. The government shut down factories, near and far, to ensure the air was clean. It blanketed Hangzhou with security. And it put on a grand evening gala, featuring a dazzling light show and ballerinas dancing on water. The substance of the meetings was much duller. But the summits will, indeed must, go on. ■

Kenya's interest-rate cap

Ceiling whacks

NAIROBI

Curbing lending rates makes good politics but bad economics

WHEN interest rates are uncomfortably high, what can be done? To Western central bankers struggling with overflowing liquidity, that would be a pleasant question to have to answer. In Kenya, where the central bank's headline rate is 10.5%, it is a nagging political problem. On September 14th a law capping the interest rates that commercial banks can charge at four points above the central-bank rate is due to come into force. Under the same law, banks will have to pay depositors at least 70% of the central-bank rate. Bankers and the IMF are horrified. What effect will the cap have?

MPs had already tried twice before to cap rates. On both occasions the law they put forward foundered on a presidential veto. The current president, Uhuru Kenyatta, signed the law despite the objections of the central bank and most of the banking industry. Kenya is holding a presidential ▸▸

election next year, and access to finance has become a hot political issue. According to Aly Khan Satchu, a well-connected Kenyan financier, Mr Kenyatta felt too weak to resist. Pundits rejoiced. "Cheaper loans at last," declared the *Standard*; "Why low bank rates are good for your family," ran the headline in the *Daily Nation*.

For most businesses, the more likely effect is a drying-up of credit. This is because the real cause of Kenya's high interest rates is not greedy banks but its government, which is splurging money ahead of next year's vote. On June 9th Henry Rotich, the finance minister, announced that the budget deficit for 2016-17 would reach 9.3% of GDP, far higher than anticipated. Yields on government debt have typically hovered around 14% over the past year. Under the new law, banks are being asked to lend to private businesses for the same rate they can get for lending to the government.

How bad the impact on the economy will be depends largely on how businesses react, says Anzetse Were, a Kenyan economist. Most probably, she reckons, businesses will find other sources of credit than banks. Microfinanciers will not be affected; nor will the savings co-operatives which provide credit to large parts of the economy. These lenders may well expand their business as banks shrink theirs. One "silver lining" could be to tip more Kenyan businesses, which rely heavily on debt, to raise equity instead, says Ms Were.

Bank shares fell sharply on the Nairobi stock exchange after the law was passed. Habil Olaka, the chief executive of the Kenyan Bankers Association, says that although the law does not require it, banks have agreed to apply the new terms to their existing portfolio, meaning that their margins will fall at once. Mr Olaka says banks will try to make up for losses by expanding the use of technology such as mobile-phone apps to cut their costs. But most will probably have to close branches, sack staff and lend less.

A study by the World Bank in 2014 found that half the countries in sub-Saharan Africa have interest-rate ceilings of one sort or another, including the biggest economies, Nigeria and South Africa. African economies with caps generally have a lower ratio of credit to GDP than those without. In Kenya GDP growth has been driven by credit growth, according to Exotix, an investment bank. That might now slow.

One consequence of interest-rate caps is that credit flows to safer borrowers rather than to needy but risky businesses. In Kenya the immediate beneficiaries may well include those who passed the law. Compared with their constituents, Kenyan MPs are among the best paid in the world. But winning office is not cheap and, in the course of campaigning, many build up hefty debts. Cheaper loans mean cheaper campaigns. Which way's the bank? ■

Offshore finance

The holdout

The Bahamas cocks a snook at the war on tax-dodgers

GROWING peer pressure on countries to exchange information about clients of their financial firms has left tax evaders with few places to hide. Panama was one, but the "Panama Papers" revelations this year have forced it into line: its government is poised to embrace the Common Reporting Standard (CRS), administered by the OECD, a club of mainly rich countries, which is becoming the global benchmark for sharing data. "Automatic"—that is, regular and systematic—exchange is meant to begin in 2017. But some recalcitrants remain. Chief among them is the Bahamas, an archipelago east of Florida and a tax haven of long standing.

Most of the 100-plus countries in the CRS have signed a "multilateral convention" designed to speed up the data-swapping. Although the Bahamas is in the CRS, it is one of a few that have elected instead to strike deals one country at a time—and then only with those with which it already has special data-exchange agreements known as TIEAS. The Bahamas has only 26 of these (not counting TIEAS with other tax havens, which are meaningless). That leaves a lot of gaps. It has only two with Latin American countries, which provide the bulk of its offshore business. It says others are in the works.

The Bahamas justifies this go-slow approach by citing concerns over the security of data passed to other tax authorities, and argues it is better suited to countries (like itself) with systems based mainly on indirect taxes. This looks like an excuse to drag its feet. The OECD has a team policing CRS members' data-security safeguards, which even the Bahamians admit mitigates some of the worries. Mark Morris, an independent tax expert, says the Bahamas has a "disingenuous 'compliant non-compliance' strategy": join the CRS, but choose the clunkier bilateral method and use fabricated confidentiality concerns to share data with as few countries as possible.

Why hurry?

The Bahamas Financial Services Board (BFSB), which promotes the islands' financial centre, has stressed at international industry events that it will move very cautiously on information exchange. Some interpret this as a veiled invitation to park undeclared money there. Others say the Bahamas' talk of its strategy being key to its finance industry's "survivability" shows it believes it can carry on only by accepting undeclared funds. Tax-dodgers may also be attracted by the fact that the Bahamas is one of the few places where tax evasion does not count as a "predicate" (underlying) offence for money-laundering charges.

All this worries the OECD's tax-transparency crusaders. Pascal Saint-Amans, the club's head of tax policy, was concerned enough to fly to Nassau last year to address the cabinet. "I told them if they play games they will lose. Their reputation will be hit," he says. The lack of a response has left him "extremely disappointed".

On September 6th, just after receiving questions from *The Economist*, the government issued a press release saying that "progress [is] being made" with CRS compliance, that this is a "priority", and that the Bahamas is "clean". In response to the questions, it said it sees no competitive advantage from not signing the multilateral convention and is "cognizant of the damage" it could suffer if it advertised itself as being a safe place for the tax-shy. It said it is willing to exchange data "with any appropriate partner that approaches us". The BFSB said it "has NOT been promoting the Bahamas as a place for undeclared funds".

The Bahamas is not quite alone. As many as a dozen other CRS countries have declined to sign the convention or equivalent multilateral agreements. But most either have lots of TIEAS with the countries where their clients live (Hong Kong, for instance) or are minnows that even Mr Saint-Amans won't lose sleep over (like Dominica). The United Arab Emirates is a worry, he says. But the Bahamas displays a unique combination of defiance and a sophisticated offshore trust and banking sector, giving clients plenty of choice. Its banks have assets of $223 billion, 26 times its GDP.

Mr Saint-Amans says he now plans to write the government a stern letter. Some might conclude from this that he suspects another visit would be a waste of time. ■

Long-term private-equity funds

The Omaha play

Buy-out firms are seeking out longer-term investments

WARREN BUFFETT'S Berkshire Hathaway is celebrated for identifying undervalued companies, buying them, holding on to them for years and reaping handsome rewards for its shareholders. Private-equity firms, by contrast, habitually deal in shorter timespans. Funds with a typical life of ten years aim to turn round troubled companies and sell them profitably within just three to five years. Recently, though, the private-equity industry has taken a page from Mr Buffett's playbook.

Several buy-out firms have been setting up funds that intend to lock up investor funds for 20 years and to hold individual companies for at least ten. Their target net annual return of 10-12% is well below the 20% usually aimed for by ten-year funds, but they promise less volatility and lower fees—1% or so, rather than the customary 2%. Among the largest private-equity firms, Blackstone, the Carlyle Group and CVC have all set up dedicated long-term funds. The largest, Blackstone's, has raised nearly $5 billion. Specialised upstarts such as Altas Partners of Toronto, which raised $1 billion for its first fund in the spring, are also getting in on the act.

Private-equity houses are establishing these funds mainly because their clients have an appetite for them. With interest rates at rock-bottom, investors are keen to find assets that can offer decent returns. Sovereign-wealth funds, which can invest for indefinite periods, are happy to accept long-term funds' illiquidity. Endowments, too, are locking up money for longer.

Creating long-term funds is not simple. Ludovic Phalippou, from Said Business School at Oxford University, says that getting fee and incentive structures right can be "very tricky". Fees, typically fixed for the life of a fund, may look reasonable at first but prove wrong later. Low fees may lure investors but give private-equity firms insufficient incentives to manage the investments diligently; high fees could allow firms to siphon off most of investors' returns. In quick turnarounds, new managers are usually brought in with the promise of juicy bonuses linked to the sale; how, Mr Phalippou asks, could that be done with a 20-year horizon?

Some have concerns about conflicts of interest. One worried investor fears that large private-equity firms might earmark promising companies for their short-term funds—which remain their core business—leaving only mediocre ones for the new long-term funds.

Small, long-term specialists like Altas Partners should avoid that pitfall. Andrew Sheiner, Altas's founder, says he intends to hold on to investments for up to 15 years, but to retain the flexibility to "own each business for as long as it makes sense", so some may be sold sooner. Altas says it has attracted a lot of interest not only from investors but also from the owners and bosses of target companies, many of whom are tired, in Mr Sheiner's estimation, of being handed from one private-equity owner to another, and instead seek a more stable, longer-term partner.

