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The right to die

Why assisted suicide should be legal

Contents

On the cover
Doctors should be allowed to help the suffering and terminally ill to die when they choose: leader, page 9. Campaigns to legalise assisted dying are gathering momentum across the West, pages 16-20. Our poll of attitudes in 15 countries, page 19

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After Charleston
The unexpected consequences of a young man's murderous rampage, page 21. The Charleston massacre will not produce new controls on firearms, page 22

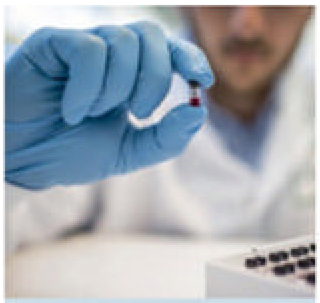
Uighurs China's government wonders how to stop terrorism in Xinjiang. Try treating Muslims more sensitively: leader, page 11. Teaching Uighur children in Mandarin will not bring stability to the region, page 35

Greece's crisis Even if the government manages to make a deal with its creditors, it will be hard to get it approved back at home, page 41. Greece and the euro zone can't go on like this—but probably will: Charlemagne, page 45

Contents continues overleaf

Growth in Latin America After the commodity boom, the region needs a new recipe for growth: leader, page 12. Learning the lessons of stagnation, page 27

Divestment campaigns Institutional investors should divest from oil, gas and coal only if their beneficiaries understand the trade-offs: leader, page 10. How these campaigns work, page 59. Being a good corporate citizen can pay off, page 56



Diagnostic testing Theranos, an ambitious Silicon Valley firm, wants to shake up the market for medical testing, page 51. Elizabeth Holmes, the firm's boss, says her mission extends beyond making a fortune, page 52. America's health insurers, page 55

Wireless charging Electronics has already cut the data cord. Can it now cut the power cord as well? Page 67

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Politics

Pictures of Dylann Roof, the alleged murderer of nine black churchgoers in Charleston, South Carolina, brandishing a gun and the **Confederate battle flag** reignited debate over its racist symbolism. In South Carolina lawmakers led by Nikki Haley, the Republican governor, took the first steps to remove it from the grounds of the state capitol. Political leaders in other southern states ordered the image to be dropped from state flags and licence plates and retailers including Amazon, eBay and Walmart will no longer sell it.

The American Senate passed a bill that gives President Barack Obama **trade-promotion authority**. Mr Obama will now have the power to send trade deals—such as the Trans-Pacific Partnership with 11 countries—to Congress for a yes-or-no vote, with no amendments.

Mr Obama also announced that individuals who pay **ransom** for the release of people taken hostage by terrorist groups will no longer be threatened with criminal prosecution. Though the federal government still will not pay ransoms to hostage-takers, officials may work more closely with families who are negotiating a release.

Dzhokhar Tsarnaev, the 21-year-old **Boston marathon** bomber, broke his silence on June 24th at the federal hearing sentencing him to death. He admitted his guilt in the 2013 attack, apologised to the victims and survivors and asked Allah for mercy.

Breaking bread

Leopoldo López, **Venezuela's** imprisoned opposition leader, ended a month-long hunger strike after the government set a date in December for congressional elections, meeting one of his main demands. In a letter made public by his wife, Lilian Tintori, Mr López said the government's decision was a "joint achievement" by himself and more than 100 supporters who had followed him in refusing to eat.

Illegal killings by the **Colombian** army were among the "worst episodes of mass atrocity" in the recent history of the Western hemisphere, said Human Rights Watch, a New York-based watchdog which investigated cases in which civilians were slain and then passed off as leftist guerrillas. It alleged that officers responsible for this practice were now in top army posts.

An unholy mess

At least 18 people were reportedly killed after Uighurs armed with knives and bombs attacked police at a traffic checkpoint in Kashgar, in the far western Chinese province of **Xinjiang**. The region has been racked by violence involving Muslim Uighurs resentful of religious repression and the growing dominance of Han Chinese, the national ethnic majority.

Six Taliban gunmen attacked the **Afghan parliament** in Kabul after a suicide bomber detonated a large car bomb outside the gates. The other assailants were all shot by police. The incident has raised questions about the Taliban's willingness to engage in possible peace talks with the government.

Senior officials from **America** and **China** have held annual meetings in Washington to discuss security and economic issues. They agreed to co-operate to conserve the oceans. But there were differences over China's alleged hacking of American computers and its land reclamation in the South China Sea.

South Korea and **Japan** marked the 50th anniversary of their diplomatic ties, which have been strained recently by South Korea's misgivings about Japan's attitude towards its role in the second world war. Japan's prime minister, Shinzo Abe, attended a reception hosted by South Korea's embassy in Tokyo, while the South Korean president, Park Geun-hye, did the same at the Japanese embassy in Seoul.

Wrack and ruin

A report by the United Nations Human Rights Commission found evidence that both Israel and the Palestinian group Hamas committed war crimes during the conflict in **Gaza** last summer in which 1,462 Palestinian and six Israeli civilians died. Both sides rejected the accusations.

A report from the London-based Royal Institute of International Affairs found that GDP in **Syria** has fallen to less than half of its pre-war level as a result of the fighting that has raged since 2011. The Syrian pound has lost 78% of its value.

Iran's parliament passed a bill banning access to its military sites for international nuclear inspectors, a move that will complicate efforts to get an agreement over the country's weapons programme that might see sanctions lifted.

Around 40 people are thought to have died in an attack by the Islamic terrorist group **Boko Haram** in north-east **Nigeria's** Borno state.

Paying: the long game

Over a string of last-ditch European summits, **Greece** and its euro-zone creditors headed fitfully towards a deal to extend the Greek bail-out. But Alexis Tsipras, the prime minister, faces the wrath of voters and his Syriza party, so the deal could yet unravel.

France squealed when WikiLeaks revealed that American security officials had spied on three recent presidents by tapping their phones. But the French parliament also passed a law to give their own spies greater surveillance powers.

Western defence ministers reaffirmed that **NATO** would return to its original role, by agreeing to put more arms and heavy equipment into central Europe and the Baltic states, which feel menaced by a newly belligerent Russia. The Russians complained loudly.

A court in the **Netherlands** found that the government has a legal duty of care under human-rights law to protect Dutch citizens from the harm caused by climate change. It ordered the government to cut greenhouse-gas emissions by 25% on 1990 levels by 2020.

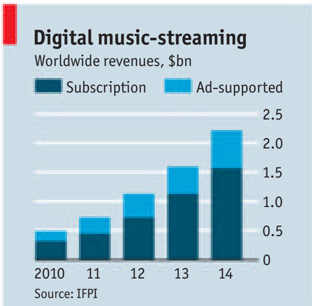
A surge of asylum seekers led **Hungary** to say it would suspend its application of rules obliging people to apply for asylum in the first European Union country they reach. The government is planning to build a fence along the border with Serbia, which is not a member of the EU.

The **Channel Tunnel** linking Britain and France was closed briefly after striking ferry workers blocked roads and started fires in the French port of Calais. Later a surge of illegal migrants who had been camping out around the city tried to board lorries and cars queuing to pass through.

Business

Hopes waxed and waned throughout the week that **Greece** could find respite from its debt crisis. Alexis Tsipras, the prime minister, offered some concessions on curbing pensions and raising taxes at a meeting of euro-zone finance ministers. In response, the ministers told Mr Tsipras that the measures did not go far enough and more austerity was needed. Greece faces a default unless it repays a €1.6 billion ($1.8 billion) loan to the IMF by June 30th. Talks were continuing as *The Economist* went to press.

The player's gonna pay



Bad blood was avoided when **Apple** performed an uncharacteristically swift climbdown regarding its new music-streaming service. After initially saying it would not pay royalties to artists whose songs were played during a free trial period, the computer giant decided everything had changed after Taylor Swift, an American superstar, threatened to withdraw her new album from the service. The firm says it will pay 73% of its music-subscription revenue to music owners.

In a further sign that the sector is hotting up, **Google** launched a free version of its music-streaming service, Google Play Music. Unlike the firm's subscription option, it will broadcast adverts and will not be available offline. **Tidal**, meanwhile, a rival service owned by Jay-Z, a rapper, lost its second boss in two months when Peter Tonstad stepped down. It has attracted a small fraction of the subscribers of rivals such as Spotify.

Bouygues, a French telecoms firm, rejected a reported €10 billion ($11.2 billion) takeover offer from **Altice,** a competitor. A successful bid would have created France's largest mobile operator. The country's Socialist government decried the attempted takeover as bad news for consumers and jobs. Bouygues said a deal would have been difficult to get past regulators, but denied it had bowed to political pressure. A deal could have calmed a mobile-phone price war that has been raging in the country since Iliad, a low-cost-operator, disrupted the market three years ago.

Financial regulators in Britain announced plans to police **bankers' bonuses**. Under new rules, banks will be able to claw back bonuses up to seven years after they were paid. This will rise to ten years for senior managers. Additionally, bonuses may be deferred for seven years for those bankers involved in risky trading. Non-executive directors, as well as managers at banks which have taxpayer support, will now be barred from receiving such incentives.

British regulators also opened an investigation into **KPMG**'s audit of **Bank of New York Mellon**. In April the Financial Conduct Authority fined BNY Mellon's London branch £126m ($198m) for breaching rules on keeping clients' money safe between 2007 and 2011.

After falling by nearly 15% last week, **Chinese stocks** rallied slightly. But trading volumes were down, suggesting investors may be wearying of the volatility. Some Chinese firms are priced at 100 times their earnings, implying this week's gains may be short-lived.

The **American economy** contracted by less than was first estimated in the first quarter. Revised figures showed that GDP fell by an annualised 0.2% rather than by 0.7%.

An overtaking manoeuvre

A Qatari investment fund joined forces with Stephen Ross, the owner of the Miami Dolphins American football team, to bid for control of **Formula 1**. The proposed deal is reportedly worth up to $8 billion. Bernie Ecclestone, F1's boss, is expected to relinquish his 5% stake in the sport, although he could remain involved in its management. F1 has struggled to make inroads in America, a state of affairs that Mr Ross hopes to fix.

Ahold and **Delhaize**, two big European supermarket owners, have agreed to merge in a deal worth €25 billion ($28 billion). The new entity, which will bring together the owners of the Stop & Shop and Food Lion chains, will become the fourth-biggest grocer in America, where both firms make most of their revenues.

Spooking investors

Palantir, a big-data firm, is reportedly raising $500m in new funding at a valuation of $20 billion—making it one of the most valuable private concerns in Silicon Valley. Palantir was formed to analyse data for American spy agencies, but has since branched out to offer services for other firms, including banks.

Jim McNerney, the boss of **Boeing**, is stepping down. Dennis Muilenburg, the plane-maker's chief operating officer, is to take the yoke. The firm has been struggling with the rising cost of manufacturing its new 787 Dreamliner.

A federal judge blocked the $3.5 billion merger of **Sysco** and **US Foods** on anti-competition grounds.

Other economic data and news can be found on pages 76-77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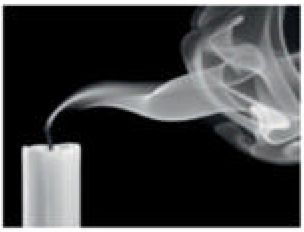
The right to die

Doctors should be allowed to help the suffering and terminally ill to die when they choose



IT IS easy to forget that adultery was a crime in Spain until 1978; or that in America, where gay marriage is allowed by 37 states and may soon be extended to all others by the Supreme Court, the last anti-sodomy law was struck down only in 2003. Yet, although most Western governments no longer try to dictate how consenting adults have sex, the state still stands in the way of their choices about death. An increasing number of people—and this newspaper—believe that is wrong.

The argument is over the right to die with a doctor's help at the time and in the manner of your own choosing. As yet only a handful of European countries, Colombia and five American states allow some form of doctor-assisted dying. But draft bills, ballot initiatives and court cases are progressing in 20 more states and several other countries (see page 16). In Canada the Supreme Court recently struck down a ban on helping patients to die; its ruling will take effect next year. In the coming months bills will go before parliaments in Britain and Germany.

The idea fills its critics with dismay. For some, the argument is moral and absolute. Deliberately ending a human life is wrong, because life is sacred and the endurance of suffering confers its own dignity. For others, the legalisation of doctor-assisted dying is the first step on a slippery slope where the vulnerable are threatened and where premature death becomes a cheap alternative to palliative care.

These views are deeply held and deserve to be taken seriously. But liberty and autonomy are sources of human dignity, too. Both add to the value of a life. In a secular society, it is odd to buttress the sanctity of life in the abstract by subjecting a lot of particular lives to unbearable pain, misery and suffering. And evidence from places that have allowed assisted dying suggests that there is no slippery slope towards widespread euthanasia. In fact, the evidence leads to the conclusion that most of the schemes for assisted dying should be bolder.

Nothing is hurt, nothing is lost

The popular desire for assisted dying is beyond question. *The Economist* asked Ipsos MORI to survey people in 15 countries on whether doctors should be allowed to help patients to die, and if so, how and when. Russia and Poland are against, but we find strong support across America and western Europe for allowing doctors to prescribe lethal drugs to patients with terminal diseases. In 11 out of the 15 countries we surveyed, most people favoured extending doctor-assisted dying to patients who are in great physical suffering but not close to death.

No wonder that, just as adultery existed in Spain before 1978, so too many doctors help their patients die even if the law bans them from doing so. Usually this is by withdrawing treatment or administering pain-relief in lethal doses. Often doctors act after talking to patients and their relatives. Occasionally, when doctors overstep the mark, they are investigated, though rarely charged. Some people welcome this fudge because it establishes limits to doctor-assisted dying without the need to articulate the difficult moral choices this involves.

But this approach is unethical and unworkable. It is unethical because an explicit choice that should lie with the patient is wholly in the hands of a doctor. It is hypocritical because society is pretending to shun doctor-assisted dying while tacitly condoning it without safeguards. What may turn out to be more important, this system is also becoming impractical. Most deaths now take place in hospital, under teams of doctors who are working with closer legal and professional oversight. Death by nods and winks is no good.

Better is to face the arguments. One fear is that assisted dying will be foisted on vulnerable patients, bullied by rogue doctors, grasping relatives, miserly insurers or a cash-strapped state. Experience in Oregon, which has had a law since 1997, suggests otherwise. Those who choose assisted suicide are in fact well-educated, insured and receiving palliative care. They are motivated by pain, as well as the desire to preserve their own dignity, autonomy and pleasure in life.

Another fear is that assisted dying will downgrade care. But Belgium and Holland have some of the best palliative care in Europe. Surveys show that doctors are as trusted in countries with assisted dying as they are in those without. And there are scant signs of a slippery slope. In Oregon only 1,327 people have received lethal medicine—and just two-thirds of those have used it to take their lives. Assisted dying now accounts for about 3% of deaths in the Netherlands—a large number—but this is less a rush to assisted dying than the coming to light of an unspoken tradition in which doctors quietly brought their patients' lives to an end.

Wear no forced air of solemnity or sorrow

How, then, should assisted dying work? For many the model is Oregon's Death with Dignity Act. It allows (but does not oblige) doctors to prescribe lethal drugs to patients with less than six months to live who ask for them, if a second doctor agrees. There is a cooling-off period of 15 days.

We would go further. Oregon insists that the lethal dose is self-administered, to avoid voluntary euthanasia. To the patient the moral distinction between taking a pill and asking for an injection is slight. But the practical consequence of this stricture is to prevent those who are incapacitated from being granted help to die. Not surprisingly, some of the fiercest campaigners for doctor-assisted dying suffer from ailments such as motor neurone disease, which causes progressive paralysis. They want to know that when they are incapacitated, they will be granted help to die, if that is their wish. Allowing doctors to administer the drugs would ensure this.