Despite their recent surge, longer-dated private-equity funds are likely to remain a niche. Last year investors committed $384 billion to the whole industry; the amount going into long-term funds is a small fraction of that. Only 5% of funds set up in 2016 have an intended lifespan longer than 12 years, according to Preqin, a data provider. The large, sophisticated investors who would be the best fit for such long-term funds can often build internal private-equity teams more cheaply. For others keen to invest in a portfolio of companies for the long term, there is another option. If even Henry Kravis, co-founder of KKR, a buy-out behemoth, has called Mr Buffett's method "the perfect private equity model", might it not make sense to invest directly in Berkshire Hathaway? ■

Financial education

Quantum of scholars

NEW YORK

The promise of a faster and cheaper path to Wall Street

MATHEMATICAL wizards known as quants are prized by trading firms in Chicago, hedge funds in Greenwich, Connecticut, and big banks in New York, London and Hong Kong. They wear T-shirts, not suits, and can bring in fatter pay-packets than bankers for less gruelling hours. But becoming a quant is hard: a PhD in maths or physics usually helps.

More and more universities are trying to provide students with a short cut to Wall Street, via master's degrees in quantitative finance. Familiarity with advanced calculus, probability and programming are minimum requirements. Since Carnegie Mellon University launched the first computational-finance programme in 1994, more than 40 universities worldwide, including Columbia, MIT and Oxford, have followed.

These courses, usually 12 or 18 months long, are faster and cheaper than either doctoral programmes or typical MBAs. They are popular, too: last year the median master-of-finance programme (a broader category that includes quantitative finance) received 5.2 applications for each place, against 4.5 for MBAs, reports the Graduate Management Admission Council, a global group of management colleges. In the early 2000s many students were already working in general finance or technology. Today, over half of would-be quants at American universities are new graduates. Between 70% and 80% are foreign, mainly from China, India and France.

Demand for mathematical skills is on the rise. In trading people are needed to design strategy and write codes, rather than execute individual deals. Fintech startups are keen on data-mining and machine-learning skills. Courses have adapted to shifts in Wall Street's requirements. Since the financial crisis, banks have become more worried about quantifying risk and less keen on designing exotic products; Carnegie Mellon has cancelled advanced derivatives courses and started ones on risk management.

Graduates from the best programmes can expect well-paid jobs: the average starting salary for alumni of the University of California, Berkeley, was $154,668 last year. Freshly minted quants must still compete against PhDs, who are better trained to research and build models. Graduates are up against computer-science types and recruits from the tech industry. But any quantitative analysis would conclude that demand for these students is healthy, and growing.

Free exchange | All in the family

America does little to help people's work-life balance. Enter Heather Boushey

AMID the furore of America's bizarre presidential election, it is easy to forget that history may be made. If elected, Hillary Clinton will be the first female president. Her achievement would be one manifestation of arguably the most important social change of the past century. At the start of the 1950s only about one-third of American women worked, compared with almost 90% of men. Today 57% of women are in work, while the share of men is just under 70%. This shift has added trillions to economic output, and allowed women who might otherwise have been stuck at home to start companies, invent new products, advance the course of science or simply to earn a living of their own. It also transformed life within the home. Yet American policymakers have responded painfully slowly to this new reality.

America is an extraordinary outlier in the quality of its safety net for families. It does not require firms to provide any paid family leave (when, for example, a child is born). The average in the OECD, a club of mostly rich countries, is 54 weeks. As a share of GDP, total spending on family benefits in America, at 1.6%, is well below the OECD mean. And a third of that takes the form of tax breaks—not much use to poorer families, which pay little income tax in the first place.

Mrs Clinton, it seems, means to fix this. She has named Heather Boushey as chief economist in her transition team (putting her in line for a top job in a Clinton administration). Ms Boushey, currently at the Washington Centre for Equitable Growth, a left-leaning think-tank, has made inequities in the labour market the focus of her research.

Despite decades of advances, the gender gap remains wide. Women are still under-represented in senior positions and among entrepreneurs. That helps to explain why the median female wage is 80% of that of men, lower than the OECD average. Worryingly, progress may be slowing. The proportion of women in the American workforce—which remains lower than in much of western Europe—has declined in recent years. The share of professional degrees earned by women soared from almost nothing to above 40% in the early 2000s, but has since fallen.

In "Finding Time: The Economics of Work-Life Conflict", a book published earlier this year, Ms Boushey argues that America's labour-market troubles are largely the result of its failure to grapple with changes in family structures. Women once stayed at home, cooking meals, ironing clothes and looking after children while their husbands went out to work. This division was not universal—in poorer families, especially, women have long been employed outside the home. But it was the norm.

As women joined the paid labour force in increasing numbers, more household responsibilities were shoehorned into the hours outside work. (Although men do more in the home than they used to, women still carry out the bulk of domestic duties.) Some can afford nannies and cleaners to help out. But many families, and especially women, have too much to do and too little time in which to do it. That may in turn push them to give up formal work. Family-friendly policies almost certainly boost labour supply. The OECD reckons, for example, that increases in paid leave up to a total of two years raise women's participation in the labour force.

Ms Boushey therefore wants America's government to step into parts of workplaces and homes that it has hitherto chosen to avoid. In her book, she recommends reinforcing America's safety net to make it more like those in Europe: to grant workers more paid time to care for new babies or ailing relatives; to allow greater flexibility in working time; and to provide greater support for the education of pre-school children. Those all sound like a boon for hard-pressed households. But is the government really needed to supply them?

With her co-authors, Ms Boushey argues that better family-leave policies should not only improve the lives of struggling families but also boost workers' productivity and reduce firms' costs. In research with Sarah Jane Glynn, of the Centre for American Progress, another left-leaning think-tank, Ms Boushey found that the cost to employers of replacing workers who leave (for any reason, from a new job to parenthood) could amount to between 15% and 20% of annual pay, even in occupations paying less than $30,000 per year. Doing good for workers should, therefore, be good for businesses and for the economy. Other research suggests that more flexible work rules reduce absenteeism and increase productivity.

But if enlightened family policies enable firms to raise their workers' productivity and cut costs, they ought to be leaping to provide them themselves. At the very least, the cost of hiring replacements ought to give hard-pressed employees—those who are pregnant, say, or who have to care for elderly parents—room to bargain for better treatment. On the face of things, new government rules and regulations are unnecessary.

Inside out

Some companies have indeed spotted that it pays to be kind to their staff: when Google increased paid maternity leave from 12 to 18 weeks in 2007, the rate at which new mothers left fell by half. But big, profitable companies such as Google are better placed than most to notice the opportunity and act upon it. In firms employing a handful of people rather than many thousands, it can be debilitating if someone takes six months off. Here a nudge from the state may help. Broad social insurance could help smaller companies to share the financial load: they would pay into a fund, from which they could draw when employees go on parental leave, say. There are no easy answers here. But Mrs Clinton's team have at least started to ask the right questions. ■

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Also in this section

Building materials

Top of the tree

The case for wooden skyscrapers is not barking

THE five-storey pagoda of the Temple of the Flourishing Law in the Nara prefecture of Japan is one of the world's oldest wooden buildings. It has withstood wind, rain, fire and earthquakes for 1,400 years. Analysis of the rings in the central pillar supporting the 32-metre structure suggests the wood that it is made from was felled in 594, and construction is thought to have taken place soon after.

In an age of steel and concrete, the pagoda is a reminder of wood's long history as a construction material. New techniques mean that wood can now be used for much taller buildings. A handful are already going up in cities around the world. The 14-storey Treet block of flats in Bergen, Norway, is currently the tallest. But Brock Commons, an 18-storey wooden dormitory at the University of British Columbia in Canada, is due to be completed in 2017. That is when construction is expected to begin on the 21-storey Haut building in Amsterdam. Arup, a firm of engineering consultants working on the project, says it will be built using sustainable European pine. Some architects have even started designing wooden skyscrapers, like the proposed Tratoppen ("the treetop" illustrated opposite), a 40-floor residential tower on the drawing-board in Stockholm.

Timber!

Wood has many attractions as a construction material, apart from its aesthetic qualities. A wooden building is about a quarter of the weight of an equivalent reinforced-concrete structure, which means foundations can be smaller. Timber is a sustainable material and a natural "sink" for CO_2, as trees lock in carbon from the atmosphere. Tall steel-and-concrete buildings tend to have a large carbon footprint, in part because of the amount of material required to support them. Using wood could reduce their carbon footprint by 60-75%, according to some studies.

There are two main concerns about using wood to build high. The first is whether wood is strong enough. In recent years there have been big advances in "engineered" wood, such as cross-laminated timber (CLT) made from layers of timber sections glued together with their grains at right angles to one another. In much the same way that aligning carbon-fibre composites creates stronger racing cars, aircraft and golf clubs, CLT imparts greater rigidity and strength to wooden structures.

A recent experiment by Skidmore, Owings & Merrill, a firm of architects, and Oregon State University, shows how strong engineered wood can be. The researchers used CLT in a hybrid form known as concrete-jointed timber. This featured an 11-metre wide CLT floor section with a thin layer of reinforced concrete spread across the surface. Thicker sections of concrete were added where the floor was supported by pillars. It was put into a giant test rig where a powerful hydraulic press pushed with increasing force onto the surface. The researchers wanted to see how the structure moved under load, but kept pressing in order to find its limits. The floor finally began to crack when the load reached a massive 82,000 pounds (37,200kg), around eight times what it was designed to support.