Oregon's law covers only conditions that are terminal. Again, that is too rigid. The criterion for assisting dying should be a patient's assessment of his suffering, not the nature of his illness. Some activists for the rights of the disabled regard the idea that death could be better than a chronic condition as tantamount to declaring disabled people to be of lesser worth. We regard it as an expression of their autonomy. So do many disabled people. Stephen Hawking has described keeping someone alive against his wishes as the "ultimate indignity".

One exception to this distinction should be children. The decision of whether to endure chronic conditions should be left until adulthood. But, as with adults, children facing imminent death from terminal diseases should, in consultation with their parents and doctors, have the right to be spared their last agonising hours.

The hardest question is whether doctor-assisted dying should be available for those in mental anguish. No one wants to make suicide easier for the depressed: many will recover and enjoy life again. But mental pain is as real as physical pain, even though it is harder for onlookers to gauge. And even among the terminally ill, the suffering that causes some to seek a quicker death may not be physical. Doctor-assisted death on grounds of mental suffering should therefore be allowed.

Because patients' judgments may be ill-informed and states of mind can change, especially among the mentally ill, society should help people to die only when safeguards are in place. These should include mandatory counselling about alternatives, such as pain relief, psychotherapy and palliative care; a waiting period, to ensure that the intention is enduring; and a face-to-face consultation with a second, independent medical expert to confirm the patient's prognosis and capacity. In cases of mental suffering the safeguards should be especially strong.

The most determined people do not always choose wisely, no matter how well they are counselled. But it would be wrong to deny everyone the right to assisted death for this reason alone. Competent adults are allowed to make other momentous, irrevocable choices: to undergo a sex change or to have an abortion. People deserve the same control over their own death. Instead of dying in intensive care under bright lights and among strangers, people should be able to end their lives when they are ready, surrounded by those they love. ■

Fossil-fuel divestment

No smoking

Institutional investors should divest from oil, gas and coal only if their beneficiaries understand the trade-offs

THEY have chained themselves to the White House fence, blockaded Australian coal ports with dugout canoes and mooned the offices of a British minister. But protesters from a green pressure group called 350.org have had their greatest success doing something far duller: petitioning institutional investors to "divest" from stocks and bonds issued by firms that peddle fossil fuels. Opponents of divestment marshal arguments from theory and practice to pooh-pooh such campaigns. But that is both to misunderstand the goals of the activists and to dodge hard questions about how best to serve the interests of their clients.

Denigrators of divestment point out, rightly, that selling a security does not materially reduce the price if there are lots of buyers still out there. Any buyer is likely to have fewer qualms about the firm or country concerned than the seller, so the pressure for immediate change may actually dissipate as divestment proceeds. That is why some fund managers, like Hermes, argue that engagement with polluting firms is better than walking away. In the case of fossil fuels, the sceptics add, divestment has the wrong target: state-owned firms, not listed ones, control the bulk of reserves.

The critics are right that it is hard to detect much impact from divestment campaigns on firms' cost of capital. The first recruits to the fossil-fuel campaign were charities and universities with relatively small investments. Its biggest coup came earlier this year, when Norway's vast sovereign-wealth fund resolved to sell its investments in coal and the dirtiest forms of oil production. A few big pension funds, such as PFZW of the Netherlands, have promised to reduce the carbon footprint of their holdings. But the consequences for the share prices or bond yields of the spurned firms, if any, are not discernible amid the far bigger swings attributable to changes in the price of oil, gas and coal (see page 59).

Much the same is true of other such campaigns. The shares of cigarette-makers have performed brilliantly in recent years, despite a big divestment drive. The falling price of gold and growing popular unrest probably had more to do with South Africa's rising borrowing costs in the dying days of apartheid than divestment did. Israel's borrowing costs have fallen and its stockmarket has boomed despite the BDS (boycott, divestment, sanctions) movement, which is intended to press it into making peace with Palestinians.

But advocates of divestment do not really expect to raise their targets' cost of capital. Rather, they want to create the sense that a business or a country is a pariah. If you believe that global warming is a mortal threat to all humanity, and that the world's attempts to ward it off are inadequate, then it makes sense to do more or less everything you can to bring about change. Campaigners use divestment not as a tool of corporate finance, but as a facet of free speech—part of a broader push, involving boycotts, protests, lobbying and public advocacy, to sway opinion and influence regulation. Good luck to them: they have every right to make their case.

For love or money

Whether campaigners should prevail is less clear. Individual investors can settle the matter on their own. The complication with divestment campaigns is that investment committees are looking after the money of other people. Discerning their preferences is often hard and sometimes impossible. End-investors frequently want to have things both ways, demanding that funds are both green to a fault and deeply in the black. University-endowment funds can heed the views of today's students, but not those of future generations.

Occasionally, as with smoking, the moral issues are sufficiently clear-cut for managers to act on unambiguous instructions from their investors. But many issues are more complex and, even in the days of instant cost-free communication, money managers cannot spend their time polling investors and expect to get a useful response. More often, therefore, they should be conservative and set themselves clear aims. That means maximising returns. ■

Muslims in China

Wooing Islamists with a beer festival

China's government wonders how to stop terrorism in Xinjiang. Try treating Muslims more sensitively

IN CHINA'S far western region of Xinjiang, the authorities are fearful. What they call terrorist attacks carried out by Uighurs, a Muslim ethnic group that regards Xinjiang as its homeland, have killed 400 people in the past couple of years. The latest such incident, on June 22nd, left 18 people dead near the southern city of Kashgar. In recent months officials in Xinjiang claim to have broken up more than 180 terrorist groups—at least one of them reportedly set up by Uighurs who had fought with Islamic State in the Middle East. State television recently aired footage of children being turned into "killing machines" for global *jihad* at a training camp near the border with Afghanistan and Pakistan. China's rhetoric is overblown, but the country is right to worry about terrorism. In March last year a group of Uighurs knifed 31 Chinese civilians to death at a railway station in the south-western city of Kunming.

China recognises that part of the problem is a home-grown one: that many of Xinjiang's 10m Uighurs have felt left out of the country's economic boom. Thanks, not least, to its oil and gas industries, Xinjiang's own economy has been growing fast, too. But this has mainly benefited ethnic Hans, who form about 40% of the province's population. Firms in Xinjiang often prefer to employ Hans, because they speak better Chinese and because there is a shortage of skilled Uighurs. Officials say, plausibly, that better education for Uighurs is crucial for improving stability (see page 35). Overcoming racial prejudice among employers would help. In 2009 long-simmering ethnic tensions erupted into an orgy of rioting in Xinjiang's capital, Urumqi, leaving around 200 people dead and the region even more ethnically divided than before.

The terrorist murder of civilians is wrong, however beleaguered a people. But China can help bring about the calm it seeks by treating Uighur culture and faith with more respect. Even as officials wage what they call a "people's war" against terrorism, they inflame Muslim fury by banning women from wearing face-veils and men from growing long beards. Other countries, such as Belgium and France, have also mistakenly banned the veil, but China's restrictions are especially draconian. In March a man was jailed for six years by a court in Xinjiang for "provoking trouble"; his offences included growing a beard. His wife got a two-year sentence for covering her face. Before the holy month of Ramadan this year, officials reiterated a ban on the observance of fasting rituals by bureaucrats, teachers and students. In January they decreed that pilgrims to Saudi Arabia must travel in state-organised groups. (Few win permission to go.) Small wonder many Uighurs see what officials call "bilingual education" as a trick to marginalise their language and identity.

Show a little respect

Last year China launched a hearts-and-minds operation in Xinjiang: 200,000 officials were told to spend time living among Uighurs in order to understand their problems. They clearly failed to listen hard enough. Earlier this month, as Muslims in Xinjiang prepared for Ramadan, rural officials near the city of Hotan decided to organise a beer festival. A local news website showed pictures of men glugging down beer in a drinking contest. Uighurs in exile expressed outrage; in a rare climbdown of sorts, the report was censored.

A counter-terrorism law is now being drafted that could allow officials to brand any unauthorised religious activity as "extremism". That would play into the hands of terrorists. The way to peel violent extremists from the general population is to give Muslims fewer grievances. Heavy-handedness will only make Xinjiang—and the rest of China—less safe. ■

Russia and Yukos

Bound over

The Kremlin cares little for the rule of law at home. Western courts are less malleable

RUSSIA is one of the West's biggest headaches. Vladimir Putin's Kremlin has menaced its neighbours to the point where NATO is strengthening defences in the Baltic states. The European Union has just renewed economic sanctions imposed after the attack on Ukraine. But governments are doing less to bring home to the regime in Moscow the consequences of its actions than Western law courts, where Russia faces a barrage of litigation from investors whose assets it has expropriated.

The Kremlin's contempt for the rule of law in Russia was exemplified by the looting of Yukos, once the country's biggest and best-run oil company. Its independent-minded boss, the tycoon Mikhail Khodorkovsky, was a political irritant as well as a very rich man. So in a series of spurious lawsuits Yukos was broken apart. After a questionable auction in 2004, its best assets ended up with Rosneft, a state-controlled oil company run by a close ally of Mr Putin's.

At the time that seemed a clear victory for the Kremlin. But more than ten years later, the shareholders of Yukos, who were left many billions of dollars out of pocket, are making striking headway in their attempts to gain redress in foreign courts (see page 53). The Russian side has lost several big lawsuits, at tribunals in Strasbourg, Stockholm and The Hague—the last of ▸▸

which handed down a record $50 billion judgment against the Russian state for failing to protect foreign investors. Now the plaintiffs are trying to collect their money by hunting down Russian state assets all over the world.

The opening salvoes in this battle have been dramatic. Courts in Belgium and France froze bank accounts belonging to the Russian state (diplomatic property is immune from seizure, but other assets are not). Russia reacted sharply, saying that the rulings were politicised. It threatened to respond in kind against Western countries.

Mr Putin and his associates know, from first-hand experience, that courts and judges in Russia are for the most part obedient puppets of their political masters. They also believe, wrongly, that the Western system works on the same principle, but just dressed up with more hypocrisy and flimflam. They see their legal woes as part of an ongoing effort by foreigners to encircle, undermine and ultimately destroy Russia.

Outsiders are not persecuting Russia. They are responding to its behaviour. If Russia breaks the law it will find itself on the losing side in court. It voluntarily signed up to the international conventions under which investors are acting against it. It can hardly complain when the rules are enforced. Nor should it blame Western governments for the way the legal system bites. In a country governed by law the state does not dictate what the courts do.

Russian lessons

For the plaintiffs in the Yukos case actually to collect compensation under the convention that Russia signed up to will be arduous. Compensation may also impose costs in the West. The obvious assets to pursue, both practically and morally, are those belonging to Russia's state-controlled energy giants, Gazprom and especially Rosneft, which swallowed much of Yukos. Rosneft's own minority shareholders—in particular BP, a British energy firm that holds 20% of it—would howl. But to seize Rosneft's assets would be poetic justice: BP should have known that the firm was built on stolen property. Much more important, if the courts so will it, that would be the law. ■

Latin America

The loss of El Dorado

After the commodity boom, the region needs a new formula for growth

IT WAS wonderful while it lasted. For much of this century Latin America saw robust economic growth, a big fall in poverty and a swelling of the middle classes. Now the good times are over. Emerging markets everywhere are subsiding like a cooling soufflé. But Latin America has gone stone cold. The IMF expects growth of just 0.9% in 2015, which would be the fifth successive year of deceleration. Many economists are talking of a new normal of growth of only 2% or so a year—less than half the region's pace during the boom.

What has gone wrong? The short answer is that the great commodity supercycle triggered by the industrialisation of China is over. Rising exports of minerals, soya beans and fuels lifted many South American economies. Without that fillip the region has converged downwards to the 2.4% long-term growth rate of Mexico, which is not a big commodity exporter.

Worse, the commodity bonanza prompted distortions that may limit new sources of growth. Many Latin currencies became overvalued, wounding the competitiveness of non-commodity firms. Consumption soared; investment sagged. While Asia built factories, Latin America erected shopping centres.

The net result is not wholly negative. Past Latin American commodity booms ineluctably ended in financial busts. This time only countries, such as Venezuela, that have repeated old mistakes—fiscal populism, protectionism and government meddling—face a crisis. Most of the region has become more resilient after years of responsible macroeconomic policies, with stronger banks and lower public debt.

For a boom-bust continent, resilience is not to be sniffed at. But it will not ensure faster growth that endures. To get rich, Latin America must boost its abysmally low rate of productivity growth and diversify its economies (see page 27). That, in turn, means moving beyond the tired ideological debate between market and state that still bedevils the region's politics. Latin America needs both better-functioning markets, with more competition, and much smarter government.

Start with productivity. In 1960 the efficiency with which Latin America combined capital and labour was three-quarters that of the United States. Now it is just over half. The obvious causes of this gap are the lack of transport, the paucity of innovation and of skills; and a swollen informal sector. Dealing with this requires more than just education and infrastructure. The lack of appropriate housing and urban-planning policies, for instance, means that many workers must spend hours a day commuting. Many don't bother, preferring to set up subsistence businesses in their own back yards. Similarly, improving child care or tackling violent crime would boost growth (by letting women seek more productive work and reducing the extortion that deters businesses from expanding).

A golden opportunity

The second priority is to take regional integration seriously. Economies become more diversified and sophisticated when their businesses join regional supply chains. That process has powered East Asia's growth, and that of northern Mexico (though not its south) thanks to its ties to the United States. In South America too many leaders talk about unity while practising protectionism. A good start would be to turn Mercosur, based on Brazil and Argentina, from a largely fictional customs union into a proper rules-based free-trade area.

None of these reforms will pay off quickly. None will be easy to get through, especially since many of the region's presidents are unpopular and their governments tarnished by corruption. But without the easy pickings of the boom, the hard work of structural reforms is the only way to boost growth and welfare. The sooner its leaders realise that, the better the region's prospects. ■

Au naturel

Your review of a book on French intellectualism asks what is it about the French that makes them speak and think like this ("They think, therefore they are", June 13th)? The answer is that they don't. Disappointing as it may be to Anglo-Saxons, the French do not sit around shooting the breeze about Derrida, Barthes and Foucault in the Café de Flore. Most of them have never heard of these luminaries. They do not even have any time for Thomas Piketty. Just because such names are dropped by the media-politico microcosm do not assume that anyone pays any attention. That is what is called here: *prendre ses désirs pour des réalités*.

It is hard to see what intellectual content there was in the Charlie Hebdo mass march in January. And if one seeks "rupture", artistic or otherwise, what difference is there between the Nouvelle Vague and Britain's rebellious cinema of the early 1960s or Italy's of the 1950s? Or between François Mitterrand's emptying of his new Socialist Party of all intellectual content in the 1980s, and Tony Blair's similar exercise with Labour in the 1990s? I was in France in 1968: it was fun but there wasn't much that was intellectual about it.

Anglo-Saxons might understand the French better if they accept that they get up every day to worry about jobs, money and kids, just like everyone else, not "rupture, revolution and progress".

PAUL TRACY
Paris

The House of Lords

Bagehot (June 13th) vacillated from describing the House of Lords as "a democratic embarrassment" and "in many ways a joke" to acknowledging the many experts who serve and perform vital work in scrutinising legislation. I am not of two minds. I am convinced that the Lords plays vital roles in asking government to "think again" about legislation as well as informing public policy.

Could it be improved? Undoubtedly. But Bagehot's characterisation of the Lords belittles the significant contribution that members make. In the 2014-15 session alone the Lords spent 507 hours examining legislation and considered over 3,449 amendments to bills. In 2007 members of the Lords defeated plans for regional supercasinos; in 2010 we amended a bill to ensure children with special educational needs had greater rights of access to academies; and in 2014 we changed the children and families bill so that it banned smoking in cars when children were present.