The concrete covering the floor was mainly for sound insulation, but it helps to deal with the second worry: fire. The concrete adds a layer of fire protection between floors. In general, a large mass of wood, such as a CLT floor, is difficult to burn without a sustained heat source—for the same reason that it is hard to light a camp fire when all you have is logs. Once the outside of the timber chars it can prevent the wood inside from igniting. The big urban fires of the past, such as the Great Fire of London, which occurred 350 years ago this month, were mostly fuelled by smaller sections of timber acting as kindling. Prospective tenants would doubtless need lots of reassurance. But with other fire-resistant layers and modern sprinkler systems, tall wooden buildings can exceed existing fire standards, reckons Benton Johnson, a project leader with Skidmore, Owings & Merrill.

He says the test showed that not only can wood be made strong enough for tall buildings but that "it makes sense to use it". Although a cubic metre of concrete is cheaper than an equivalent volume of timber, wooden buildings can be built faster. Mr Johnson thinks the appeal of wood, both visually and as a sustainable material, will make it commercially attractive to property developers.

What about woodworm and rot? "If you don't look after it, steel and concrete will fail just as quickly as timber," says Michael Ramage, head of the Centre for Natural Material Innovation at the University

of Cambridge in Britain. Dr Ramage and his colleagues are also testing wooden materials for tall buildings, including for an 80-storey, 300-metre wooden skyscraper (see illustration) presented as a conceptual study to the City of London. Designed with PLP Architecture and Smith and Wallwork, an engineering company, it would, if built, become the second-highest building in London after the Shard.

For a busy city such as London, there are yet more advantages to building higher with timber, adds Dr Ramage. For a start, the construction site would be a lot quieter without the heavy plant required to pound deep foundations, pump concrete and install steel supports. There would also be less construction traffic. Dr Ramage calculates that for every lorry delivering timber for a wooden building, five lorries would be needed to deliver concrete and steel. All these things may mean that once the total construction costs are calculated, a wooden building can work out cheaper.

Anders Berensson, the Swedish architect who designed Tratoppen, believes engineered wood will become the cheapest way to construct tall buildings in the future. Another benefit of the material, he says, is the ability to carve the wood readily. In his current design the number of each floor is cut into the building's exterior.

London's tree house

One big obstacle to this wooden renaissance is regulation. Building codes vary around the world. In America cities can restrict wooden buildings to five or six storeys (about the height of a fire engine's ladder). Exemptions can be made, however, and proponents of wood are hoping that as taller timber buildings emerge, city planners will adjust the rules. If they do, an old-fashioned branch of architecture might enjoy a revival. ■

The story of yeast

Domesticated tipple

In a piece of genetic archaeology, researchers discover the origins of a good pint

CATTLE ranchers know that if they want to increase their yields it is best to breed their largest cows with their biggest bulls. The same idea works when trying to improve other livestock, crops and pets. Although less well known, microorganisms can also be bred selectively. Given that yeasts have a long history of being used to ferment food and drink, archaeologists have argued for years that early craftsmen may have selectively bred yeast strains without even realising it.

Now there is evidence to support this idea. Steven Maere of the University of Ghent and Kevin Verstrepen of the University of Leuven, both in Belgium, and their colleagues have been studying the genomes of culinary yeast species. As they report in *Cell* this week, the researchers have found evidence that people started domesticating yeast strains, particularly those used in beer, some 500 years ago.

Today's bakers, vintners and brewers have intimate knowledge of yeasts and choose strains that improve their products and grant specific flavours. But until the work of Louis Pasteur in the mid-19th century nobody knew that microorganisms existed. However, a process called "backslopping", whereby part of an old successful mix of fermented dough, wine or beer is seeded into a new mix, might have allowed early yeast users to confine species that had favourable characteristics in man-made environments for years on end, effectively domesticating them. Drs Maere and Verstrepen suspected that regular backslopping would have resulted in yeasts developing traits that led them to thrive in environments managed by humans, but to struggle in the wild. To explore that idea, they set up an experiment.

Working with a team of experts from White Labs, a company in San Diego that develops and sells yeasts, the researchers analysed the genomes of 157 strains of *Saccharomyces cerevisiae*, a yeast species that is commonly used today. Most were beer strains but the team included a number of wine, spirit, sake and bread yeasts for comparison. They knew from past studies that it was common for organisms exposed to artificial selection to carry evidence of such tinkering in the form of duplicate chromosomes and genes. And, sure enough, they found these characteristics in abundance and noticed that all the strains seemed to stem from wild ancestors that lived 500 years ago.

Further support came from traits carried by their genes. All yeasts engage in asexual reproduction most of the time. But wild species are capable of mating when genetic diversity in a population declines. Such a trait can prevent populations from becoming homogenous and thus vulnerable to a single disease or predator, but it serves no purpose in populations living in stable, protected man-made environments and ought thus to fade away. This is precisely what the researchers found. More than 40% of the beer yeasts were found to be incapable of reproducing sexually, and the others showed dramatically reduced sexual fertility.

Although domestication led sexual reproduction to decay, traits useful for life in a brewery became more common. The researchers found that genes involved in the fermentation of maltose, the main sugar found in beer, were duplicated several times, allowing beer yeasts to complete the fermentation process more rapidly than their feral ancestors. Similarly, wild yeasts typically carry genes associated with a range of unpleasant flavours; and these genes were rare in the culinary ones. Intriguingly, all these signs of domestication were far stronger in the 102 brewing strains that the researchers studied than those in the wine strains.

The evidence suggests that yeast domestication began in the 1500s and was more pronounced in brewing than it was in winemaking. Drs Maere and Verstrepen suggest that this may be down to different practices. Brewing yeasts were likely to breed continuously in a man-made environment, since they are recycled after each fermentation batch and beer is produced all year. In contrast, wine yeasts are only grown for a short period every year, and spend much of their lives in and around vineyards where they are subject to intermingling with wild strains, so are subjected to natural selective pressures.

The work was more than an academic exercise. The researchers went on to select a strain of beer yeast that shows very efficient fermentation, but also produces an unwanted spicy flavour, and crossed it with a less efficient but better-smelling sake strain. By selecting progeny without the gene variants for the off-flavour, they obtained a new beer yeast that combines swift fermentation with a lovely, fruity aroma. And this could be just the beginning. The scientists expect a range of novel yeast hybrids to follow from their research. ■

Military technology

Top Gun's topper

Is the world's most expensive fighter-jet helmet really that good?

"IN THIS style, $400,000." That price tag for a hat sounds like something out of a tea party attended by Alice. It is actually, though, the expected cost of the world's most high-tech helmet—one to be worn by pilots of the Lockheed Martin Lightning II, also known as the F-35, which has been developed by America and its allies to replace most of their existing strike aircraft. In the context of a plane costing between $148m and $337m, depending on exactly which model you order, the price of the helmet is, perhaps, trivial. But for that amount you might expect to get something pilots are universally happy with. And they are not.

The helmet is a wonder. Fighter pilots have long been used to a "heads-up" display—an image of cockpit data and targeting information displayed on the windscreen in front of them. The F-35 helmet goes much further. Not only does it display that detail, and much else besides, on the helmet's visor but it also takes video images from six external cameras mounted around the aircraft and shows that as well. This allows the pilot to "look through" the aircraft at any angle. Want to see what is happening below? Then look down and instead of your lap you see the ground. The projected view also doubles up as a night-vision system, without the pilot having to put on a special set of goggles.

The visor display can also include information from satellites, friendly aircraft and military units on the ground. The pilot's eyes are tracked by the helmet to rapidly reposition images and symbols as they look around. If a missile is launched it can be steered towards the target with only the pilot's gaze. In other warplanes pilots would have to expend "significantly more brainpower" assimilating data from multiple cockpit display screens, some of them not in their line of sight, says Billie Flynn, a test pilot for Lockheed Martin.

Mission impossible

The helmet, known as the Gen III Helmet Mounted Display System (HMDS), has been developed by a joint venture between Rockwell Collins, an American company, and Elbit Systems, an Israeli one, working with Lockheed Martin. Joe DellaVedova, the Pentagon's spokesman for the F-35, says the combination of aircraft and HMDS means the new warplane can safely handle combat roles that no other can. Such boosterism is backed by numbers: America and its allies plan to order more than 3,100 F-35s.

But some think that the helmet's "political engineering" is as much a marvel as its electronics, says Dan Grazier of the Project on Government Oversight, a watchdog in Washington, DC. The aircraft's research was spread around more than 300 congressional districts whose legislators were keen to support contractors' proposals for fancy and expensive new features, he maintains. The helmet is now so complex, he reckons, that it has become the F-35's weak link. Intricate kit breaks—and when it does, a pilot cannot simply borrow another's helmet to fly. This is because each HMDS is calibrated to an individual flyer: for example, the alignment of their pupils for eye-tracking, which is a two-day laboratory job that only Rockwell Collins is authorised to conduct.

In 2011 the Pentagon paid Britain's BAE Systems to develop a backup helmet, lest the HMDS design prove flawed. Two years later the Pentagon decided to stick with the Rockwell Collins effort. Since then, some problems have been mostly solved. The helmet now adjusts the display to compensate for different vibrations. A green glow on the display, once distracting, has been dialled down. Pilots say that a previously frustrating delay in image projection has also largely gone.

But criticism persists. A report written by a US Air Force F-35 pilot following mock dogfights last year said that the helmet was so large it restricted the ability of pilots to turn their head to see enemy aircraft. Tilting back to look up turns the helmet's avionics cable "into a spring, further increasing neck tension". Some flight manoeuvres momentarily resulted in the helmet being pinned against the canopy, obstructing the display and inhibiting weapon-firing. One airman says few of his colleagues like the F-35 helmet.

At 2.4kg, there is also concern about the helmet causing a whiplash injury if a pilot is forced to eject. Test ejections with dummies by the Pentagon's Operational Test and Evaluation unit found this could cause possible fatal neck injuries for some pilots. Designers are working to lower those risks. To reduce loading on the neck, Rockwell Collins will lighten the helmet by a quarter of a kilo, says Karl Shepherd, the firm's marketing boss. Mr Flynn, Lockheed's test pilot, says that more than 300 pilots have been trained to use the HMDS and that all "have become believers" in the helmet.

A lesson lies in all this, some say. Developing exquisite technologies is not always the best means to an end. Had the F-35's cockpit not been positioned lower than those of other fighter jets to reduce its radar signature, pilots would be able to see more with their own eyes. There are old-school ways around that: one F-35 pilot says he sometimes banks the aircraft over when he wants to see what is going on below. In future years, an entirely different solution may emerge. Given the pace of drone technology, the aircraft that replaces the F-35 may not have a pilot at all. ■

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China

Water, water, everywhere

How China's rivers shaped its history

The Water Kingdom: A Secret History of China. By Philip Ball. *Bodley Head; 316 pages; £25. To be published in America by University of Chicago Press in March 2017*

THE Chinese mental compass is oriented not north-south as with the rest of the world, but west-east—a consequence of tectonic forces that threw up mountains in inner Asia from which rivers seek a course down through China to the sea. "Twisting around ten thousand times but always going eastward," said Confucius: it seemed a law of nature. Philip Ball argues in his new book, "The Water Kingdom", that the two greatest waterways, the Yellow river that flows across the north China plain and the Yangzi that charges through the heart of the country, are both "symbols of the nation" and, for millennia, have been the "keys to its fate".

Nowhere is this clearer than with the Yellow river, China's "mother river". Rising on the Tibetan plateau, it cuts a giant loop through the loess badlands of China's north-west—the famous "yellow earth" formed of fine dust blown from the Gobi desert. By the time the river has turned abruptly eastward onto the vast and populous north China plain, a litre of river water carries up to 300 grams of alluvial silt.

For thousands of years the silt has both nourished and destroyed on an unparalleled scale. As the sediment settles, it raises the river bed and makes the river more prone to flooding with the summer rains. The response was always to build higher ramparts of mud, rocks and matting of woven reeds until the river ran on its own conveyor belt, sometimes 15 metres above the surrounding countryside. When rains inevitably breached the dykes, the consequences could be catastrophic: up to 2.5m people are thought to have drowned or died from disease and starvation in the flood of 1887. After such disasters, it was impossible to force the river back into its old watercourse. Like an out-of-control fire hose, the Yellow river has thrashed across the north China plain, its sea mouth shifting by hundreds of miles. "China's Sorrow" indeed.

The vast ecosystem is shaped by human agency, yet nature remains god. The Yangzi, the more immense torrent, divides the wheat-growing north from the rice cultivation of the south. It has long been China's commercial artery, running deep into the country through spectacular gorges, as well, in earlier dynasties, as its line of defence. With floods no less brutal than the Yellow river's, the Yangzi has no equal for beauty and cruelty, as can be seen from the flooding of Changzhou in 2015 (pictured).

Nearly all cultures have flood myths and legends. China's are unusual in that at the heart of them are the engineering challenges of flood control. The first attempts to tame the Yellow river are ancient; the huge Three Gorges dam, which a decade ago turned a fast-flowing stretch into a reservoir the size of Lake Superior, is just the latest scheme.

Mr Ball argues that "whatever one might think of China's mega-engineering schemes, doing nothing is not an alternative." Indeed, his book, a rewarding read, is at its most fascinating when describing how in China the laws of nature seem to have embedded in them a moral precept. Success or failure in flood control and irrigation can furnish or remove the Mandate of Heaven. The Yellow river catastrophe of 1887 was seen as evidence that the Qing, the last dynasty, was losing its mandate. When Chiang Kai-shek caused the deaths of hundreds of thousands of Chinese by ordering a breach of the same river's dykes in an effort to avoid defeat by the Japanese in 1938, it was grist to the Chinese Communists' claims that the Nationalists were unfit to rule.

If heaven's mandate comes from controlling the waters, might the demands of hydrology, including the need for considerable resources and legions of workers for flood control and irrigation, have created the highly centralised, authoritarian states of Chinese dynastic rule, the Communists' one included? The idea of an "Oriental despotism" based on a "hydraulic civilisation" was advanced in the 1950s by Karl Wittfogel, a Marxist historian. His ideas have fallen out of fashion, not least because they often overplay emperors' reach and downplay historical local actors in trade, commerce—and even hydrology.

And yet: China's biggest current water projects, including piping water from the Yangzi under the Yellow river to slake Beijing, are on an imperial scale that without ▸▸

authoritarianism would be hard to envisage. At the very least, water management has created, as Mr Ball puts it, "a political language, and it is one that speaks of legitimacy to rule". Look how it soaks into political gesture, for instance, with the prime minister, Li Keqiang, wading into the flood waters in his office clothes. Such symbolic offerings will have to count for more as popular concerns grow about sediment building up behind the Three Gorges dam, increasing water extraction and desertification in the Yellow river basin. There is so much toxicity in northern Chinese cities that half the water there is undrinkable.

Like Confucius's rivers, "The Water Kingdom" twists around in spirals and meanders. That is its charm, as it takes in painting, poetry and ancient history. Sometimes the reader wishes the author had walked the rivers' banks as much as the library stacks, and on occasion the narrative is shunted off course, as in overenthusiastic claims for China's maritime prowess. The shock-and-awe voyages of Admiral Zheng He in the early 15th century that reached Hormuz and eastern Africa were remarkable. But they were never repeated, while his vessels were little more than lumbering rafts. Meanwhile, for much of history, the overseas trade with China was carried not in Chinese craft but on foreign (Arab, Indian and later Western) bottoms. But these are quibbles. Mr Ball puts water back beautifully at the heart of China's story. ■

The right in America

Hand on heart

Strangers in Their Own Land: Anger and Mourning on the American Right. By Arlie Russell Hochschild. *The New Press; 351 pages; $27.95*

THE past is a foreign country. But so too is the present, says Arlie Hochschild, an American sociologist, of much of her own country. Ms Hochschild is a devoted liberal from Berkeley, California, and her latest book, "Strangers in Their Own Land", is an astute study of America's "culture war" drawn from the perspective of the white conservatives who feel they are losing it. But it is also a *Bildungsroman*: one woman's journey across the political divide, to an empathy with those on the other side.

Based on five years among Tea Party activists in Louisiana—a typical, if perhaps extreme, Southern "red state"—"Strangers in Their Own Land" will elicit comparisons with "What's the Matter with Kansas?" by Thomas Frank, a bestseller in 2004. Like Mr Frank, Ms Hochschild is concerned chiefly with what she calls the "great paradox" of ordinary, hard-working Americans seemingly voting against their own economic interests by supporting small-state Republican politicians. And like Mr Frank, she is certain such voters would be better off under the Democrats. Much of the book is concerned with the many environmental disasters suffered by Louisiana as a result of under-regulated oil and gas companies plundering its natural wealth with the connivance of local Republican leaders. Where she and Mr Frank disagree is over his central premise that such voters are being duped by an unholy alliance of Fox News, unscrupulous corporations and self-aggrandising Washington elites.

Ms Hochschild has been praised for focusing on her subjects' emotional lives. Her new book is no exception. It is people's emotional response, she argues, that is the raw stuff of politics. What, then, do her subjects feel? They see themselves as betrayed by "line-cutters"—black people, immigrants, women and gays—who jump in ahead of them in the queue for the American dream. Southerners feel patronised and humiliated by northerners who tell them whom to feel sorry for, then dismiss them as bigots when they do not. They feel they are victims of stagnant wages and affirmative action but without the language of victimhood: struggling Southerners are not "poor-me's". They believe that they are honourable people in a world where traditional sources of honour—faith, independence and endurance—seem to go unrecognised: until Donald Trump began offering hope and emotional affirmation.

It is a convincing thesis, but not a new one. That conservative white middle-class and working-class Americans feel a sense of betrayal and loss is familiar territory. Ms Hochschild has little new to say about right-wing media or evangelical Christianity. What she does say about prosperity preachers and Fox News shock jocks duping their subjects by directing their anger away from real sources of local grievance like oil spills and gas leaks might confirm the argument she seeks to overturn. The book's appendix shows how misled Tea Party activists are on many of their most cherished gripes, such as the size of federal government. According to the Bureau of Labour Statistics, at the end of 2014 only 17% of the 143m American workers were federal, state-government or military employees. The Tea Party activists she spoke to believe the figure is around 40%.