Our select committees have helped encourage the director of public prosecutions to clarify the law on "revenge porn", and opened the government's eyes to the ineffective working of the Mental Capacity Act 2005. These few examples represent only the tip of the iceberg of the significant impact that the Lords and its members can have.

Perhaps your columnist might consider giving rather more emphasis to this than wearied caricatures.

LORD SEWEL
Chairman of Committees
House of Lords
London

Fratpack bosses

The students Lexington mentioned as posing a threat to free speech on campus (June 13th) are the ones that relish their self-righteous fervour and enjoy the limelight as they call the shots in the classroom and bring professors to heel. They are the same students who decide that people like Christine Lagarde and Condoleezza Rice should have their invitations to speak at graduation ceremonies revoked because they don't fit the PC bill. We know things have gone too far when a good-natured comedian such as Jerry Seinfeld gives up performing on college campuses because it is not worth the trouble.

These students are more than irritating, they are dangerous. They stand to devalue the university experience for many who have fought hard to get there. They should not be allowed to neuter the curriculum and hijack the classroom.

MAGGIE MCGIRR
Greenwich, Connecticut

Mobile authentication

Asking consumers to remember to use something extra, a USB key or a token, to authenticate their login adds an extra level of complexity ("Passé words", May 30th). Research in Britain found that 44% of shoppers cancelled at least one online transaction because they were frustrated with complicated identity verification. Shoppers abandoned online carts worth nearly $2 billion because of complex authentication protocols—money businesses can ill-afford to lose.

One device most people carry with them is their phone. With the technology available today, mobile operators can use their subscriber data to offer mobile ID authentication to businesses. Consumers won't need to carry a USB key or remember complex passwords, usernames and security questions. The SIM on the phone and the mobile number can authenticate the consumer. Most of us already use our mobile phone's look and feel as an extension of our persona. Isn't it time to allow mobile technology to go the whole hog and enable our online identity?

JOHN GIERE
Chief executive
Openwave Mobility
Redwood City, California

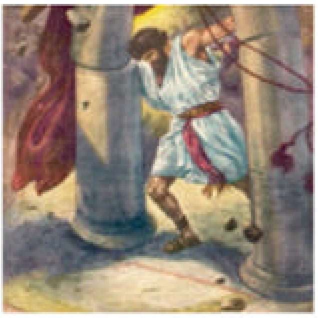
Ruined ruins

"Save our stones" (June 13th) underplayed how important the funding that Islamic State gets from looting archaeological sites is to its operations. In fact, income from stealing antiquities is the only major income source for IS that is rapidly increasing, not just as a percentage of overall funding but in real terms. We conservatively estimate that such funding increased from tens of millions of dollars last year to more than $100m this year.

As many as 60% of the biggest smugglers in looted antiquity may be based in or linked to London. If the reality is anywhere close to this the legitimate auction house examples you mentioned are just the ripple on the surface of very murky water. Britain is the world's second largest art market. Countering IS funding would require diverting resources given that the Metropolitan Police Art and Antiquities Team is understaffed.

To boost supporting action with legislation, Britain could finally ratify the 1954 Hague Convention on protecting cultural property during wartime, rather than continuously holding off until "as soon as parliamentary time should allow". It is frequently argued that concerns over antiquities held by British museums present a stumbling block to ratification, but the convention's main focus is on protecting sites in the event of conflict.

JAMES DOVE-DIXON
TIMOTHY NICOLLE
Strategy and Security Institute
University of Exeter



Samson was not "an antecedent of the modern-suicide bomber". Instead, he was the victim of a lying and callous lover, who robbed him of his strength and turned him over to his enemies, who in their turn robbed him of his sight and his human dignity. He paid them in kind for their treachery and viciousness.

TOM HONE
Arlington, Virgina

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Legal Counsel (D-2)
Office of the Legal Counsel
Geneva, Switzerland

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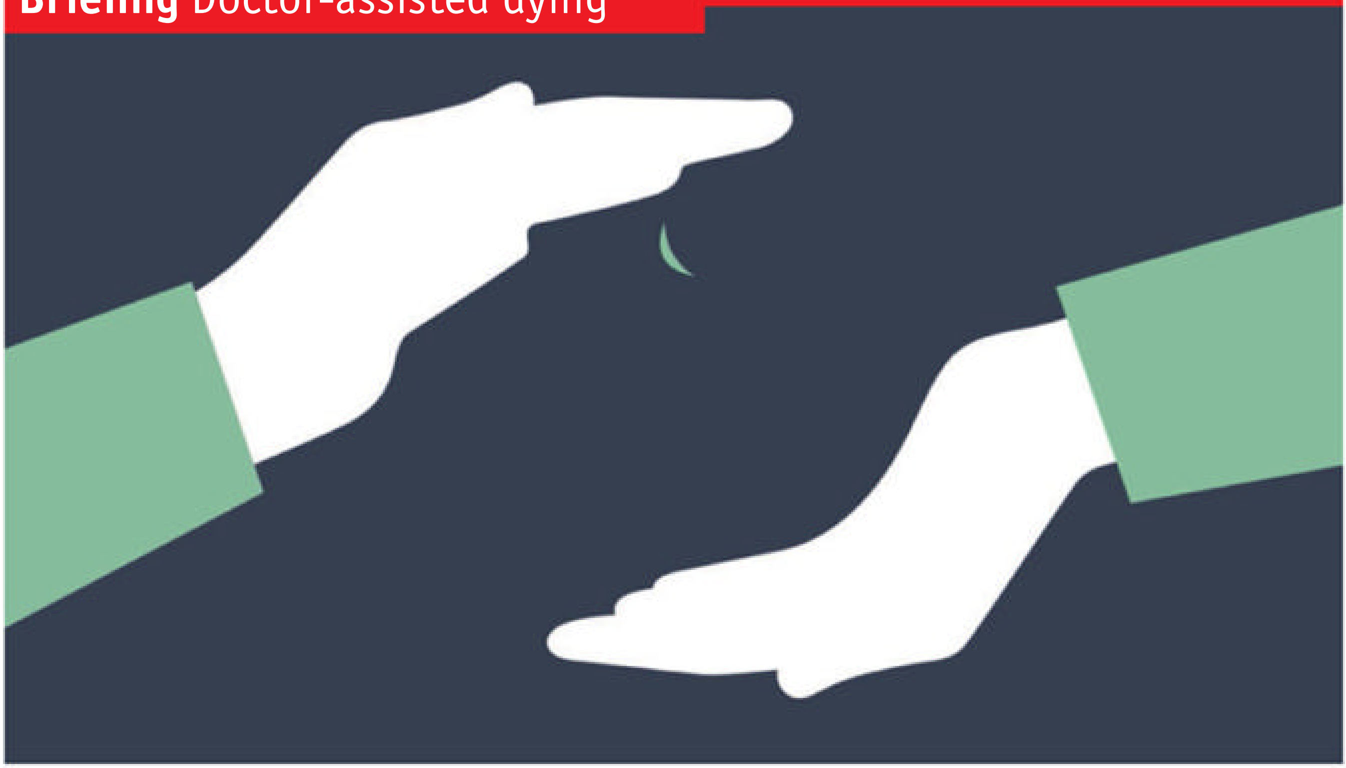


Final certainty

For more coverage, and details of our poll, visit economist.com/assisted-dying

AMSTERDAM, CHICAGO, GENEVA, LONDON, LOS ANGELES AND OTTAWA

Campaigns to let doctors help the suffering and terminally ill to die are gathering momentum across the West

LAST year Brittany Maynard, a 29-year-old Californian, was diagnosed with terminal brain cancer. Rather than let the illness take its dreadful course she moved to Oregon, where a "Death with Dignity" law exempts doctors from prosecution, with some safeguards, if they prescribe life-ending drugs to terminally ill patients who ask for them. She was a "realist" who did not want to die blind and paralysed by her tumour, says her widower, Dan Diaz. "At the end she admitted to me that she could have lived another month or two. But she also told me: 'I won't be living those days; I will be suffering.'"

Before taking the lethal dose Ms Maynard videoed an appeal to California's lawmakers to legalise assisted dying. Soon her wish may be fulfilled. On June 4th the state Senate voted 23-14 in favour of a bill modelled on Oregon's. If it passes, California will become the sixth American state to allow doctors, in some circumstances, to help terminally ill patients to die without fear of prosecution. (Montana, Vermont and Washington have assisted-dying laws; New Mexico's law banning the practice was overturned by a court last year, but that decision is subject to challenge.)

Similar bills have failed several times before in California, and to become law this one must still get through the state assembly and be signed by the governor, Jerry Brown, before September 11th. On June 23rd the bill's authors delayed a vote in a committee of lawmakers to give them time to muster more support. Religious groups, particularly Catholic ones, are lobbying against it—and Mr Brown is a Catholic who once considered becoming a priest. But several lawmakers say they were persuaded by Ms Maynard's appeal; before dying she talked to the governor by phone. And since 1973 Gallup, a polling organisation, has found majorities in favour of legal doctor-assisted dying across America.

Going gentle

The idea that doctors should be allowed to prescribe lethal medication for some patients who are close to death or suffering greatly is gathering support across the West. *The Economist* commissioned Ipsos MORI to poll people in 15 countries on whether they thought the practice should be legalised, and if so, in what circumstances. In all of them except Poland and Russia, majorities said that it should be legalised for terminally ill adults (see chart on next page). In America more than three-fifths support the idea in principle; some fall away when asked to consider the details, but most remain firm. In all but four countries more than half those asked supported extending doctor-assisted dying to other situations, such as unbearable physical suffering. (For further details of our poll results, see box on page 19.)

Bills and legal cases are in progress in around 20 American states, and in Britain, Canada, Germany and South Africa. Not all will succeed: last month the Scottish Parliament voted 82-36 against an assisted-dying bill, and earlier this month Lecretia Seales, a New Zealander dying of brain cancer, had her request for doctor-assisted dying refused by the courts, which said the matter was for parliament to decide. In 2012 a ballot initiative in Massachusetts, the most Catholic American state, was narrowly rejected. But even failures put the cause in front of a wide audience. It has gained high-profile supporters: in 2011 Terry Pratchett, a novelist who recently died of a rare form of Alzheimer's, presented a passionately argued documentary about a motor-neurone-disease sufferer who ended his life at a Swiss clinic before he became incapacitated.

Doctors have long quietly eased terminal agonies by increasing pain relief to life-shortening doses. Under the doctrine of double effect, as long as the intention was ▸▸

to relieve suffering rather than hasten death, no crime was committed. What the doctor really intended was hard for anyone else to know, let alone prove.

But more deaths now happen in intensive-care units under closer legal and professional oversight, making doctors more cautious about testing the limits of what is allowed. And modern medicine means that dying is much more often prolonged. The case of Karen Ann Quinlan in 1976 thrust the issues into the spotlight. The parents of the young woman, who fell into a coma after drinking and taking Valium at a party, had to go to court to force her doctors to take her off a ventilator.

After a string of similar cases around the world, most countries now accept that patients or, if they are incapacitated, their relatives, may insist that unwanted life-sustaining treatment be withdrawn. That offers a way out for some of those who long for death. Someone who needs a ventilator to breathe, for example, can demand that it be removed. But what if there is no life-sustaining treatment to withdraw?

The cold friction of expiring sense

Understandably, doctors are rarely willing to step decisively outside the law. When they do, though, their fellow citizens are strikingly unwilling to condemn them, perhaps out of sympathy for the difficult choices they make, and in the hope that if it comes to it, their own doctors will act to shorten their pain. Jack Kevorkian, an American doctor who by his own admission helped at least 130 terminally ill people to die, gained such notoriety that he was nicknamed Dr Death and united the medical profession in condemnation. Three times juries acquitted him on charges of assisting suicide; only when his killing of a patient by administering a lethal drug was broadcast on television was he convicted for homicide. He served eight years of a nine-year jail sentence. In 1991 Timothy Quill, a palliative-care doctor now at the University of Rochester, wrote an article in the *New England Journal of Medicine* describing his decision to prescribe barbiturates for an unnamed patient who was terminally ill with leukaemia, knowing that she intended to use it to kill herself. Though he was investigated, a grand jury declined to indict him.

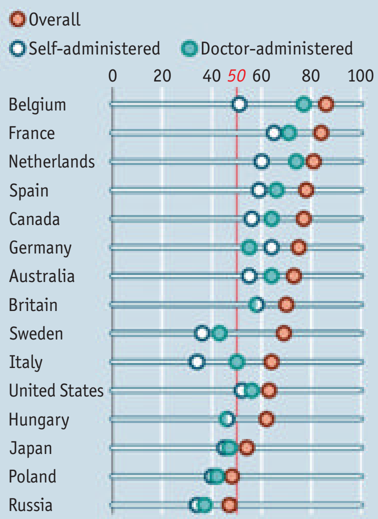
For a long time Switzerland was the only place where it was legal to help people to die, rather than passively to allow them to do so. After centuries in which suicide was a crime (meaning that those who tried and failed to kill themselves risked prosecution or their possessions being forfeited), most countries have removed such laws from their statute books—some rather recently; suicide was only decriminalised in Ireland in 1993 and in India last year. Most kept penalties for assisting a suicide, but Switzerland's law, passed in 1942, barred it only if the motive was selfish, for example to get an inheritance.

Then in 1994 voters in Oregon passed the Death with Dignity bill which, after legal challenges, came into force in 1997. It requires two doctors to agree that the person requesting help to die has less than six months to live and is of sound mind. Also in 1997, Colombia's constitutional court decriminalised doctor-assisted dying, but since it gave no guidance on when it would be acceptable, few doctors were willing to offer it. (A panel of senior judges is now considering draft rules produced by the health ministry.) In 2002 the Netherlands, which for decades had turned a blind eye to doctors prescribing lethal medicine for the terminally ill, legalised the practice—and extended it to those who, though not close to death, found their suffering unbearable. Belgium followed the Dutch example shortly afterwards.

Each of these countries has had assisted dying for long enough to answer some questions: whether it is used as a cheap alternative to palliative care; whether tight rules are relaxed over time; whether it weakens the doctor-patient relationship; and whether the ill and dying feel themselves under pressure to finish themselves off rather than be a burden on relatives. But other thorny questions are about values, and cannot be answered by gathering data. Opponents see deliberately ending a human life as always wrong; proponents think it can be an expression of autonomy. Some disabled people feel that allowing a life to be declared ready to end, even by the person living it, devalues the lives of all others suffering in the same way. Others regard it as recognition of disabled people's individuality. The differing approaches are being eyed for lessons by lawmakers around the world.

Merciful ends

Support for assisted dying, June 2015, %



Source: *The Economist*/Ipsos MORI

"Just a small charity with a huge workload": that is how Silvan Luley, one of its organisers, describes Dignitas, an assisted-dying clinic that has become synonymous with Switzerland's reputation for "suicide tourism". Each year several hundred Swiss residents die with a doctor's help, most of them at EXIT, the largest clinic, which does not accept foreigners. Since Dignitas, which does, was founded in 1998 more than 1,700 people from more than 40 countries have ended their lives there. Some of their tragic stories and bitter choices have made headlines back home.

Summer's lease hath all too short a date

In 2008 Dan James, a 23-year-old who had become almost totally paralysed in a rugby accident a year earlier, died in Dignitas; his parents said he had come to regard his body as a prison and was "not prepared to live what he felt was a second-class existence". They accompanied him to Switzerland and were investigated on their return to England for assisting a suicide, though it was eventually decided that prosecution would not be in the public interest. Last month another Briton, Jeffrey Spector, who had an inoperable spinal tumour and felt that his condition was deteriorating, killed himself in Dignitas too. "I know I am going too early," he said before he died. But he feared suddenly becoming paralysed and unable to make the journey unaided if he waited.