Ms Hochschild offers an entry pass to an alternative worldview, and with it a route map towards empathy. In her book people like Janice Areno, a Bible-bashing Pentecostalist who says the poor should work or starve, become human. The anger and hurt of the author's interviewees is intelligible to all. In today's political climate, this may be invaluable. ■

Biography

Shades of Byzantium

Outlandish Knight: The Byzantine Life of Steven Runciman. By Minoo Dinshaw. *Allen Lane; 767 pages; £30*

BY THE time he died, in 2000 at the age of 97, Sir Steven Runciman knew that he was a "'relict of a past age'", the "embodiment of a…nearly mythical era." Minoo Dinshaw's brilliantly entertaining biography of the great historian of Byzantium restores him to public view and provides a vivid picture of many aspects of 20th-century Europe that now seem almost as remote as the crusades and religious schisms he described in his books.

Runciman was not aristocratic by birth—his grandfather, a shipping magnate, had established the family fortune—but he was immensely grand and well connected. His parents were the first married couple to sit together in the House of Commons. And his father, who was part of Lord Asquith's cabinet before the first world war, survived the declining fortunes of the Liberal party to lead the doomed mission to Czechoslovakia in 1938. He could claim in 1991 to have known every 20th-century prime minister except Sir Henry Campbell-Bannerman, who died when he was a toddler, and Bonar Law, "'whom nobody knew'". Introduced by his governess to French, Latin and Greek by the age of seven, he won scholarships to Eton—in an era of clever men like George Orwell, Cyril Connolly and Anthony Powell—and to Cambridge, where he lived in the "scornfully beautiful Great Court" of Trinity Col- ▸▸

Birdman

lege. Through his friend Dadie Rylands (they were named the Tea Party Cats "for their velvety urbanity") he met Lytton Strachey, John Maynard Keynes and other members of the Bloomsbury group.

Despite frequent trips to London to socialise with the "bright young people" (and be photographed with his budgerigar by Cecil Beaton), Runciman won the first-class degree and prize fellowship that were to launch his academic career. Of the Cambridge spies recruited in the 1930s, Guy Burgess was a pupil and friend and Anthony Blunt a "supercilious" colleague. Employing political and diplomatic connections to the full, he travelled in style to Romania, Bulgaria and Asia. He established his reputation with histories of the emperor Romanus Lecapenus, the first Bulgarian empire and Byzantium. When he inherited wealth from his grandfather in 1938, he gave up his university fellowship.

Unfit for military service, Runciman spent the war in the Balkans and the Middle East: in Sofia as press attaché to the British Legation, Jerusalem, Cairo and Istanbul. There he narrowly escaped a bomb blast, spent three years as professor of Byzantine history and art, and became an honorary Dervish. Between 1945 and 1947 he led the British Council in Athens. Osbert Lancaster, a witty cartoonist, and Patrick Leigh Fermor, who would become a glamorous writer, were there. Greece was lurching towards civil war and Runciman gained an abiding love for the country, pleasure from upstaging the British ambassador and the position of Astrologer Royal.

On his return to Britain, Runciman split his time between London and the Hebrides, and wrote the books that were to make his name: the ground-breaking three-volume "History of the Crusades"; and a succession of works on Byzantine history that drew on a wide variety of sources, Muslim and Greek, most notably "The Sicilian Vespers" and "The Fall of Constantinople". Francis Birrell, a Bloomsbury acquaintance, had greeted Runciman's first book with the acknowledgment that fewer than "half a dozen people were really competent" to review it (and that he was not one of them). There were no such reservations about later volumes, which were lively, authoritative and well received.

Runciman was not to everyone's taste. He loved to tease, possessed a "queenly persona", snubbed people who failed to interest him and "had a tongue like a viper if he wanted to use it". He was a gossip who adored royalty; he entertained the Queen Mother to lunch at the Athenaeum Club every year; four queens are said to have attended his 80th-birthday party.

Despite being able to compose an alphabet of lovers with every letter except Q ("I shall die Qless"), he was to claim that he had "never been in love". He retained a wide circle of loyal friends and was a popular laird of the Isle of Eigg, not least because he would invite his musical friends to stay and perform at the village hall. (Yehudi Menuhin was "memorably described" by the ferryman as "a handy man for a ceilidh"). He gave his name and time to numerous public bodies and causes, at home and abroad. A final apotheosis, three months before he died, for his service as Grand Orator to the Patriarch of Constantinople, was a descent by helicopter on the Holy Mountain of Athos.

Mr Dinshaw's choice of subject for his first book is an inspired one. He interweaves the strands of a long and variegated life with sympathy, elegance and awareness of the wider picture. In recognition of Runciman's fascination with the supernatural, chapters are headed with quotations from Arthur Waite's "The Key to the Tarot". He refers frequently to novelists such as Evelyn Waugh and Olivia Manning, authors of trilogies about the war. And his turn of phrase is as arresting as Runciman's own—one family friend is "unceremonious, crapulous". Mr Dinshaw has done Runciman proud. To whom will he turn his attention next? ■

The Venice film festival

Showtime

VENICE

Unveiling the new films that will win Academy Awards

"SPOTLIGHT", which won the best-picture award at the Oscars this year, was first shown at the Venice film festival last September. "Birdman", the best-picture winner in 2015, was unveiled at Venice the year before. And in 2014, "Gravity" did not win the best-picture Oscar, but it collected seven other Academy Awards, as well as a mountain of trophies from around the world. No prizes for guessing where it was first shown to the public.

Purists may say that no festival should be judged on the number of prizes its films go on to pick up elsewhere. But in publicity terms, it is invaluable to be known—as Venice is now—for being the launching pad for the winners of the Academy Awards, the Baftas and the Golden Globes.

This year's opening film was "La La Land", a delightful musical comedy from Damien Chazelle, the writer-director of "Whiplash". Set in modern Los Angeles, but revolving around a jazz pianist (Ryan Gosling) and an aspiring actress (Emma Stone—pictured together) who adore the music and movies of Hollywood's golden age, it succeeds in being both innovative and nostalgic, frothy and melancholy, romantic and realistic. For all its bright colours, retro styling and toe-tapping tunes, the film asks, as "Whiplash" did, whether pursuing artistic greatness means abandoning everything else in your life, especially in the economically squeezed 21st century. The audience in Venice was so enchanted that by the time the end credits rolled, the Oscars had become a two-horse race between "La La Land" and all the rest.

Whether or not "Arrival" is in contention for the best-picture award, Denis Villeneuve's weighty and eerie science-fiction mind-bender is one of two films at the festival that could snag a best-actress trophy for Amy Adams, who has already been nominated for five Oscars and five Baftas. Ms Adams stars as a linguistics professor who is recruited by the American government when a monolithic alien spacecraft lands in a meadow in Montana—or, to be precise, floats a few metres above it. Her mission is to board the flying saucer, decode its occupants' language and work out whether they are friend or foe. As in "Gravity", the heroine of "Arrival" is a single mother getting over the death of her daughter, but in contrast with "Gravity", the tragic back story doesn't feel as if it has been grafted on. It is crucial to the plot.

Ms Adams's other starring role at the festival was in "Nocturnal Animals", Tom Ford's proudly melodramatic and dizzyingly ambitious follow-up to "A Single Man". Proving definitively that the fashion designer is as skilled at writing and directing films as he is at designing sunglasses, "Nocturnal Animals" cuts between three narratives. In one, Ms Adams plays a rich, glamorous but miserable Los Angeles gallerist who is sent a proof copy of a novel written by her ex-husband. In the second strand, which visualises the story in the novel, a mild-mannered man (Jake Gyllenhaal) is terrorised by hoodlums in West Texas. And in the third, the gallerist remembers her bohemian youth in New York. Fact and fiction are woven together. Mr Ford, being Mr Ford, makes it all look absolutely fabulous.

Mel Gibson's "Hacksaw Ridge" is nowhere near as sophisticated as the other films shown. Nonetheless, his admiring biopic of Desmond Doss (Andrew Garfield), a pacifist who won the Medal of Honour for his bravery as a medic in the second world war, is likely to carry away many prizes. For all the gore, the film is ultimately a straightforward, uplifting ode to patriotic duty and individual principles. Besides Hollywood loves a tale of redemption, and "Hacksaw Ridge" marks Mr Gibson's return to favour after years in the wilderness of scandal. What could be more Oscar-friendly than that? ■

Johnson | Talking in tongues

Should religious language keep up with the times or stick closely to the original?

A RECENT Johnson column looked at the English past subjunctive. The present subjunctive gets much less attention. This appears after verbs like "insist" and "request", and can be spotted when a first- or third-person singular verb, which normally has an "s" on the end (he brings), loses that "s": for example, "We ask that each student *bring* a lunch."

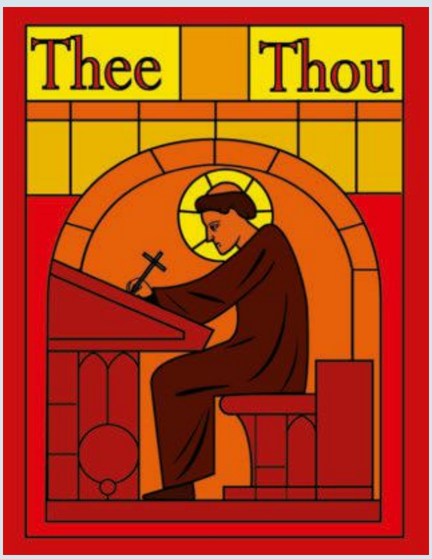
This subjunctive is becoming rarer. The above would be more idiomatic as "We ask each student to bring a lunch." Most of the subjunctives that people actually know and use, in fact, are frozen phrases—many of them religious. "Peace be with you." "The Lord be with you." "God save the Queen." "God bless America." "God shed His grace on thee." "Until death do us part." (In the plain indicative, these would be "Peace is with you," "God saves the Queen" and so on.) These forms cannot be repurposed in modern English: you can't say to your neighbour "a good barbecue be with you," or "your daughter win the race tomorrow."

Something about religious worship seems to call for special, often archaic language. Islam and Judaism both give exclusive status to one language, classical Arabic and Hebrew, regardless of the spoken languages of the worshippers. Arabs read, pray and hear sermons in a seventh-century language that is nearly as different from their spoken Arabic as Latin is from Italian. Young Jews around the world join the adult community by reciting a Torah passage in Hebrew.

Christianity has also had its own policies. Early Christians accepted a Greek translation of the Hebrew Bible as the first part of God's word, and a collection of Greek writings as the New Testament. But the Greek accounts of Jesus were already translations: he and his followers spoke Aramaic. After Christianity won official status in the Roman empire in the fourth century, it jumped languages again: St Jerome's Latin Bible was official for Western Christianity. In 1546 the Council of Trent said of this translation of a translation that "no one is to dare, or presume to reject it under any pretext whatever."

All this has theological consequences, as Nicholas Ostler explains in a masterly recent book, "Passwords to Paradise". St Jerome made basic errors, some due to the fact that most vowels are omitted in Hebrew texts: Johann Reuchlin (1455-1522), the first Christian Hebraist in northern Europe, found around 200 errors in St Jerome's translation.

Even defensible translation choices are meaningful. Mr Ostler skips over some well-known examples to tell the story of the fourth-century Goths, for example. Their leader, Wulfila, chose a translation for "Lord", *frauja*, that meant something like the head of a household. Other tribes



chose a word more suitable for a military chieftain—as would the Goths, one might think, but it seems Wulfila wanted to wean his people off marauding.

Should churches regularly update their translations, keeping the religion fresh and relevant, or preserve tradition and authenticity? The debate is as old as the faiths themselves. A fourth-century commentator, arguing for translating Greek into Latin for Western Christians, said that "our heart is ignorant, if it speaks in a language it doesn't know." But Reuchlin, who corrected St Jerome, naturally thought he had got nearer to the spirit of the scriptures, and so to their author himself: "God wished his secrets to be known to mortal man through Hebrew."

The practical answer is that young people and new converts should study in their own vernaculars. As they progress in the faith they can get closer to the original through study. But the underlying theological question is hard to dodge. Would a loving supreme being want the truth of religion to be plain even to unlettered people, in the simplest possible vernacular? Or should original language (like Quranic Arabic) and archaic language (*thou* and all those subjunctives in English) remind worshippers that religion is not just any old set of beliefs and practices, just as there are special rules for the Sabbath or a house of worship?

The question divided believers during the Reformation. Today, as science challenges many religious beliefs, some defenders of religion seek refuge in the argument that faith has a special status where the arguments of science do not apply. A language of sacred mystery could be seen as a sign of that special status—or as an admission that letting the faithful interrogate the doctrine in plain language can be a dangerous thing.

OFFICE OF THE PROJECT DIRECTOR (WATER)

GWADAR DEVELOPMENT AUTHORITY

GOVERNMENT OF BALOCHISTAN (PAKISTAN)

NOTICE INVITING TENDERS

1. **Gwadar Development Authority (GDA)** intends to invite Professional and Eligible Contractors or Firms to participate in the Bidding process of **"Necessary Facilities of Fresh Water Treatment, Water Supply and Distribution Gwadar"** Phase-I (Water Transmission Main from Swad Dam to Gwadar City), Balochistan (Pakistan) which is being financed by the Government of Pakistan.
2. As the time is an essence for the completion of this Project, it is envisaged that the Project will be executed in Two Packages:

1. **Water Transmission Main from Swad Dam to Darbella** (CP-01) 2. **Water Transmission Main from Darbella to Gwadar City** (CP-02)

3. **Qualification Criteria (Applicable for Both Contract Packages separately):**

S.No	Description	Requirements
1.	**ELIGIBILITY:** Valid Registration with Pakistan Engineering Council in relevant Category and Discipline	Category C1, Discipline CE-04, CE-09 and CE-10. Foreign Firms should strictly follow the Pakistan Engineering Council Bye-Laws (www.pec.org.pk)
2.i	**QUALIFICATION:** Similar Assignments with Cost (One Similar Project), undertaken over in the Past Ten (10) Years	Rs. 1,400 Million
2.ii	Annual Turnover Construction for the Last Three (3) Years	Rs. 2,000 Million
	Average Net Worth for the Last Three (3) Years	Rs. 400 Million
	Average Networking Capital for the Last Three (3) Years	Rs. 200 Million
2.iii	Income Tax Returns for the Last Three (3) Years	Must Meet
2.iv	List of Litigation/s (If Any), their Nature and Status / Outcome	Must Meet
2.v	Affidavit that the Firm has never been Blacklisted	Must Meet
3.i	Requirements of Manpower and Equipment	Provided in Bidding Documents

4. **METHOD OF PROCUREMENT**: Single Stage-Two Envelopes, under Balochistan Public Procurement Authority Rules 2014 (www.bppra.org.pk)
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6. The Bidding Documents are also available on Website of Gwadar Development Authority (www.gda.gov.pk) and BPPRA Website (www.bppra.org.pk)
7. Bid Validity is 120 Days. 8. The Applicant, who will download the Documents from the Website, should submit the Fee of Documents as mentioned in Para 05 above at the time of submission of Documents. 9. All Technical Bids must be accompanied by Original Bid Security amount of PKR 45 Million for Each Package separately in the shape as stated in the Bidding Documents. 10. **PRE-BID MEETING**: Pre-Bid Meeting will be held as per schedule provided in the Bidding Documents. 11. The Procuring Agency will NOT be responsible for any Costs or Expenses incurred by the Bidders in connection with the preparation and delivery of Bids, including the Cost and Expenses incurred by the Bidder in connection with Site Visits. 12. Procuring Agency reserves the right to annul the Bidding Process, as per BPPRA Rules 2014.
13. **Last Date for Submission of Bids** is **OCTOBER 17, 2016** up to **11:00 am**. **Technical Bids** shall be opened on the same day at **12:00 pm**.
14. Time of Completion will be as per Bidding Documents.
15. Place of Issuance, Submission, Enquiries and Opening shall be the Office of PD (Water) as mentioned below.

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Economic and financial indicators