For critics, the lax Swiss laws mean some are helped to die who should have been helped to live: Mr James's condition was not life-threatening, and Mr Spector was still quite well. Though late-stage cancer sufferers are still the majority, the share with non-fatal illnesses is growing. The clinics respond by pointing to their own rules, which say that they will only help those who show a "consistent wish to die" and are terminally ill or suffering "unendurable pain or disability". Patients are interviewed to confirm that the decision is theirs, and must take the fatal dose themselves. Assisted suicides are recorded as unnatural deaths and investigated by the authorities. No malpractice case has ever been brought.

According to Mr Luley, a big part of Dignitas's "huge workload" is counselling: its main task is not to give assistance in dying, but suicide prevention. Very few who contact the clinic go through with killing themselves. Assisted suicides account for under 1% of all deaths in Switzerland, less than half the number who kill themselves by other means. That final step takes so much courage and determination, says Bernhard Sutter of EXIT, that those who do so are far from the weak and vulnerable preyed on by the death-mongers of sinister myth. The Swiss, he adds, cherish self-determination, including the right to choose the manner and timing of one's death. Citizens of

Zurich, where Dignitas is based, voted in 2011 against banning assisted suicide or restricting it to Swiss residents, as some troubled by the tag "suicide tourism" wanted.

All the same, it is Oregon's more restrictive rules, which exclude people with serious but not fatal afflictions, that are likely to be copied elsewhere. Though the number helped to die has risen over time as awareness of the law has increased, it remains very low. Since 1997 just 1,327 people have received prescriptions for lethal medication, of whom only two-thirds have taken it. And there is no evidence that the eligibility requirements have slipped: about four-fifths have had terminal cancer. Doctors must brief patients on alternatives such as pain medication and hospice care. A second doctor must review each case. Doctors have been investigated for breaches just 22 times. Each appears to have concerned a logistical issue, such as failing to file paperwork on time. None resulted in a sanction for unprofessional conduct.

Opponents had feared that Oregon's law would be mostly used by poor people who lacked health insurance and were desperate for release from untreated agony. In fact, almost all those who have used it have been well-educated, insured and in hospice care, regarded as the gold standard for palliative care. Pain, or the fear of it, motivated only a quarter. Most cited a loss of autonomy or dignity, or an inability to do things that made life enjoyable. "We are finally reaching a point where we not only have data to back up that this law works, but we have decades of experience with a state that allows aid in dying," says Barbara Coombs Lee of Compassion & Choices, a lobby group that receives some of its funding from George Soros, a billionaire investor and philanthropist. "Our opponents simply can't keep making unsubstantiated claims of abuse, because the cases to back them up just don't exist."

Some, in America and elsewhere, think that the demand for assisted dying would shrink if other options for dying patients, such as hospice care, were more widely available. But research by Clive Seale, a sociologist at Brunel University in London, suggests otherwise. He found that terminal-cancer patients in British hospices were more likely, not less, to consider doctor-assisted dying than those in hospitals. To enter a hospice, patients must accept that they are close to death, he points out. They are planning their deaths, and such people often consider all their alternatives.

One country that may follow Oregon's approach is Britain, where last year Lord Falconer, a former Lord Chancellor (justice minister), brought a private member's bill modelled on it before parliament. It ran out of time before last month's election, but earlier this month a Labour MP, Rob Marris, said he will be carrying a version forward. It will be debated in the House of

Commons in September. Its aim, says Lord Falconer, is simple: "If you are dying anyway of an illness you should have as much control as you can about how that death takes place."

For some supporters, that is too narrow. In 2009 Debbie Purdy, who was severely disabled by multiple sclerosis, brought a case that forced England's director of public prosecutions to formalise his policy of not prosecuting those who accompanied others to Swiss clinics. "Permission to get help to die felt like permission to live, to enjoy life as much and for as long as I could," she wrote in a newspaper article published posthumously in January. In the end she opted to die in an English hospice by rejecting food and drink to spare her husband lingering worries about being prosecuted if he helped her travel to Switzerland. Though she endorsed Lord Falconer's bill, she described it as "simply not good enough", since it would cover only the terminally ill and not those with chronic, incurable conditions such as hers.

Like tears in rain

Last year Steven Fletcher, a Canadian MP who has championed assisted dying for some years, brought a private member's bill before the country's parliament. Though also modelled on Oregon's law, it would have extended eligibility to those who have major disabilities or suffer chronic medical issues that cannot be relieved. He sees no reason why this would open the door to suicide on demand—and, from personal experience, is sure that the extension is needed.

In 1996 Mr Fletcher became paralysed from the neck down in what he calls his "quintessentially Canadian accident": his car hit a moose. For months he was conscious but unable even to breathe unaided. A few years earlier Canada had been transfixed by the case of Sue Rodriguez, a motor-neurone-disease sufferer who had petitioned the Supreme Court for help to die before she found herself similarly incapacitated. In 1993 it ruled 5-4 that anyone who aided her faced prosecution. Soon afterwards Ms Rodriguez took her life with help from an MP who had supported her through the court hearings, and barbiturates provided by an anonymous doctor; no one was ever prosecuted. Mr Fletcher's health improved: he no longer needs a ventilator and can speak again. But if doctor-assisted dying had been allowed at the time of his accident it would have given him peace of mind, he says, "to know then that I would not be forced to linger on and die a horrible death".

Canada's parliament rose for summer recess on June 19th, meaning that Mr Fletcher's bill has run out of time. But Canada may soon get something along the same lines, all the same. In February, in a case very similar to that of Rodriguez, the Supreme Court ruled very differently, deciding unanimously that in so far as the country's ban on the practice affected competent adults who clearly wanted to die with "grievous and irremediable" conditions that caused "enduring" and "intolerable" suffering, it violated constitutional protections to life, liberty and personal security. It delayed implementation for a year to allow parliament to respond.

Since then, not much has happened. Parliament will not return until after an election in October. The government may ask for an extension—or simply miss the deadline. There is a precedent for procrastination. In 1988 the Supreme Court threw out the abortion law and bills to replace it were defeated by an unlikely coalition of pro-choice MPs and pro-lifers who regarded the proposals as too soft. The government then gave up. Ever since, Canada has been one of very few countries with no law on abortion (it is available because of an act guaranteeing access to health care).

A reprise would be a failure of political leadership, says Mr Fletcher. But the Supreme Court's ruling set fairly precise parameters for doctor-assisted dying (which are, as it happens, strikingly similar to those set out in his bill), so there would not be a free-for-all. Doctors, though, would prefer regulation. Otherwise, they fear that decisions would be inconsistent and the boundaries would be stretched over time.

Groups that lobby for disabled people's rights generally reject doctor-assisted dying. Disabled people themselves are split. Restricting it to the terminally ill is impossible, since prognoses are unreliable, says Baroness Jane Campbell, a British life peer with severe spinal muscular atrophy who opposed Lord Falconer's bill. She gives her own example: when she was a baby, her parents were told she would not live longer than a couple of years; she is now 56. And she argues that basing a law on the idea that someone could be so ill or disabled that they would prefer to die is tantamount to declaring their lives of lesser value. By contrast Stephen Hawking, probably the world's best-known person with motor neurone disease, has said he would consider assisted suicide (though not yet: he has too much physics still to do). "To keep someone alive against their wishes is the ultimate indignity," he said. And a poll in Canada found a majority of disabled people in favour of Mr Fletcher's bill.

Every third thought

The Netherlands and Belgium allow doctor-assisted dying in many more circumstances than Oregon—and permit doctors to administer the lethal dose intravenously, rather than requiring patients to take it themselves, usually in liquid form, as in both Oregon and Switzerland. In the Netherlands, it is available for people experiencing "unbearable suffering with no prospect of improvement", and for terminally ill children over the age of 12, with parental consent. Around 3% of Dutch deaths each year are doctor-assisted, the world's highest rate. But it is Belgium that has stretched eligibility furthest. Last year it scrapped all minimum age limits, though children can only be granted assisted dying if they are close to death and in great pain.

Both countries have good palliative care by international standards. A 2008 study concluded that the movement to legalise doctor-assisted dying in Belgium had promoted improvements to end-of-life care more generally, and that the existence of good palliative care made legalisation ethically and politically acceptable. In Oregon, palliative care also improved after the Death with Dignity law came in. A survey of doctors found that having to prepare for conversations about assisted dying had

The Economist's poll results

Attitudes towards assisted dying

An idea whose time has come

IN JUNE *The Economist* and Ipsos MORI polled attitudes towards doctor-assisted dying in 15 countries. We asked whether it should be allowed for adults who are of sound mind and have less than six months to live, and if so, whether doctors should be permitted to administer the lethal drugs, or whether patients should have to take them themselves. We also asked whether it should be legal for under-18s who are terminally ill, if their parents consent; and for adults suffering unbearably because of an incurable but not terminal condition, whether physical or mental.

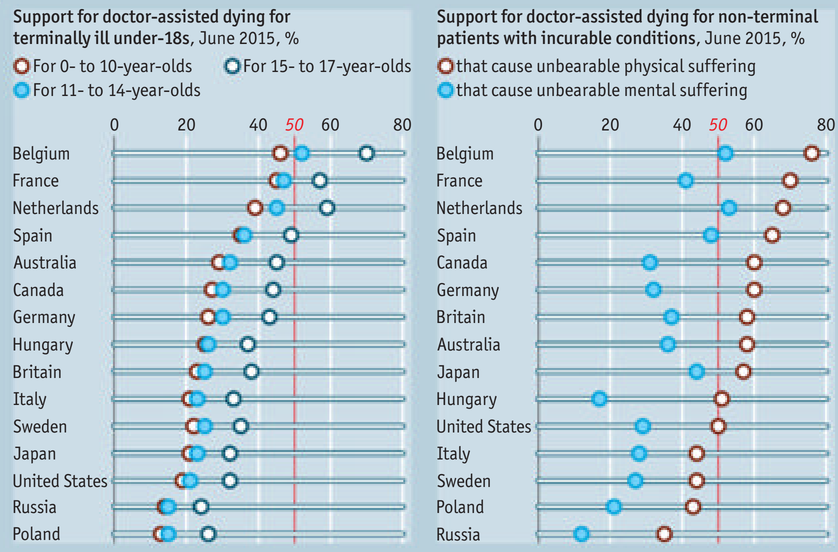
We found that majorities thought doctor-assisted dying should be legal for adults in 13 of the 15 countries polled. Western Europe was broadly more supportive than eastern Europe. Large majorities were in favour in Belgium and the Netherlands, where doctor-assisted dying is legal, and—much more surprisingly—in France and Spain, where it is not, and the Catholic church's influence is strong. When people were asked to think about the specifics of how a life should be taken, support fell considerably, though in nine countries it remained above 50%.

France is probably the country where the law is most out of step with public opinion. On June 23rd its Senate voted against a bill legalising deep sedation to ease the last part of the dying process and requiring doctors to take account of dying patients' wishes regarding their treatment; it must now return to the lower house. Both are standard elsewhere.

In many countries, older people were more likely to be in favour than younger ones—except in Italy and Poland; one possible explanation is that younger people in those two countries are less likely to hew to the Catholic church's line. In several countries, being richer or better-educated made it more likely that a person would support assisted dying. Everywhere except Germany, where the Nazis' euthanasia programme has shaped the debate about assisted dying, respondents were keener on doctors administering lethal drugs than leaving people to take the drugs themselves. The gap was particularly wide in Belgium and the Netherlands, both of which allow either option, and also in Italy.

Majorities in most places were in favour of permitting doctor-assisted dying for those with physical conditions that caused them unbearable suffering. When the suffering was mental, though, only Belgium and the Netherlands (once more) continued to support it. And for terminally ill children, few were willing to allow it. Belgium, the only country with no lower age limit, stood alone in having a majority, or near-majority, in favour for all three age groups we asked about: under-tens, 11- to 14-year-olds and 15- to 17-year-olds. The French and Dutch were in favour for 15- to 17-year-olds only, but everywhere else support was below 50% for children of all ages.

Thus far and no further



Source: *The Economist*/Ipsos MORI

nudged the majority to learn more about terminal patients' other options.

Doctor-assisted dying was widely discussed in the Netherlands for decades, says Annelien Bredenoord, a medical ethicist at Utrecht University's hospital. The start of the debate can be traced to 1971, when a village doctor accepted her stroke-afflicted mother's request to help her die; a court imposed only a token punishment. The case sparked the founding of the Dutch Union for Voluntary Euthanasia, which brought more court cases to get the issue onto the agenda. Over time, courts defined increasingly clear conditions which doctors had to follow to be safe from prosecution. By the time the system was enshrined in law, it had been tested on a semi-formal basis for over a decade.

The result has been a gradual transformation in the way Dutch society approaches death. In 2013 a Dutch documentary, "Midnight Butterfly", told the story of an Amsterdam nightclubber with a terminal genetic illness who received euthanasia after throwing a party on her 26th birthday. One reviewer called it "our culture's ultimate example of courage: dying how and when you want, while you are still yourself, and making a party out of it."

Yet even as consensus was forming, contradictions were emerging. In 1993 Dr Boudewijn Chabot, a psychiatrist, was prosecuted for carrying out euthanasia on a woman suffering intolerable psychological pain because of the deaths of her two sons. A court accepted that intolerable suffering could be mental rather than physical, but it remains a fraught issue. Guidelines warn that patients whose suffering is caused by psychological illness or depression may not be mentally competent to request assistance to die. Though 90% of assisted-dying cases in the Netherlands involve cancer, heart ailments or neurological disease, the share involving mental suffering is creeping up. In 2002, the first year the law was in force, there were no such cases; in 2013 there were 42.

The past decade has seen a rapid rise in the number of assisted deaths. The first national census of Dutch doctors' end-of-life practices was in 1990, when assisted dying was tolerated, though not legal. At the time, it accounted for over 2% of all deaths. The share dropped after the law came into effect, falling to 1.3% in 2005. Since then the number of assisted deaths has risen by about 15% per year.

In one sense this rise is not surprising: the aim of shifting from decriminalisation to full legalisation was to move from the grey area of doctors' discretion to the clarity of a law with multiple safeguards. But it appears that this shift has not fully taken place, either in the Netherlands or, more especially, Belgium. In the past 15 years terminal sedation—increasing drug doses to maintain deep unconsciousness until death—has become widely used in many countries to control dying patients' fear and agitation. A survey of health professionals in Belgium, Britain and the Netherlands by Professor Seale found that in Britain it is used more conservatively than in Belgium and the Netherlands. British doctors are also more likely to discuss end-of-life decisions with colleagues and patients or their relatives.

Belgian doctors are also unusually ready to administer life-ending drugs without explicit consent, generally to patients who have dementia or are in a coma. Such situations fall outside the country's assisted-dying laws, which require that patients are competent and request help to die. Raphael Cohen-Almagor of Hull University, the author of "The Right to Die with Dignity", has studied doctors' end-of-life decision-making in several countries, including Belgium and the Netherlands. He finds such cases troubling. "When they legislated in 2002, it was very clear," he says. "They wanted to empower patients; it was about autonomy and transparency."