Economic data

% change on year ago

	Gross domestic product latest	qtr*	2016†	Industrial production latest	Consumer prices latest	2016†	Unemployment rate, %	Current-account balance latest 12 months, $bn	% of GDP 2016†	Budget balance % of GDP 2016†	Interest rates, % 10-year gov't bonds, latest	Currency units, per $ Sep 7th	year ago
United States	+1.2 Q2	+1.1	+1.5	-0.5 Jul	+0.8 Jul	+1.3	4.9 Aug	-473.1 Q1	-2.6	-3.2	1.54	-	-
China	+6.7 Q2	+7.4	+6.6	+6.0 Jul	+1.8 Jul	+2.0	4.1 Q2§	+256.1 Q2	+2.7	-3.8	2.59§§	6.66	6.37
Japan	+0.8 Q2	+0.7	+0.5	-3.8 Jul	-0.5 Jul	-0.1	3.0 Jul	+167.6 Jul	+3.4	-5.0	-0.02	102	119
Britain	+2.2 Q2	+2.4	+1.6	+2.1 Jul	+0.6 Jul	+0.7	4.9 May††	-161.9 Q1	-5.4	-4.0	0.78	0.75	0.66
Canada	+0.9 Q2	-1.6	+1.2	-1.3 Jun	+1.3 Jul	+1.7	6.9 Jul	-51.1 Q2	-3.2	-2.5	1.00	1.29	1.33
Euro area	+1.6 Q2	+1.2	+1.5	+0.4 Jun	+0.2 Aug	+0.3	10.1 Jul	+393.5 Jun	+3.2	-1.8	-0.12	0.89	0.90
Austria	+1.2 Q2	-0.7	+1.3	+0.9 Jun	+0.6 Jul	+1.0	6.0 Jul	+10.5 Q1	+2.8	-1.4	0.09	0.89	0.90
Belgium	+1.4 Q2	+2.2	+1.3	+6.3 Jun	+2.2 Aug	+1.8	8.3 Jul	+6.5 Mar	+1.2	-2.8	0.12	0.89	0.90
France	+1.4 Q2	-0.2	+1.3	-1.3 Jun	+0.2 Aug	+0.3	10.3 Jul	-22.5 Jul‡	-0.5	-3.3	0.18	0.89	0.90
Germany	+1.7 Q2	+1.7	+1.6	-1.2 Jul	+0.4 Aug	+0.4	6.1 Aug	+307.7 Jun	+8.4	+0.4	-0.12	0.89	0.90
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	8.25	0.89	0.90
Italy	+0.8 Q2	+0.1	+0.8	-1.0 Jun	-0.1 Aug	nil	11.4 Jul	+53.9 Jun	+2.3	-2.6	1.08	0.89	0.90
Netherlands	+2.3 Q2	+2.5	+1.5	+1.6 Jun	-0.3 Jul	+0.3	7.4 Jul	+62.0 Q1	+9.8	-1.4	0.01	0.89	0.90
Spain	+3.2 Q2	+3.4	+2.9	+1.0 Jun	-0.2 Aug	-0.4	19.6 Jul	+22.7 Jun	+1.3	-4.3	1.02	0.89	0.90
Czech Republic	+3.6 Q2	+3.7	+2.3	-14.0 Jul	+0.5 Jul	+0.5	5.4 Jul§	+2.7 Q1	+1.1	-0.5	0.25	24.0	24.2
Denmark	+1.0 Q2	+1.8	+1.1	-0.8 Jun	+0.3 Jul	+0.8	4.2 Jul	+18.3 Jun	+6.8	-2.5	-0.02	6.62	6.69
Norway	+2.5 Q2	+0.1	+1.0	-1.4 Jul	+4.4 Jul	+3.5	4.8 Jun‡‡	+23.6 Q2	+6.6	+3.0	1.13	8.18	8.30
Poland	+3.0 Q2	+3.6	+3.1	-3.4 Jul	-0.8 Aug	-0.8	8.5 Aug§	-1.7 Jun	-0.8	-2.9	2.77	3.85	3.80
Russia	-0.6 Q2	na	-0.5	-0.3 Jul	+6.8 Aug	+7.1	5.3 Jul§	+38.4 Q2	+3.3	-3.7	8.01	64.5	68.8
Sweden	+3.1 Q2	+1.2	+3.3	+4.2 Jul	+1.1 Jul	+1.0	6.3 Jul§	+25.4 Q2	+5.6	-0.4	0.14	8.44	8.47
Switzerland	+2.0 Q2	+2.5	+1.1	-1.2 Q2	-0.1 Aug	-0.5	3.3 Jul	+71.9 Q1	+9.7	+0.4	-0.48	0.97	0.98
Turkey	+4.8 Q1	na	+3.2	+1.1 Jun	+8.0 Aug	+7.7	9.4 May§	-29.4 Jun	-4.7	-2.0	9.55	2.93	3.03
Australia	+3.3 Q2	+2.1	+2.8	+3.7 Q2	+1.0 Q2	+1.3	5.7 Jul	-52.8 Q2	-4.4	-2.1	1.83	1.30	1.44
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	0.90	7.76	7.75
India	+7.1 Q2	+5.5	+7.6	+2.1 Jun	+6.1 Jul	+5.2	4.9 2013	-22.1 Q1	-1.2	-3.8	7.06	66.4	66.8
Indonesia	+5.2 Q2	na	+5.0	+9.1 Jun	+2.8 Aug	+3.8	5.5 Q1§	-18.7 Q2	-2.2	-2.3	6.89	13,085	14,248
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	3.51	4.06	4.33
Pakistan	+5.7 2016**	na	+5.7	nil Jun	+3.6 Aug	+3.7	5.9 2015	-2.5 Q2	-0.8	-4.6	8.03†††	104	104
Philippines	+7.0 Q2	+7.4	+5.8	+8.5 Jun	+1.8 Aug	+1.7	6.1 Q2§	+6.7 Mar	+3.0	-1.0	3.40	46.7	46.9
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	1.68	1.35	1.43
South Korea	+3.2 Q2	+3.2	+2.6	+1.6 Jul	+0.4 Aug	+1.0	3.5 Jul§	+104.4 Jul	+7.4	-1.2	1.46	1,090	1,204
Taiwan	+0.7 Q2	+0.2	+0.5	-0.3 Jul	+0.6 Aug	+1.3	4.0 Jul	+75.7 Q2	+13.5	-0.6	0.66	31.2	32.7
Thailand	+3.5 Q2	+3.2	+2.7	-5.1 Jul	+0.3 Aug	+0.2	1.0 Jul§	+42.4 Q2	+6.2	-2.6	2.11	34.6	36.1
Argentina	+0.5 Q1	-2.7	-1.2	-2.5 Oct	— ***	—	9.3 Q2§	-15.0 Q1	-2.3	-5.1	na	15.0	9.32
Brazil	-3.8 Q2	-2.3	-3.3	-6.6 Jul	+8.7 Jul	+8.2	11.6 Jul§	-27.9 Jul	-1.0	-6.6	11.84	3.24	3.80
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	4.22	661	695
Colombia	+2.0 Q2	+0.8	+2.0	+6.6 Jun	+8.1 Aug	+8.0	9.8 Jul§	-16.9 Q1	-5.5	-3.7	7.01	2,840	3,142
Mexico	+2.5 Q2	-0.7	+2.1	+0.6 Jun	+2.7 Jul	+2.9	3.8 Jul	-30.9 Q2	-3.0	-3.0	5.79	18.4	17.0
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	1.70	3.75	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	+0.6 Q2	+3.3	+0.3	+4.3 Jun	+6.0 Jul	+6.0	26.6 Q2§	-13.4 Q1	-4.3	-3.4	8.61	14.1	14.0

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

Markets

	Index Sep 7th	% change on one week	% change on Dec 31st 2015 in local currency	% change on Dec 31st 2015 in $ terms
United States (DJIA)	18,526.1	+0.7	+6.3	+6.3
China (SSEA)	3,236.8	+0.2	-12.6	-14.9
Japan (Nikkei 225)	17,012.4	+0.7	-10.6	+5.7
Britain (FTSE 100)	6,846.6	+1.0	+9.7	-0.7
Canada (S&P TSX)	14,796.8	+1.4	+13.7	+22.4
Euro area (FTSE Euro 100)	1,053.8	+2.2	-3.7	-0.3
Euro area (EURO STOXX 50)	3,091.7	+2.3	-5.4	-2.1
Austria (ATX)	2,394.3	+3.5	-0.1	+3.4
Belgium (Bel 20)	3,635.5	+2.3	-1.8	+1.7
France (CAC 40)	4,557.7	+2.7	-1.7	+1.7
Germany (DAX)*	10,753.0	+1.5	+0.1	+3.6
Greece (Athex Comp)	575.1	-0.4	-8.9	-5.7
Italy (FTSE/MIB)	17,292.8	+2.1	-19.3	-16.4
Netherlands (AEX)	463.3	+2.0	+4.9	+8.5
Spain (Madrid SE)	907.4	+3.2	-6.0	-2.7
Czech Republic (PX)	881.4	+2.6	-7.8	-4.6
Denmark (OMXCB)	845.5	-0.4	-6.7	-3.3
Hungary (BUX)	28,642.8	+2.4	+19.7	+26.7
Norway (OSEAX)	686.0	+1.2	+5.7	+14.4
Poland (WIG)	48,478.3	+1.1	+4.3	+7.0
Russia (RTS, $ terms)	1,005.8	+5.8	+17.2	+32.9
Sweden (OMXS30)	1,441.5	+1.6	-0.4	-0.5
Switzerland (SMI)	8,321.0	+1.4	-5.6	-2.5
Turkey (BIST)	77,643.1	+2.2	+8.2	+7.7
Australia (All Ord.)	5,521.1	-0.2	+3.3	+8.9
Hong Kong (Hang Seng)	23,741.8	+3.3	+8.3	+8.3
India (BSE)	28,926.4	+1.7	+10.8	+10.4
Indonesia (JSX)	5,381.3	-0.1	+17.2	+23.4
Malaysia (KLSE)	1,689.6	+0.7	-0.2	+5.6
Pakistan (KSE)	40,084.9	+0.7	+22.1	+22.6
Singapore (STI)	2,893.7	+2.6	+0.4	+5.8
South Korea (KOSPI)	2,061.9	+1.3	+5.1	+13.1
Taiwan (TWI)	9,259.1	+2.1	+11.0	+16.8
Thailand (SET)	1,487.2	-4.0	+15.5	+20.0
Argentina (MERV)	16,315.5	+4.3	+39.7	+20.4
Brazil (BVSP)	60,129.4	+3.8	+38.7	+71.7
Chile (IGPA)	20,438.7	nil	+12.6	+20.7
Colombia (IGBC)	10,447.9	+2.7	+22.2	+36.7
Mexico (IPC)	47,398.7	-0.3	+10.3	+3.6
Venezuela (IBC)	12,490.9	+4.4	-14.4	na
Egypt (Case 30)	8,146.1	-0.1	+16.3	+2.5
Israel (TA-100)	1,282.1	+0.8	-2.5	+1.2
Saudi Arabia (Tadawul)	6,139.4	+1.0	-11.2	-11.1
South Africa (JSE AS)	53,456.4	+1.4	+5.4	+16.3