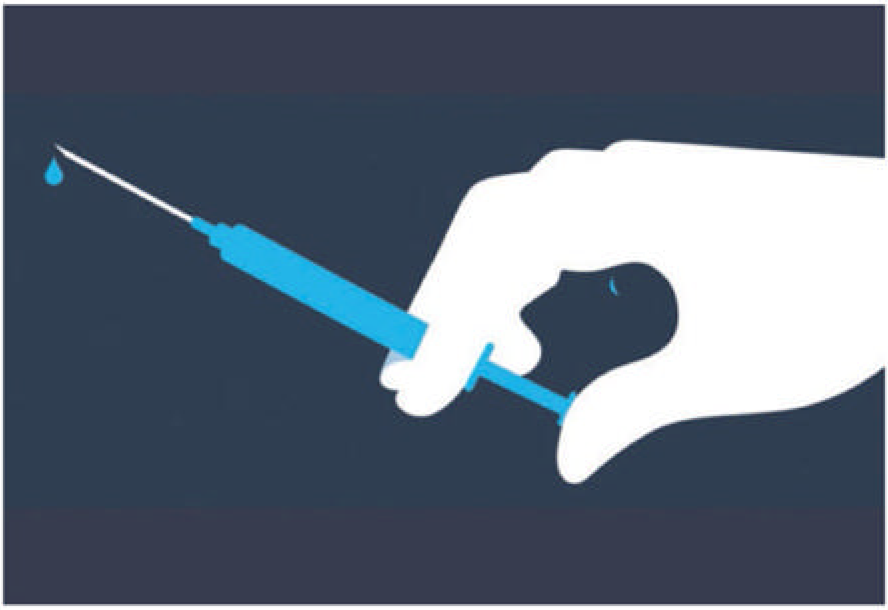
Neither administer nor counsel

In most places, the medical establishment is opposed to laws on doctor-assisted dying, though the national medical association played a big part in legalising it in the Netherlands, and its counterpart in Belgium shifted to neutrality as that country's law was being framed. That opposition has deep roots. "Nor shall any man's entreaty prevail upon me to administer poison to anyone; neither will I counsel any man to do so," runs the Hippocratic Oath, written nearly 2,500 years ago.

But there are signs of change. Though the American Medical Association remains opposed, shortly before the vote in Sacramento the California Medical Association altered its stance to neutral. Late last year a survey by Medscape, a website for health-care professionals, found that for the first time more than half of American doctors were in favour. Polls of British doctors found most thought that the British Medical Association (BMA) should drop its opposition, and that a third of specialist doctors wanted assisted dying legalised, a rise from previous polls.

Doctor-assisted dying seems not to weaken public faith in the medical profession: surveys show that doctors are trusted as much where it is allowed as where it is not. A more subtle fear is that when it is legal, patients may feel pressured to ask for it. "Patients believe you know far more than they do, and they're frightened," says Baroness Ilora Finlay, the president of the BMA and a life peer. "If they say, 'I just want to die,' you can say, 'Do you want me to process your request?' If you go down that path you're saying: 'Your fears are justified.'" She is against assisted suicide, but thinks that if it is permitted, it should be provided through courts, not doctors.

Other doctors regard it as part of a broader change in the doctor's role from authority figure to trusted guide. Diana Barnard, a palliative-care specialist at the University of Vermont, was active in Vermont's successful campaign to legalise assisted dying. She believes that it can spark useful conversations between doctor and patient. "As a doctor, I have things to offer, but I shouldn't presume that I know what the perfect answer is," she says. For Dr Emile Voest of the Netherlands Cancer Institute, "it's about the patient's autonomy." Most of his terminal patients choose palliative care, he says, but he has also performed euthanasia a dozen times over the years. "I always tell my patients I'm not sure how I would handle it if I had cancer, but I'm glad I have the option, even if I don't use it." ■



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The Charleston shooting

At half-mast

CHARLESTON, SOUTH CAROLINA AND WASHINGTON, DC

The unexpected consequences of a young man's murderous rampage

WHEN a mass shooting happens in America, the motivation of the killer is usually unfathomable. In the case of Dylann Roof, who was arrested on June 18th for murdering nine people at the Emanuel African Methodist Episcopal (AME) church in Charleston, South Carolina, it was all too clear. "I chose the city of Charleston because it is the most historic city in my state, and at one time had the highest ratio of blacks to whites in the country," wrote Mr Roof in a message posted online before the massacre. "We have no skinheads, no real KKK, no one doing anything but talking on the internet." A friend said that Mr Roof intended to ignite a race war. Instead he started something else. By wrapping himself in a Confederate flag, along with those of Rhodesia and apartheid-era South Africa, he has transformed a symbol that a week ago flew on the grounds of state capitols into a pictogram of hatred.

That Mr Roof's crime has had the opposite effect to the one he intended is largely owing to the extraordinary response from Emanuel AME church, whose pastor was among the dead. The church already had too much meaning for one building to bear. It is one of the oldest black churches in the South and its congregation, like early Christians, once met in secret because of a ban on black services. The ancestor of the whitewashed Gothic church where the congregation now meets was burned to the ground after a slave revolt. To this repository has now been added a racist massacre and, more powerfully, the generosity of the church's surviving worshippers in offering forgiveness to their assailant.

In the days after the shooting Charleston followed this lead, with people gathering in the streets for vigils rather than protests. At one of these a few thousand people gathered in a small basketball stadium, each holding a rose. Robert Guglielmone, a Catholic bishop, read Psalm 27—"For in the day of trouble/He will keep me safe in this dwelling"—which ought to be an affirmation but sounded more like a plea. The city's many churches kept their doors open for prayer meetings.

Beyond Charleston, Mr Roof's shooting started heated arguments about guns, race and flags. That a man who had been arrested twice and posted pictures of himself with white supremacist symbols should have access to a semi-automatic pistol is no surprise. Getting hold of guns is already easy, and the South Carolina legislature has worked hard to make it easier: in April its House of Representatives passed a bill to introduce "permitless carry", which would exempt anyone who is allowed to own a gun from having to get a permit. In the 1970s the state passed the nation's first law limiting firearms purchases to one a month, a measure designed to stop gun trafficking. It was repealed in 2004.

Nor was it a surprise when a board member of the National Rifle Association in effect blamed the dead pastor, Clementa Pinckney, who was also a Democratic member of the South Carolina Senate, for what happened at Emanuel AME, on the ground that he had voted against allowing guns into churches in 2011. As the motivation for owning guns has changed over the past two decades, the need for citizens to be armed for self-defence has become a frequent refrain among fans of the Second Amendment (see next story), though most are more sensitive about when they make it. Charleston's mayor, Joseph Riley, who fervently opposes guns, hit back: "We don't want to live in a country where you need a security guard for Bible study."

Take it down

What was different about the reaction to this shooting, compared with so many others, is that something tangible has already changed as a result of it. On June 22nd South Carolina's governor, Nikki Haley, said that it was time to take down the Confederate flag from its position on the grounds of the state capitol. In Mississippi the Republican Speaker of the House of Representatives said it was also time to take it off the Mississippi state flag. The governor of Alabama had a Confederate flag removed from the grounds of the state capitol. The governors of Virginia, Tennessee and North Carolina said they wanted the flag removed from car licence-plates in their states. A clutch of prominent businesses made the same decision. Amazon, Walmart, eBay, Sears and Google announced they would no longer sell the flag ▸▸

or goods branded with it.

The swiftness of this change has been extraordinary. The Confederate flag has at different times been used to honour the war dead of southern states, to signal a disregard for authority and to decorate belt buckles. It was waved by George Wallace, who offered Alabama "segregation now, segregation tomorrow, segregation for ever" in 1963, and then made the same pitch to the country in the 1968 presidential election. And it was painted on the roof of the orange car driven in "The Dukes of Hazzard", a television series adored by children who grew up in the 1980s, many of whom thought the blue cross with the white stars was just a nice paint job.

The debate over the meaning of the Confederate flag is 150 years old this year, the anniversary of the end of the civil war. Almost as soon as the Stars and Stripes were raised over Fort Sumter, just across the water from Charleston, in 1865, a concerted effort to rewrite the causes of the war began. In this telling, the conflict had little to do with slavery and everything to do with states' rights, as if the two were unrelated. Northerners were quick to accept a version of events according to which both sides in the war had been right, if it helped to mend the country in the aftermath. Charleston's Hampton Park, named after a Confederate major-general and once the site of a prisoner-of-war camp, is a small reminder of this forgetting. Its tree-lined avenues and fountain make a popular backdrop for wedding photographs, the brides standing on ground that served as a mass grave for more than 200 Union soldiers.

But when used in politics the meaning of the Confederate flag has been all too clear. Mississippi adopted its current state flag, which has the Confederate cross in its top left corner, in 1894, when the state was pushing back hard against Reconstruction and only eight years after ten blacks were murdered in one of the state's courthouses. Georgia incorporated the Confederate cross into its state flag in 1956, while the state's politicians were fighting against attempts to end Jim Crow laws, and just two years after the Supreme Court ruled that schools must be desegregated in *Brown v Board of Education*. Georgia redesigned its state flag in 2003.

The Confederate flag, wrote Russell Moore of the Southern Baptist Convention on his blog on June 19th, "was the emblem of Jim Crow defiance to the civil-rights movement, of the Dixiecrat opposition to integration, and of the domestic terrorism of the Ku Klux Klan and the White Citizens' Councils of our all too recent, all too awful history [...]That sort of symbolism is out of step with the Justice of Jesus Christ."

Mr Moore expected a flood of complaint, but has received only a trickle. The noisiest protestations have come from the professionally outraged, such as Rush Limbaugh, a radio host. Mr Limbaugh told listeners to his show that the same people who are out to confiscate the Confederate flag would one day come for the American one. He ought to read Mr Roof's manifesto. "I hate the sight of the American flag," wrote the shooter, making its stars and stripes appear instantly brighter.

In his statement about the shooting, Barack Obama expressed frustration that he had been obliged to make statements about gun massacres too many times. "At some point, we as a country will have to reckon with the fact that this type of mass violence does not happen in other advanced countries," he said. "It doesn't happen in other places with this kind of frequency." He spoke of his anger and of Emanuel AME's prominent place in the civil-rights movement, and quoted Martin Luther King. Like most presidents reaching the end of their second term, Mr Obama is hardly popular at the moment. But at times when decades-old questions about race, history, hatred and violence resurface, his calming, thoughtful presence is an asset. He will give the eulogy at Mr Pinckney's funeral on June 26th. ■

Gun politics

A counsel of despair

WASHINGTON, DC

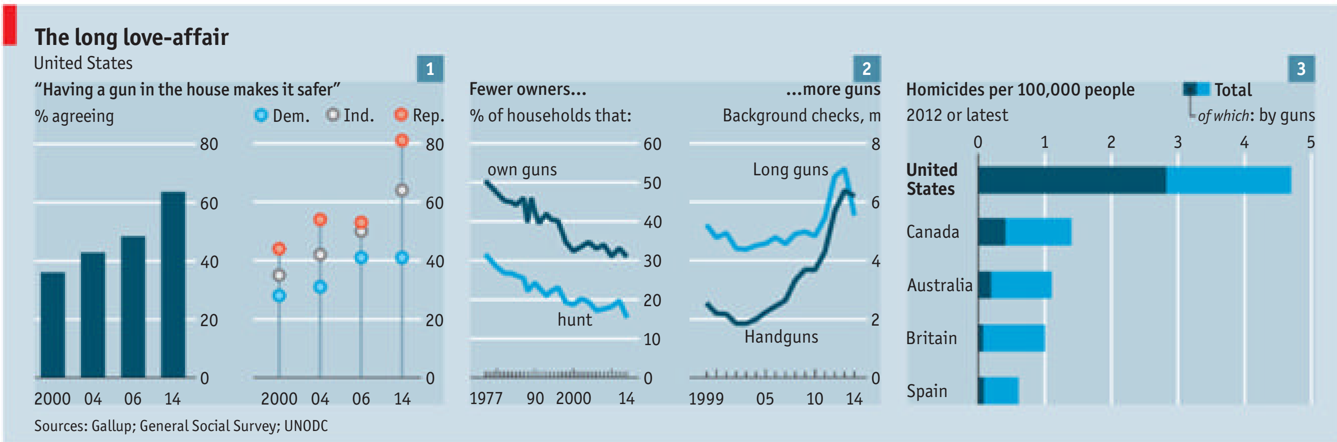
The Charleston massacre will not produce new controls on firearms

AFTER the massacre in Charleston, Joseph Riley, the city's mayor, said that "nine people died, because of this crazed man, with obviously easy access to a handgun." The right to bear arms "is ingrained in the constitution and life in America", he conceded. But, he continued, "There has got to be a better way."

Mr Riley's plea did not get far. The shootings in Charleston have sparked a clamour about racism and the Confederate battle flag. On guns, they produced a whimper. Barack Obama denounced loose rules, but added that he doesn't "foresee any real action being taken". Harry Reid, the minority leader in the Senate, called for a vote on expanded background checks, but admitted that "we may not be able to win that vote". Republicans spoke in favour of guns: Ted Cruz, a Texan senator and presidential candidate, warned that Democrats would try to use the massacre "to take away the Second Amendment rights of law-abiding citizens".

Americans are far more likely to die by gunfire than people in any other rich country. In 2013, 21,175 people killed themselves with guns and 11,208 people were killed by others. Gun homicide and suicide rates are hugely higher than in most of Europe. Mass shootings appear to be more common, too. Jaclyn Schildkraut and Jaymi Elsass, two criminologists, have counted 133 such events in the United States between 2000 and 2014 (excluding gang violence or terrorism). In England, they counted one.

Yet there is little appetite for change. After the massacre in 2012 of 20 children and six staff at a school in Connecticut, by a young man using one of his mother's ri-



fles, several attempts were made in Congress to tighten access to firearms, but all failed. Many states are actually loosening their rules. In June Mr Reid's state, Nevada, introduced new legal protections for people who kill in self-defence from their cars; in May Texas allowed its citizens to carry pistols openly. In April Kansas passed a law allowing residents to carry concealed handguns without having to get a licence.

If the number of background checks performed or the number of guns manufactured is any indicator, gun sales are at close-to-all-time highs. According to data from the FBI, nearly 21m background checks of various sorts were performed in 2014, up from just 8.6m a decade earlier. Those numbers soared almost as soon as Mr Obama was elected (see chart 2). According to the Small Arms Survey, Americans own more guns per head than citizens of any other country in the world.

Yet while the number of guns appears to be going up, data from the General Social Survey (GSS), gathered by the University of Chicago, suggest that gun owners represent a slightly smaller share of the population than they did. In 2014, 31% of households had guns, down from over 40% a decade ago (see chart 2). Individual gun ownership increased slightly between 2010 and 2014, but it was still sharply lower than in the 1990s. A shrinking number of gun owners seem to be accumulating ever larger stashes.

The difference today is that gun ownership is less of a hobby and more about self-defence—and identity. In 1977, 32% of Americans told the GSS that they or their spouse hunted; by 2014 that figure had fallen to 15.4%. But according to polling by Gallup, since 2000 the proportion of Americans who say that owning a gun makes them feel safer has increased sharply, from 35% to 63% (see chart 1). Mike Lau, an instructor at the South Carolina Gun School, predicts that the Charleston shooting will lead to more people learning to use guns to protect themselves. Gun ownership by women has risen, even as it has fallen for men; pistols now outsell rifles and shotguns.

Gun ownership is a strong indicator of political and demographic background. Poorer people, residents of big cities, blacks and Hispanics are far less likely to own a gun. Richer white people in suburbs and rural areas are far more likely to. Republican voters are much more inclined than Democrats to say that having a gun makes them feel safer—a gap that has widened dramatically since 2006 (see chart 1).

A large majority of Americans still say they support background checks for all gun purchases (in most states, private sales and sales at gun shows do not require such checks at present). But they do not trust the motives of the politicians—mostly Democrats—who want to tighten the rules. Most Republican politicians are bullied into absolutism by gun lobbyists. And so the shootings will inevitably go on. ■

California's budget

Trouble ahead

LOS ANGELES

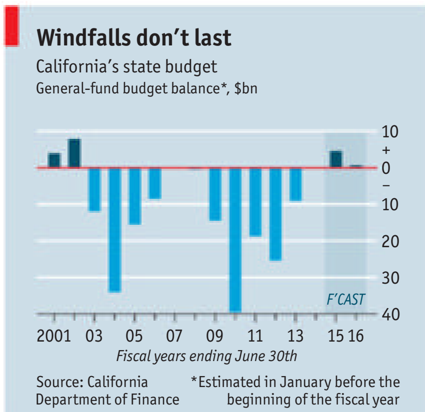
California's budget does little to save it from ups and downs in future

"IN PROSPERITY we all grow over-nice," warns the chorus of Aeschylus's "Agamemnon". But harbingers of doom are as ignored in modern Sacramento as they were in Troy. California's lawmakers passed a $115.4 billion budget on June 19th. Their enthusiasm for expenditure was curbed somewhat by the state's more parsimonious governor, Jerry Brown, who persuaded legislators not to pass their preferred package—$2.1 billion larger.

Higher-than-expected tax revenues so far this year inspired California's legislators to test their governor's generosity. The state's $2.3 trillion economy appears strong enough; unemployment is trending downwards, house prices are rising and incomes booming. But there is a catch. In 1950, 10% of California's fiscal take came from income tax; by 2014 64% did. The Golden State depends too much on its fine crop of plutocrats, and its funds rise and fall with their fortunes. According to the Franchise Tax Board, the wealthiest 1% of Californians accounted for more than half of all income tax collected in 2012.

Proposition 30, a ballot initiative passed that same year, only made matters worse. As well as imposing a sales-tax increase until 2017, it raised income taxes for those making more than $500,000 until 2019 (those in the top tier pay at the country's highest rate, 13.3%.) And as top tax rates on capital gains are the third-highest among even rich countries, California jumps about with market movements more than many other states.

Buoyant share prices help explain why morale is high at present. They meant that the state collected $6.7 billion more in tax revenues than had been predicted—most



of which will go to finance schools and community colleges, as the state's constitution demands. The windfall is welcome in the wake of cuts since 2008 but, according to the Centre on Budget and Policy Priorities, California still provides less money for primary and elementary schools than it did before the recession. And its spending per pupil is more measly than that of 28 other states. Students at the University of California have seen their tuition costs almost double in recent years, too—but Mr Brown at least struck a deal in the new budget to freeze them until 2017.

The rest of the extra tax revenues will be split between the state's rainy-day fund and debt payments. Last November voters approved Proposition 2, very dear to Mr Brown's heart, to shore up the fund, tightening the rules for making deposits into it and drawing money out. The constitutional amendment means lawmakers must divert 1.5% of California's general fund, its current account, to the rainy-day fund each year. On top of that, the state must set aside proceeds from the capital-gains tax that exceed 8% of the general fund's own revenue. Boom years (the theory goes) will no longer see unsustainable spending levels set if the money is safely tucked away. And the new rules mean that future governors can raid the rainy-day fund only if they have declared a fiscal state of emergency. By June 30th 2016, $3.5 billion should be waiting for them—much better than nothing, but still a modest sum with which to shore up state finances.

Preventing cycles of fat and thin fiscal years is vital. Reasonable spending levels in good times allow California consistently to provide services when times are bad. This, for Mr Brown, was a reason not to pay for some schemes lawmakers wanted. Although almost a third of California's 39m residents rely on health coverage from the state's health programme, MediCal, he refused to raise reimbursement rates for those providing care under it.

The juiciest bone in the new budget is a new tax credit for the working poor. When the cost of living and non-cash benefits are considered, California has America's highest poverty rate. Almost a quarter of residents cannot pay for basic necessities. Grim districts on the outskirts of Los Angeles and dilapidated rural towns in the Central Valley suggest as much. The new credit should reach 2m Californians, providing average payments of $460 a year—about 85% of the equivalent federal credit at the moment. The new incentive will be available to families earning less than $13,870, even if they make too little to pay state taxes. But as it will be calculated afresh each year, some worry that it will be cut as soon as finances get tight.

The eye of California's next economic storm could be its still-unfunded liabilities. According to a recent report from the Volcker Alliance, headed by a former chairman of the Federal Reserve, Paul Volcker, the state is saddled with $195 billion in promises it can't afford to keep: retired public workers expect full pensions and reliable health coverage. The state's latest budget does little to assuage Mr Volcker's worry that California tends "to overspend during boom years"—in spite of Mr Brown's best efforts.

Broadening California's tax base would increase the stability of its budgets by decreasing its dependence on the fluctuating fortunes of the rich. But in a state that mostly votes Democratic and is bothered by income inequality, attempts to shift the fiscal burden away from its richest residents will inspire fierce resistance—despite the fact that its poorest ones may suffer most from violent fiscal swings in the future. ■

Property rights

No more sour grapes

NEW YORK

Magna Carta helps to stop federal raids on raisin crops

IF YOUR house lies in the path of a new interstate highway, the government will pay you for your property before kicking you out and calling in the asphalt trucks. The "takings clause" of the Fifth Amendment requires "just compensation" whenever the state takes private property for public use, and until this week this was read to apply mainly to land and homes. But on June 22nd the Supreme Court greatly expanded what counts as "private property". "The government has a categorical duty to pay just compensation when it takes your car," it said, "just as when it takes your home."

Horne's victory is sweet

Neither cars nor houses were at stake in *Horne v United States Department of Agriculture*. The case concerns raisins, specifically the raisin crop of family farmers Marvin and Laura Horne of Fresno, California. The Hornes balked in 2002 when they were asked to hand over 47% of their raisins to a Raisin Administrative Committee appointed by the secretary of agriculture. They were displeased in 2003 as well, when the figure was 30%. Instead of obeying, they sold the whole crop themselves, incurring fines of nearly $700,000.

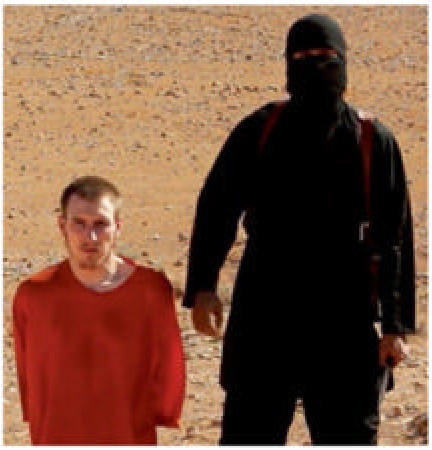
The Hornes fought back, claiming that it violates the Fifth Amendment to strip people of their crops without paying them first, but they had no luck in court. The Ninth Circuit Court held that this was a mere "regulatory" taking, since growers may get some of the proceeds when excess raisins are sold below market value to federal food programmes, exporters or foreign governments.

Eight justices voted to reverse that ruling. Chief Justice John Roberts pointed especially to clause 28 of Magna Carta (extracted from King John in 1215), which "specifically protected agricultural crops from uncompensated takings". The colonists "brought the principles of Magna Carta with them to the New World", he wrote, and had them in mind when they drafted the Fifth Amendment.

The government's last-ditch argument was that grape growers could just get out of the raisin business if they disliked the rules. But selling one's fruit is not "a special governmental benefit that the government may hold hostage", Mr Roberts wrote. "'Let them sell wine' isn't much more comforting to the raisin growers than similar retorts have been to others throughout history." Besides, Mr Roberts wrote, raisins "are not dangerous pesticides; they are a healthy snack".

In an opinion written by Stephen Breyer, three justices concurred with the ruling but would have asked the Ninth Circuit to factor in the higher raisin prices the Hornes could get because of the set-aside order; those profits should be weighed, he wrote, against the losses.

The Horne family is thrilled with the decision. "The monkey is off my back," Mr Horne declared. Some constitutional lawyers, though, fear a new monkey may have landed on theirs: a vague but potentially wide expansion of the universe of items the government must compensate citizens for when it seizes them for public use.



Ransoms

A horrible choice

NEW YORK

America doesn't pay ransoms, but won't prosecute individuals who do

WHEN continental Europeans are kidnapped, their countries' spooks and diplomats constantly communicate with relatives and captors. Despite official denials, they also reportedly pay multimillion-dollar ransoms with taxpayers' money. By contrast, the American and British governments refuse to pay ransoms, saying that to do so encourages more kidnappings—as it appears to. The UN estimates that Islamic State (IS) earned $35m-45m from abductions in the year to last October.

However, a strict no-concessions policy is tough for your citizens if they get kidnapped despite it. According to an analysis by the *New York Times* of a group of 23 prisoners held by IS, six of the seven who came from the United States or Britain were killed (including the American Peter Kassig, above), and the last is still captive. Of the remaining 16, 15 survived and were released for a fee.

The parents of three American journalists have complained about their government's handling of their cases. They say they were not informed about efforts to free the hostages, that different agencies gave them conflicting advice, and that they were threatened with prosecution for offering a ransom themselves. The government has now reviewed its hostage policy, and on June 24th Barack Obama announced the results. He will set up a "fusion cell" including people from the Justice, Defence and State Departments, and appoint a "family engagement co-ordinator" to give relatives a single point of contact. He also made it clear that no private citizen will be prosecuted for paying a ransom, and that officials are free to communicate with kidnappers and intermediaries.

But on the central question—whether Uncle Sam will pay ransoms—Mr Obama was firm. American officials cannot brook the idea of funding the groups they want to destroy, and they claim that kidnappers specifically avoid taking American (and British) hostages because they do not expect a return on the investment.

There is some empirical support for that theory. In a forthcoming study of over 1,000 kidnappings by terrorists in 2001-13, Patrick Brandt, Justin George and Todd Sandler of the University of Texas at Dallas found that the number of Americans and Britons abducted each year stayed constant, whereas the totals for countries known to meet captors' demands rose steeply. They estimate that if a non-paying government were to start offering ransoms, the number of its citizens taken hostage would jump by at least 30%.

However, proof is elusive. Most kidnappings are never made public. Differences in abduction rates could simply be because fewer Americans are travelling to lawless regions. American captives may be more valuable as propaganda tools than as revenue sources—and killing them in horrible ways can increase the ransoms other governments are willing to pay. Besides, the notion that extremists, surrounded by chaos, select victims by expected financial return is dubious. "They get taken in a combat zone because they're there and have a Western appearance," says Adam Dolnik of the University of Wollongong in Australia. "Then the kidnappers figure out who they have, and what they can get." ■

Trade bills

Fair wind blowing

WASHINGTON, DC

What a trade deal with Asia could most usefully include

PRESIDENT Barack Obama and Republican leaders this week showed what bipartisan politics looks like. After days of manoeuvres, including a revolt by leftish Democrats, Congress voted to give Mr Obama Trade Promotion Authority (TPA), a "fast-track" mandate to pursue trade pacts which Congress may not later re-open and amend.

Negotiators may now press on with the Trans-Pacific Partnership (TPP), a trade deal uniting America and 11 Pacific Rim countries, between them accounting for 40% of global economic output. Now comes the task of reaching a good deal.

When pitching TPP on Capitol Hill, trade envoys often talk about lowering tariff barriers. Favourite examples include a 40% tariff slapped on American poultry in Malaysia and a 27% tariff on American car parts in Vietnam. Time to level the playing field, they argue: American markets are already open, with most imports entering the country duty-free and average applied tariffs of 1.4%. But the largest gains are likely to involve non-tariff barriers, from red tape to "safety" tests designed to curb imports. Mr Obama argues, with a bluntness that makes Asian allies wince, that without TPP China will write trade and investment rules for the region. America wants TPP to liberalise trade in services (where its firms enjoy an edge), to give better protections for intellectual property and to promote fair competition between private firms and state-owned enterprises. America also wants a ban on rules forcing internet firms to install servers and other hardware in countries where they wish to operate. If that sounds like a rules-based vision of free trade, countering a mercantilist, state-directed Chinese approach, it is meant to. China is not included in the TPP talks, but is seeking its own pact with 15 Asia-Pacific countries (America not among them).

Though unions remain bitterly opposed to TPP, Mr Obama pledges that the new pact will include enforceable labour and environmental standards (they were voluntary in earlier deals). If those can be secured, TPP offers "significant improvements" over the status quo, says Representative Beto O'Rourke, one of 28 Democrats to back TPA in the House. His Texas district of El Paso lost a "traumatic" 30,000 jobs soon after the North American Free Trade Agreement came into force two decades ago, notably in clothing factories. Then El Paso became a cross-border production hub with its Mexican neighbour, Ciudad Juárez, more than offsetting earlier job losses and raising real per head incomes in El Paso by about 50% since 1994. Access to fast-growing Asian markets is a big opportunity for America, Mr O'Rourke says.

Expect more debates like that: Congress must still approve or reject a final TPP deal. At least, thanks to this week's votes, America is still at the table.

Lexington | Capitalism in America

Americans have never been anti-business, as long as its power is balanced by democracy

THE consensus in Washington is clear: this is a perilous time for business bosses. Political pundits nod to a populist mood sweeping the Democratic Party, obliging Hillary Clinton—long feted as an ally on Wall Street—to denounce big firms making record profits while middle-class pay has stagnated. "Prosperity can't just be for CEOs and hedge-fund managers," the Democratic presidential candidate declared in a recent speech, expressing special dismay that the top 25 hedge-fund bosses make more money than all America's kindergarten teachers combined (lines liable to warm the ears of her son-in-law, who runs a hedge fund).

Bosses feel under attack from the right, too. In vain, prominent CEOs and business lobbies have sought to save the Export-Import Bank, an 80-year-old federal agency that provides credit to exporters. It seems likely to close at the end of June, at least temporarily, after a critical mass of Republicans in Congress deemed its mission "corporate welfare", siphoning money from taxpayers to a privileged handful of firms.

Populists describe a moment with loud historical echoes. In their telling, Americans may be a business-friendly bunch most of the time, but still they rise up when a crisis exposes a capitalist game rigged by a wealthy few. That theory is largely right. The country is both unusually business-minded and prone to ferocious debates about how capitalism should be organised and regulated. That record is explored by "American Enterprise", an exhibition opening on July 1st at the National Museum of American History, part of the Smithsonian Institution in Washington, DC.

The exhibition is the Smithsonian's first to focus on America's business history. It asserts that commerce was, from earliest times, bound up with ideas of democracy and individual rights. Drawing on the Founding Fathers' own words, the Smithsonian argues that most of them were at heart businessmen, and waged a war of independence in part to determine who would benefit from the staggering potential of their sparsely peopled, resource-rich homeland. As for the civil war, it had ill-concealed economic underpinnings. Slavery was not just wicked, it was lucrative: by 1860 the total capital that slave-holders had "invested" in captive human beings was three times larger than investment in manufacturing in the northern and southern states combined.

Americans have long stood out as unusually open to innovation, and unsentimental when local businesses or customs are swept aside. Evocative displays capture the excitement of the post-1945 boom years, when frozen meals liberated working wives or franchised restaurant and motel chains promised a highly mobile population a modern, standardised product wherever they were. The exhibition does not claim that capitalism has always been uncontroversial. It describes panics and economic crashes that buffeted America—a pioneering 19th-century board game on display, the "Game of Life", features a square marked "Ruin". The Smithsonian is candid about the country's ambivalence over foreign trade. It cites George Washington's prediction that "liberal and free commerce" would soon replace war as the main motor of international relations. At the same time it recalls later politicians rallying voters behind protectionism, and deepening economic depressions as tariffs bit.

Fairness good, opportunity better

The museum depicts moments when politicians, voters and consumers agreed that capitalism needed reform. But here modern-day populists should pay close attention. For the Smithsonian's historians note that fairness, meaning a society without great gaps between rich and poor, has rarely mattered as much to Americans as ensuring opportunity for all. In contrast with much of Europe, socialism fizzled out as a force in America before the second world war. Nor was class identity ever very strong—it was "squashed by a rising standard of living", suggests one of the exhibition's curators, Peter Liebhold.