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

	Real GDP, % change Low/high range 2016	Low/high range 2017	Average 2016	Average 2017	Consumer prices % change 2016	2017	Current account % of GDP 2016	2017
Australia	1.9/3.3	2.1/3.2	2.8 (2.7)	2.8 (2.7)	1.3	2.2	-4.4 (-4.5)	-3.9 (-4.1)
Brazil	-3.8/-2.8	0.3/2.0	-3.3 (-3.5)	1.1 (1.0)	8.2 (8.0)	5.5 (6.1)	-1.0 (-1.1)	-1.1 (-1.2)
Britain	1.2/1.9	-0.7/1.0	1.6	0.5	0.7	2.4	-5.4 (-5.1)	-4.2 (-3.8)
Canada	1.0/1.4	1.2/2.5	1.2 (1.4)	1.9	1.7	2.0	-3.2 (-2.4)	-2.7 (-2.1)
China	6.4/6.8	5.7/6.7	6.6 (6.5)	6.3	2.0	1.9	2.7	2.5 (2.6)
France	1.2/1.5	0.7/1.4	1.3 (1.4)	1.1	0.3	1.1	-0.5	-0.5
Germany	1.4/2.0	1.0/1.7	1.6 (1.5)	1.2 (1.3)	0.4	1.5	8.4 (8.1)	7.9 (7.6)
India	7.0/8.1	6.1/8.3	7.6 (7.4)	7.6 (7.5)	5.2 (5.1)	5.1	-1.2	-1.6 (-1.5)
Italy	0.6/1.0	-0.1/1.2	0.8 (0.9)	0.7 (0.9)	nil	0.9	2.3 (2.1)	2.1 (1.9)
Japan	0.2/0.7	0.1/1.4	0.5	0.8 (0.9)	-0.1	0.7	3.4	3.0 (3.1)
Russia	-2.1/0.5	0.4/2.9	-0.5 (-0.8)	1.4 (1.5)	7.1 (7.2)	5.4 (5.7)	3.3 (2.9)	3.5 (3.2)
Spain	2.7/3.2	1.5/2.5	2.9 (2.8)	2.0	-0.4	1.2	1.3	0.9
United States	1.1/2.0	1.2/2.5	1.5 (1.7)	2.0	1.3 (1.4)	2.1	-2.6 (-2.5)	-2.8 (-2.6)
Euro area	1.2/1.6	0.7/1.5	1.5	1.2 (1.1)	0.3	1.3 (1.2)	3.2 (3.0)	2.9 (2.8)

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

Other markets

	Index Sep 7th	% change on one week	% change on Dec 31st 2015 in local currency	% change on Dec 31st 2015 in $ terms
United States (S&P 500)	2,186.2	+0.7	+7.0	+7.0
United States (NAScomp)	5,283.9	+1.4	+5.5	+5.5
China (SSEB, $ terms)	356.0	+0.3	-14.3	-16.5
Japan (Topix)	1,349.5	+1.5	-12.8	+3.2
Europe (FTSEurofirst 300)	1,379.5	+2.0	-4.0	-0.7
World, dev'd (MSCI)	1,747.5	+1.6	+5.1	+5.1
Emerging markets (MSCI)	926.0	+3.6	+16.6	+16.6
World, all (MSCI)	424.3	+1.8	+6.2	+6.2
World bonds (Citigroup)	970.8	+1.1	+11.6	+11.6
EMBI+ (JPMorgan)	819.6	+1.0	+16.4	+16.4
Hedge funds (HFRX)	1,188.2§	+0.4	+1.2	+1.2
Volatility, US (VIX)	11.9	+13.4	+18.2	(levels)
CDSs, Eur (iTRAXX)†	65.3	-3.3	-15.4	-12.4
CDSs, N Am (CDX)†	71.7	nil	-18.8	-18.8
Carbon trading (EU ETS) €	4.0	-8.7	-51.6	-49.9

Sources: Markit; Thomson Reuters. *Total return index.
†Credit-default-swap spreads, basis points. §Sept 6th.

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

The Economist commodity-price index

2005=100

	Aug 30th	Sep 6th*	% change on one month	% change on one year
Dollar Index				
All Items	133.6	134.6	-2.5	+3.3
Food	152.2	153.8	-2.7	+3.6
Industrials				
All	114.3	114.6	-2.2	+3.0
Nfa†	122.6	123.7	-3.5	+12.7
Metals	110.7	110.7	-1.5	-1.1
Sterling Index				
All items	185.6	182.3	-5.7	+18.2
Euro Index				
All items	149.0	148.9	-3.6	+2.8
Gold				
$ per oz	1,318.1	1,340.7	nil	+19.4
West Texas Intermediate				
$ per barrel	46.4	44.8	+4.8	-2.0

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.

Mexico's mirror

Juan Gabriel (born Alberto Aguilera Valadez), songwriter and performer, died on August 28th, aged 66

MANY of the songs, and there were at least 1,500 of them, were syrupy and sentimental. Some were more sobbed than sung. Juan Gabriel was not David Bowie. But in the Spanish-speaking world he was even bigger, and his death touched off similar mass mourning. Mexico's greatest modern pop singer touched the hearts of tens of millions, including millions living north of the Rio Grande. His meaning was deeper and more subversive than some of his songs might suggest.

Part of his appeal lay in his own history. Alberto Aguilera knew all about the solitude and loss of love of which Juan Gabriel, his stage persona, sang. The youngest of ten children, his parents were farm workers in the western state of Michoacán. When he was four, his father was confined in a mental hospital. His mother moved the family to Ciudad Juárez, on the border with the United States. Unable to cope, she placed Alberto in an orphanage. The separation traumatised him. As he grew rich, in his quiet way of pointing out the injustices in Mexican society, he bought her the house in Juárez she had once cleaned for a living; when she died, she became the "Amor Eterno" of one of his biggest hits. He gave money, too, to children's homes.

He began to write songs at 13, while selling burritos on the streets of Juárez. He sang in the town's bars, then all over the country. In Mexico City he was jailed for 18 months, mistakenly he said, over a stolen guitar. He never stopped playing, and as soon as he got out he became his new self, Juan Gabriel: determined, but still broke. Not for nothing was his first hit, in 1971, called "No tengo dinero" ("I have no money, nor anything to give, the only thing I have is love, to love with"). This catchy pop number announced his lifelong knack of addressing the cares of ordinary Mexicans.

For almost half a century he provided Mexico with a soundtrack as the country changed. His songs were played at weddings, funerals and *quinceañeras*, the coming-out parties of 15-year-old girls. Someone worked out that, at any given minute, on a radio somewhere in Latin America one of his songs would be playing. He sold more than 100m albums worldwide and gave 15,000 performances, revelling tirelessly in the glitter of the stage. Many concerts lasted hours, and featured audience singalongs and massed mariachi bands. (The last, two days before he died, was for 17,000 people in Los Angeles.) Endlessly versatile, he dabbled in rock and wrote, as well as tear-jerking ballads, traditional folk *rancheras* and slow, romantic *boleros*. He thus became an inheritor of the golden age of Mexican popular music from the 1930s to the 1960s, when the *rancheras* of José Alfredo Jiménez and Agustín Lara rang out across Latin America and in Spain.

The *ranchera* tradition was all about Mexican machismo. It sang of domineering men, treacherous women and the manly solace of tequila. One of Juan Gabriel's achievements was to soften and feminise the *ranchera*. In "Se me olvidó otra vez" ("I'd forgotten once again"), the jilted lover waits in sad futility "in the same town and with the same people, so that when you come back you won't find anything out of place". But reunion is impossible: "I'd forgotten once again that it was only me who loved you." This unusual sensitivity led him to write countless songs for, and frequently perform with, female singers.

The softening of the *ranchera* was also signalled by his visible homosexuality, with his tight white trousers, sequinned shirts, makeup and mannered gestures. As deeply reserved offstage as he was flamboyant on it, he would never admit to it. When asked by an interviewer whether he was gay, he replied: "What can be seen isn't asked about, my son"—a very Mexican way of saying yes, he was.

Perhaps because of his unsettled youth, he was a man of the system. He appeared often on Televisa, Mexico's quasi-official broadcaster, and publicly supported the long-ruling Institutional Revolutionary Party. But his loyalties were more personal than political, and he demanded respect. He fell out with Televisa when they claimed exclusive rights to air his shows. He knew he was bigger than they were.

A man without heirs

He left five sons, at least two of them adopted, none certainly his; they loved him as a father and, for him, that was enough. His musical legacy was similarly uncertain. Young Latin Americans are as likely to listen to salsa, rock or Colombian *cumbia*; for them, Juan Gabriel's music was what their mothers hummed along to as they did the housework. In one way he harked back to a more innocent Mexico, without violence and drug cartels. But in another he heralded a more tolerant country, where homosexuality is becoming grudgingly accepted. He also represented a North American fusion; though an ardent cultural nationalist (his last tour was called "MeXXIco es todo"), in recent years he lived across the border in Santa Monica.

"The Mexican macho—the male—is a hermetic being, closed up in himself," wrote Octavio Paz, the country's great 20th-century poet. He ascribed to his fellow countrymen "a painful, defensive unwillingness to share our intimate feelings", and went on: "The Mexican succumbs very easily to sentimental effusions, and therefore he shuns them." Juan Gabriel helped Mexicans sing them out. ■