Modern populists would argue that the national mood is changing, precisely because living standards seem to have stalled for so many. Buttressing the case for intervention, they might note that Americans strongly support federal safety nets, such as Social Security pensions for the old, which were contentious when enacted as part of Roosevelt's New Deal. Americans have also embraced FDR-era agencies that guarantee bank deposits or keep watch over investment firms. But lessons from history cut both ways. Even at the height of the Depression, Roosevelt had less luck with schemes that smacked of state planning. The Smithsonian owns a large emblem from the National Recovery Administration, established in 1933 to regulate production, prices and wages before losing the support of both industry and unions, and at last being declared unconstitutional by the Supreme Court.

History shows that Americans are reliably angered when they believe that businesses are harming the common good. That can involve cheating consumers by selling mislabelled or dangerous products (museum visitors can gasp at some lethal "Lawn Darts", a banned toy that could pierce a child's skull). Lots of voters think the common good is imperilled by crony capitalism or corrupt ties between business and politicians. The Smithsonian quotes the first President Roosevelt, Theodore, as he inveighed in 1902 against giant corporations suspected of fixing prices: "We draw the line at misconduct, not against wealth."

Though there are pragmatic arguments for and against the Export-Import Bank, Republicans may be reading American history right: crony capitalism has long been a good target. For candidates like Mrs Clinton, the lessons of the past are harder. Voters resent the political influence of campaign donors (among them CEOs and hedge-fund managers). Yet still presidential candidates beg the rich for cash, ahead of an election set to shatter all spending records. Business bosses may take comfort. Their reputations wax and wane; politicians ply a trade that always looks grubby. ■

Latin America's economies

Learning the lessons of stagnation

LIMA

As memories of galloping growth fade, it is time for tough thinking about the future

IN JUNE 2006 Luiz Inácio Lula da Silva, then Brazil's president, went to Itaboraí, a sleepy farming town nestled where the flatlands beside Guanabara Bay meet the coastal mountain range. He announced the building of Comperj—the Rio de Janeiro petrochemical complex, a pharaonic undertaking of two oil refineries and a clutch of petrochemical plants. With forecasts of 220,000 new jobs in a town of 150,000 people, Itaboraí geared up for a boom.

Today it is almost a ghost town. Its straggling main street adjoins an unopened shopping mall and is punctuated by a score of blocks of flats and office towers, one with a heliport on the roof, all finished in the past few months and all plastered with "for sale" signs. "A lot of people bet on this new El Dorado in Itaboraí and it didn't happen," says Wagner Sales of the union of workers building Comperj.

What did happen? Private firms that were supposed to join Petrobras, the state-controlled oil giant, in investing in the petrochemical plants took fright when a shale gas boom in the United States slashed costs for their competitors there. Lula and his successor, Dilma Rousseff, burdened Petrobras with developing new deep-sea oilfields as a monopoly operator while also adding three other refineries. A corruption scandal and plunging oil prices hit the company hard. Comperj has been reduced to one small refinery; its completion date has been pushed back to mid-2016.

Luiz Fernando Guimarães, the secretary of economic development for the municipal government, reckons there are 4,000 empty offices in the town. Two years ago the mayor set out to re-market Itaboraí as a logistics centre. But its trump card—location near the meeting-point between a new motorway round Guanabara Bay and the main coastal highway—was wasted because the federal government of that "darned Dona Dilma", as Mr Guimarães calls the president, has failed to build the last stretch to the town.

Itaboraí's plight is echoed, albeit less dramatically, across Latin America. The rise in the prices of commodities—minerals, oil and grains—brought about by China's industrialisation unleashed a golden decade for the region (or more accurately for the commodity-exporting countries of South America). Growth averaged 4.1% in the decade to 2012. In its train came a social transformation: 60m were lifted out of poverty, and the middle class swelled.

Now the good times are over. Latin America's economy is screeching to a halt; it managed growth of just 1.3% last year. This year's figure will be only 0.9%, reckons the IMF, which would mark the fifth successive year of deceleration (see chart 1 on next page). Not only has this surprised most forecasters, but Latin America has slowed more than any other emerging region. Many reckon it now faces a "new normal" of growth of just 2-3% a year. That would jeopardise recent social gains; already the fall in poverty has halted.

So what has gone wrong? Did Latin America squander its boom? An immediate explanation for the slowdown is the fall in the region's terms of trade—the ratio of the price of its exports to the price of its imports. Having risen threefold between 2003 and 2011, commodity prices fell somewhat thereafter before plunging sharply last year. Since 2011 investment in the region's economies has slowed; the IMF finds that it is closely correlated with commodity prices. Financial markets have responded accordingly, with the region's main currencies depreciating by an average of 20% against the dollar since mid-2014 and most stockmarkets in the doldrums. The impending hike in the United States Federal Reserve's policy rate will raise borrowing costs.

An end to expansion

In the past such abrupt reversals tended to cause panic and capital outflows. This time is at least partly different. Better macroeconomic policies, such as floating exchange rates and lower public debt, have allowed many countries to adjust smoothly. Chile, Colombia and Peru, which have handled their affairs responsibly, are still growing, but much more slowly. (So is Bolivia, whose leftist government has been relatively prudent.) Mexico, Central America and the Dominican Republic, which are net importers of commodities, are set to do ►►

better than average in the coming years.

Worst hit are countries that bungled their policies, to varying degrees. After an inflationary fiscal splurge, Brazil faces an inevitable adjustment: its economy will shrink by 1.2% this year according to the government, and unemployment is surging. Argentina is enduring prolonged stagnation and double-digit inflation. Venezuela faces a painful contraction of 7% this year and inflation of 95%, says the IMF. On the black market its currency has halved in value against the dollar since January.

"The boom was not completely wasted, but neither was it completely capitalised on," Guillermo Perry and Alejandro Forero of the University of the Andes in Bogotá conclude in a recent paper. Most of its proceeds went on a consumption binge and imports. By contrast Asia's expansion has been powered by manufactured exports, investment and infrastructure spending, increasing its potential for future growth.

But Latin America's traditionally low investment levels did increase. Stronger and better-regulated banks and public finances and higher levels of international reserves meant that the region sailed through the great recession of 2008-09 with only a brief downturn. Yet that success went to the politicians' heads. Many were too slow to withdraw the fiscal stimulus they applied. With the partial exception of Chile and Peru, no government now has scope to mitigate the slowdown through monetary or fiscal policy.

To return to faster growth, Latin America must address its chronic structural weaknesses. Put simply, it exports, saves and invests too little, its economies are not diversified enough and too many of its firms and workers are unproductive.

To make matters worse, the rise of China, and of the emerging world generally, over the past 15 years has exacerbated some of these problems, the World Bank concluded in a report published in May. China reinforced Latin America's role as a commodity exporter while the relative weight of its manufactured exports diminished, the bank found. That is partly because of Latin Americans' low savings rate (under 20% of GDP, compared with 30% in South-East Asia). The region has relied on drawing in foreign savings, which meant that its currencies appreciated during the boom more than they might otherwise have done, rendering many non-commodity businesses uncompetitive.

In the 1990s Latin America began to diversify its exports, selling a bigger variety of products. But that has reversed since 2000. Only a small and declining percentage of the region's exports are of "complex" (ie, knowledge-intensive) products. This matters. Ricardo Hausmann, a Venezuelan economist at Harvard, has found a close correlation between the diversity and complexity of exports and subsequent

From surging to sluggish 1

Latin America, % change on a year earlier

Source: IMF *Goods and services †Forecast

economic growth. The problem Latin America faces, says Mr Hausmann, "is the things that could be there and are not". Latin Americans "seldom talk about technology and innovation, so there are no new industries to take over from commodities".

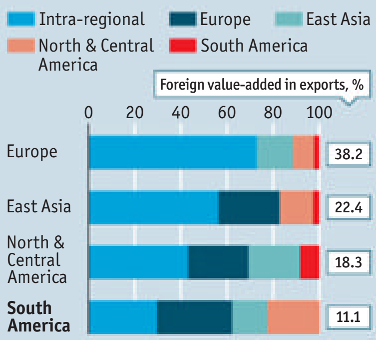
Put another way, Latin America's problem is its failure to join what economists call "global value chains"—which are in fact mainly regional. Modern industry needs elaborate supply chains with parts coming from several different countries, but they are often neighbouring ones. Some 72% of the "foreign value-added" in exports from European countries is intra-regional, in other words it originates in other European nations; the equivalent for East Asia is 56% and for South America only 30%, according to the World Bank (see chart 2). Only Mexico is plugged in to these value chains, thanks to its economic integration with the United States.

Don't stick to your knitting

The productivity gap between Latin America and the rest of the world has been widening. According to the Inter-American Development Bank (IDB), Latin America's total factor productivity (the efficiency with which labour and capital work together) was slightly over half the level in the United States in 2010, compared with

Ignore thy neighbour 2

Origin of foreign value-added in exports
2011, %



Source: World Bank

almost three-quarters in 1960. Over the same period, East Asia has narrowed the gap from around half to a third.

Why are Latin Americans so relatively unproductive? Take Alejandro Valladares's business, in a quiet street in Huaycán on the eastern edge of Lima, Peru's capital. In a large room of bare cinder-block walls on the ground floor of his house, Mr Valladares has a score of knitting machines. He makes around 12,000 pairs of baby socks a month. He sells them locally, but also to Panama. He employs four of his children and two other workers. It makes them a living but not much more. What prevents growth? Chinese competition, says Berta Valladares, one of his daughters. Sales were better 15 years ago, she says. Orders have risen recently, but only because the family has accepted lower margins.

Expanding would require more capital, adds Mr Valladares. He cherishes his British Bentley Komet knitting machines, bought second-hand from factories; but the technology predates the second world war. He has no more space in his house. After falling behind on loan repayments, he sold his cars and sends goods to market by taxi. He doesn't do business with banks any more. "I want a quiet life," he says. His daughter dreams of studying business or getting a job that would train her in computerised production. But she must combine her work with care for two children.

Latin America has large modern companies, some of which have evolved into successful multinationals. But the typical Latin American business resembles the Valladares workshop, lacking scale, technology and professional management.

There are several reasons why Latin American firms find it hard to be more productive. Andrés Velasco, who was Chile's finance minister, stresses the lack of competition in what, Brazil and Mexico apart, are smallish national markets. Achieving greater scale is vital for raising productivity, and that means going abroad. But despite much talk about integration Latin America is still quite protectionist. Growing beyond the region is hard, given South America's location. As Mr Velasco points out, exporters in Germany or China have 20% of the world economy within fair proximity (less than 3,000km); their Chilean counterparts have no such advantage. So global value chains may be out of reach. "To sell to Asia you have to sell the whole product, not part of it," he says.

Another old explanation for low productivity is that half of Latin Americans work in informal non-registered businesses, which struggle to obtain technology and capital; such firms compete unfairly with legal ones and make their tax burden bigger. Santiago Levy of the IDB believes that some governments have encouraged the informal economy by setting up non-contributory pensions and free health in-


COMPUTER GENERATED IMAGE DEPICTS THE COMPLETED DEVELOPMENT AND IS INDICATIVE ONLY
PRICES ARE CORRECT AT TIME OF GOING TO PRESS

surance alongside traditional contributory social insurance schemes that tax formal employment.

Informality is in part a consequence of baroque regulation which adds to business costs. Piero Ghezzi, Peru's production minister, laments that one of the country's few industrial estates, in Tacna on the Chilean border, has no tenants although it offers exemption from corporate income tax; that is because the procedures to set up there are so complicated. He is deploying a small team of "de-bureaucratisers" to try to sweep away regulatory obstacles.

No through road

An even more powerful brake on productivity is the region's lack of roads, ports and so on. While China invests 9% of its GDP in infrastructure and India 6%, Latin America manages just 3%, according to CAF, a development bank. Lack of money is no longer the main problem: countries such as Chile, Colombia and Peru have mobilised private finance for infrastructure. Rather, it is the difficulty of building anything. Take Peru, the fastest-growing of Latin America's bigger economies over the past ten years. Between 2005 and 2013 the government awarded contracts for 62 infrastructure projects worth $15 billion. But only 55% of the money has been spent, says Gonzalo Prialé, a lobbyist.

Drive south from Lima and the motorway stops in the booming, chaotic farming town of Chincha, which can take an hour to traverse. A contract to build a bypass was signed in 2005, but governments have failed to expropriate the necessary land. Then there are the permits required before you start pouring concrete. Environmental impact studies take three years on average, says Mr Prialé. A 1,100km gas pipeline in the south of the country needs 4,102 separate permits. In May Peru's Congress passed a law to speed this process, but its effectiveness remains to be seen.

Shoddy roads and public transport have dire effects in big cities. Latin Americans often face a daily two-hour commute each way in overcrowded buses. Many, like the Valladares family, opt to set up their own, not-very-productive business on their doorstep. Santiago is the only big Latin American capital with a metropolitan transport authority. Lack of urban planning means that firms often find it hard to get land onto which they can expand.

A third traditional explanation for low productivity is an ill-educated workforce. Latin America has made huge strides in expanding educational coverage. But the quality of teaching in schools is poor: the eight Latin American countries that participated in the PISA international tests of 15-year olds all came in the bottom third of the ranking. Some economists caution that schooling is no panacea; there is little evidence directly linking more education to higher productivity. They point to the danger that sociology graduates will drive taxis—unless governments try to stimulate the demand for, as well as the supply of, better-qualified workers.

Pisco sweet and sour

Battle through Chincha and 100km further on you arrive in Ica. There, in a low building at the entrance to the town, amid vineyards, stands the Centre for Agroindustrial Technological Innovation. Founded by the government in 2000 with Spanish aid and private support, it has helped to raise productivity in Peru's grape, wine and pisco industries. It advises farmers, for a fee, and offers them the services of a small research laboratory and a model distillery.

Since 2000 output of grapes per hectare has more than doubled. Peru is now the third-biggest exporter of table grapes to China; annual production of pisco, a grappa-style brandy, has risen from 1.8m litres to 7.8m, says Pedro Olaechea, a winemaker who chairs the centre's board. Peruvian pisco, an ancient product, is starting to gain a global name. Mr Ghezzi, the production minister, has plans for several more such technology centres, starting with leather goods, forestry and dairy products.

Latin America has traditionally been poor at innovation. Its spending on research and development as a share of GDP is less than half that in developed countries. Farming is a shining exception. In Brazil, agriculture "is the only sector that has put technology at the heart of its business," says José Roberto Mendonça de Barros, an economist in São Paulo. The latest innovation, pioneered by Enalta, a firm in upstate São Paulo, is called "precision farming" and involves installing sensors in farm machinery to control planting and fertiliser use, boosting productivity. Almost half the farmers in Mato Grosso have adopted the technology, says Mr Mendonça de Barros. He expects agribusiness to grow by 2.5% this year, even as the rest of Brazil's economy contracts.

From Bolivia with love—and frustration

Extracting more value from natural resources by applying technology is part of Latin America's future. But the region also needs to develop new businesses, in industry and services. The IDB, in an influential report last year, called for "productive development policies", in which governments try to foster such new enterprises.

Heavy-handed industrial policies have often failed in Latin America. Comperj in Itaboraí is just the latest example. The new approach calls for a lighter touch, to provide things—from training in specific skills, to new roads, or grants for innovation—whose absence may deter private investment. For example, Costa Rica's investment agency helped to develop a surgical-devices industry by persuading an American firm to set up a sterilising service. Start-Up Chile offers a grant and visa to would-be tech entrepreneurs from around the world. It has survived, with tweaks, a change of government. The new administration realised it was a global brand; although few foreigners set up lasting businesses in Chile, local participants learned from their risk-taking approach. "We realised it was a very powerful tool to change the culture," says Eduardo Bitrán of Corfo, Chile's economic-development agency.

Over the past 15 years only one Latin American country has become an important node in the world trading system, notes Augusto de la Torre, the World Bank's chief economist for the region. Mexico has joined global value-chains, diversified its exports and moved into more complex products. And yet Mexico's economic growth (averaging 2.4% a year for 20 years) and productivity have disappointed.

One theory is that Mexico has too many monopolies, especially in services: the reforms undertaken by Enrique Peña Nieto, the president, may remedy that. Others cite a weak legal culture and contract enforcement, and violent crime, as factors that deter investment. The underlying problem is the gulf in productivity between large modern companies, mainly in the north of the country, and small, informal producers and the south.

The same goes for other countries. "The problem of Latin America is that it has not been able to replicate its better-performing regions nationally," says Mr Hausmann. Doing so requires better transport, the upgrading of skills, more competition and the spread of technology. During the commodity boom, many governments could ignore that challenge. They can't any longer. ■

Bello is on holiday

Also in this section

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Farming in India

In a time warp

DELHI

India is reforming other bits of its economy, but not farming

NEARLY a quarter of a century after India launched its first big liberalising reforms in 1991, setting off a new spurt of growth, one area of the country's economy remains hardly touched: farming. The prime minister, Narendra Modi, launched a 24-hour state-run TV channel for farmers in May, but has fostered no public debate about how to improve India's dreadfully backward agriculture. This matters. About 600m Indians, or roughly half the population, depend upon growing crops or rearing animals to survive. Many farming practices, along with India's agricultural markets, infrastructure, insurance and rules on leasing land, have barely changed in decades. Reform is long overdue.

On the surface, things do not look too bad in the countryside. Rural poverty has fallen sharply in the past 15 years. Yet this is because services such as selling mobile phones or motorbikes have boomed across India. It has also helped that previous governments greatly increased welfare spending in the countryside. But the productivity of farming itself has been woeful. Contributing just 13.7% to Indian GDP, agriculture has grown by around 3% a year in recent years, far slower than the rest of the economy.

Farmers' woes have recently made headlines again. In the spring unexpected rain damaged northern wheat. A summer heatwave has killed over 2,000 people in India—mostly those toiling in fields in the south—as well as hundreds more in Pakistan. And a run of farmer suicides has drawn national attention. Official concerns linger over the monsoon: rains may fall short, for the second year in a row. Since three-fifths of Indian farmland lacks irrigation, patchy or weak rainfall can spell disaster (see story on page 63).

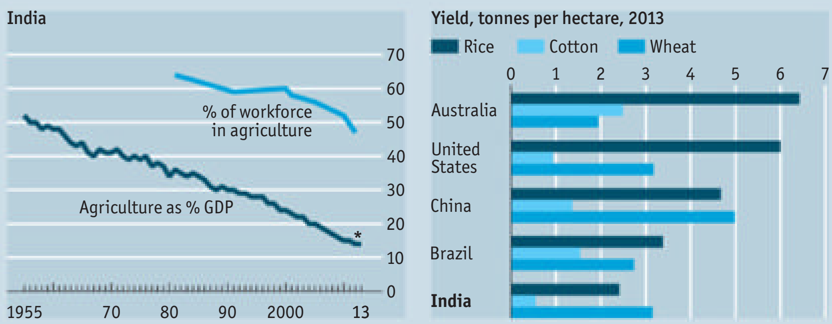
Rural incomes are already under strain. One reason is volatile prices. Farmers near Delhi, the wealthy capital, are getting as little as two or three rupees (four or five American cents) per kilo of potatoes, a quarter of last year's price. Cotton farmers who had prospered from strong exports to China have recently been hit by weaker demand. The government has bought millions of bales to shore up prices.

Another reason for lower rural incomes is the decision Mr Modi made a year ago, soon after coming to office, to cut the minimum government support-price for staples, notably wheat and rice. It was the right move, and has since helped bring down inflation. But it should have come with more transitional support for farmers hurt by the adjustment. On June 17th a new, only slightly higher, minimum price for rice was set for the coming year.

Low productivity is a bigger long-term problem. One cause of this is the shrinking size of cultivated plots. As India's population expands, the average plot size has fallen from nearly 2.3 hectares (5.7 acres) in 1970 to under 1.2 hectares today. Two grain harvests a year are common, but India's yields are low by global standards (see chart). Productivity is also held down by state laws limiting the amount of farmland a single person may own. Liberalisation would make it easier for abler farmers to consolidate land into bigger, more productive holdings. Even leasing land is famously hard, since strong tenancy rights discourage owners from renting out fields.

A newly completed but not yet published report for the government on reforming agriculture, led by Ashok Gulati of the Indian Council for Research on International Economic Relations in Delhi, is likely to blame politics. Food inflation upsets voters, so politicians respond to sudden spikes in food prices by imposing national export bans. Regional politicians do something similar. When potato prices ▸▸

Who wants to farm, anyway?



Sources: Planning Commission; World Bank; Indian Census; OECD

*Estimate

soared in West Bengal last year, the state banned traders from shipping potatoes to other states. Amid such uncertainty, farmers are disinclined to invest or specialise.

Price swings are exacerbated by a 1955 law that bans the storage of large quantities of any of 90 commodities, including onions and wheat. The aim was to deter "hoarding". The effect is to discourage traders or farmers from investing in cold storage and warehouses. So lots of crops rot before they reach a plate, and prices swing erratically. If a bumper crop can neither be exported nor stored, the only way to sell it is to slash prices.

Agricultural markets are fractured and distorted. Across much of India state marketing boards known as Agricultural Produce Marketing Committees (APMCs) restrict trade in fruit and vegetables. A trader in Delhi, for instance, is not allowed to bid for coconuts in Karnataka. It is often easier to import from abroad. The capital's markets are as likely to stock apples from New Zealand or California as from Himachal Pradesh or Kashmir. Markets are even fragmented within states. Arvind Subramanian, the government's chief economic adviser, grumbles that India has 3,000-4,000 separate agriculture markets.

Gangs of local commissioning agents squeeze farmers like ripe mangoes. The *mandi*, or marketplace, in Azadpur on the edge of Delhi is said to be Asia's largest for fruit and vegetables. Enormous trading houses are piled high with garlic and potatoes. Presiding over all are plump agents sporting gold chains. Many are the fourth generation of their family to hold the licence to do the job. They add little value, but admit to taking a hefty 6% commission on sales. In other markets fees are reportedly as high as 14%. Mr Gulati suggests the international norm for commissions is more like 0.5%. The state government in Delhi is trying to scrap the local APMC's monopoly, but there is a lack of available land to open a rival marketplace.

Many farmers struggle to obtain finance. Agricultural banks are notoriously corrupt. State aid for small farmers is skewed towards providing cheap inputs—by subsidising the provision of fertiliser, water and electricity—rather than, for example, helping to insure farmers' crops against bad weather or natural disaster. If it cut the input subsidies, the government could help with insurance. Or it could help poor rural folk by simply giving them cash.

Too much farming remains under the control of states, and little suggests that the central government wants to shake things up. State leaders, mindful of the conservative rural vote, are not keen, either. Farmers would welcome some reforms, such as cutting the power of middlemen, but would resist others, such as lifting ceilings on land holdings. They worry that this would allow them to be pushed off their land by the rich and powerful.

In October a big election is expected in Bihar, a mostly rural state. Mr Modi has great ambitions for his Bharatiya Janata Party to win there and will do nothing to fuel the opposition's claim that his government is against farmers. After that come big elections in other rural states. Crucial though it is for India to reform its ailing agriculture, such reform will only be possible if politicians find a way to explain how change will actually benefit farmers, not harm them. ■

India's health data

Sparing Mr Modi's blushes

DELHI

Missing data should embarrass the prime minister

WEALTH and child welfare are sensitive topics in India. As the country has grown richer in the past couple of decades, Indians' health has improved only slowly. The story has varied widely from state to state. Governments of southern ones like Kerala and Tamil Nadu do a lot to help women and children; health indicators there show steady gains. In the north and west, even in better-off states, nutrition, prenatal care, school attendance and other measures of childhood well-being are worse than in the south.

A much-debated case study is the western state of Gujarat, where Narendra Modi was chief minister for a dozen years before becoming prime minister. Calling his state a model, he boasted that incomes there were among India's highest. He dismissed critics who said he was neglecting health and social policy—once explaining how Gujarati women suffer high levels of malnourishment because they are "beauty-conscious" and refuse to eat.

India has not published comprehensive figures on nutrition or health since a national assessment in 2007. However, a countrywide survey involving 200,000 interviews was conducted in 2013 and 2014 by Unicef, the UN agency for children, and the Indian government. The results should have been published in October 2014. A limited set of data, on immunisation, was released that month by the ministry of health. It covered most large states, but figures on Gujarat, oddly, were excluded.

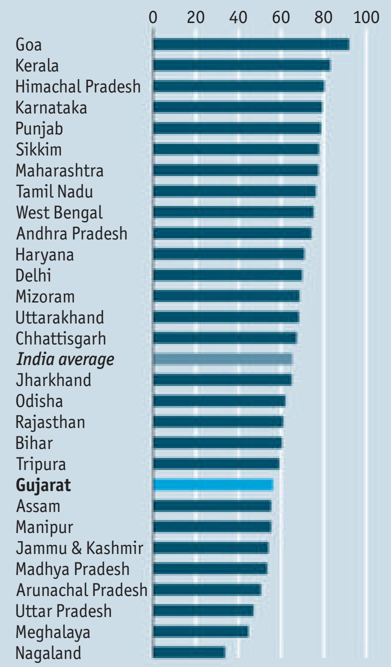
Unicef and India's government have still not published the full report. Unicef did release a 72-page study on global child welfare on June 23rd, warning that millions of children would suffer because of some countries' failure to meet development goals. In it Unicef spells out the benefits of publishing survey data. One is that it helps "citizens to hold their governments to account". Ironically, Unicef itself did not use its best data from India in the report, relying instead on figures a decade old. Unicef officials blamed the government for the delay, suggesting the accuracy of the data was under review; various Indian officials declined to comment. It seems possible that data were held back for political reasons, to avoid embarrassing Mr Modi.

The full set of figures on immunisation rates, obtained by *The Economist*, suggests a striking lack of progress in Gujarat under Mr Modi. Just after he took office in 2001, 54% of children were being fully immunised against preventable diseases—well above the national average of 46%. Gujarat was then 16th-best of 31 Indian states and territories assessed. By 2014 when he left there was only a tiny improvement, to 56.2%, far below the national average of 65%. Gujarat's rank had fallen to 21st of 29 states surveyed. Most remarkable, it was behind even notably poor and backward states such as Bihar (see chart). One indicator of the strength of a health system is how many of those who get a first dose of a vaccine fail to get subsequent ones. The new survey suggests that wealthy Gujarat's dropout rate for the polio vaccination is almost 21%. The national average is 12%.

As prime minister, just as previously, Mr Modi has paid scant attention to health. Overall spending by the central government on health and education, already low, has been cut. Mr Modi prefers to let individual states take charge. His record in Gujarat suggests that approach is flawed. ■

Gujarat's shame

Children aged 12-23 months receiving full immunisation, % of total



Source: Rapid Survey of Children, 2013/14

What to do with Japan's elderly

Out to pasture

TOKYO

A plan to send old people to the countryside

IN SUGAMO, a district of Tokyo, the river of human traffic turns greyer and slower as it files past shops selling thermal underwear and orthopaedic socks. Pavements have been modified to accommodate wheelchairs. Hand-written signs replace neon. The main street hosts ten chemists, two funeral arrangers and a karaoke bar where the song list stops in the 1970s.

By 2060 Japan's population is projected to fall from 127m to about 87m, of which almost 40% will be 65 or older (see chart). Last year the government created a new cabinet position for "overcoming population decline and revitalising local economies". It is now mulling a proposal aimed at repopulating rural areas and cutting the cost of looking after grandma: persuading old people in the capital to move to the countryside.

Over the next decade, the population of over-75s in greater Tokyo will grow by 1.75m, says the Japan Policy Council, a think-tank. Looking after 5.7m very old people will overwhelm already stretched services, it warns; well over 100,000 could be left without beds in care homes. Encouraging them to leave would pep up rural economies, suggests Yoshihide Suga, the chief cabinet secretary. The idea has raised eyebrows. Shigeru Ishiba, the minister in charge of regional revitalisation, had to deny this month that the government was bringing back *ubasute*, the mythical ancient custom of dumping the elderly on mountains to die. "Nobody is talking about forcing people to move," he insisted.

Yet mass migration of the elderly is not as implausible as it sounds, says Hideki Koizumi of the University of Tokyo. Population decline threatens hundreds of Japanese villages with extinction. Meanwhile, a small army of care workers would be needed to look after all the old people expected to live in Tokyo. If these extra workers were to move in from the countryside, the capital would get even more crowded and rural decline would accelerate. The solution: build rest homes in the boondocks and fill them with aged urbanites.

The think-tank has identified 41 regional areas that could take the pressure off Tokyo. Several are considering the proposal. Kitakyushu city, in the south-west, says it has just one concern: the government has yet to present anything like a concrete plan for how to pay for it all. The central government will need to offer heavy subsidies for housing, nursing and so on, say experts, and it can ill afford to. Such details are still being worked out, admits Keisuke Takayama, a spokesman for the council.

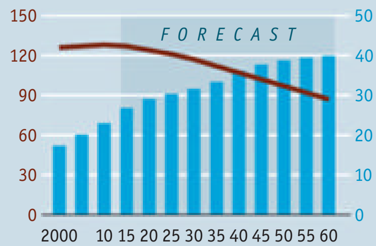
There is another problem: old people may not want to move. Most prefer to live in places they know, surrounded by their families, says Mr Koizumi.

Florian Coulmas, a German scholar, notes that Tokyo is at the vanguard of demographic change. Its wealth and excellent health care have created a "catastrophic success": the world's longest life expectancy. Other countries will one day face similar challenges (some already are), and perhaps consider equally desperate solutions. ■

Shrinking and greying

Japan

Total population, m — *Population aged 65 and over, % of total population*



Source: National Institute of Population and Social Security Research

Cooking in South Korea

The food-show craze

SEOUL

Epicurean entertainment is luring Korean men into the kitchen

SOUTH KOREAN men do less housework than those in any other advanced country. But Son Cheol-ju, a 40-year-old businessman, says he has overcome his "fear of the kitchen" thanks to a television show called "Mr Paek's Home Cooking", which started airing in May. It is full of nifty tips. When preparing a bubbling pot of *kimchi jjigae*, (a delicious, fiery stew of fermented cabbage), Mr Son now uses only water that has been used to wash rice, which makes it taste even better.

"Mr Paek's Home Cooking" is the latest of a host of new food shows in South Korea. "What Shall We Eat Today?" follows two male novices in the kitchen who do away with recipes and measurements. In "Please Take Care of My Refrigerator", chefs use basic ingredients from the fridges of Korean celebrities to rustle up dishes in 15 minutes. "Three Meals A Day" is set in mountains and remote fishing villages; guests must forage and harvest to prepare dinners from scratch. Soaps, variety shows and even news bulletins are offering up food scenes. "My Chef from the Star" (taking its name from a hit drama of 2013) is about the stars of these *cookbang*, or cooking broadcasts.

Many South Koreans also enjoy *mokbang*, online "eating broadcasts" that live-stream ordinary people gorging on heaps of takeout food. Viewers, sometimes in the thousands, interact with their favourite eaters in real-time, messaging them and sending online donations. The most entertaining noodle-slurpers can earn up to $1,000 in a three-hour stint. Some are obese teenagers; others are petite women. Dieting viewers say the appeal is vicarious gluttony; for the lonely, it is company. Though ever more South Koreans live alone, eating alone remains taboo (*shikgu*, Korean for family, means "mouths to feed").

All this culinary entertainment may be having an effect. Lotte Mart, a department store, says that sales of salt, sauces and spices have shot up over the past 12 months; it has also sold 72% more woks and 63% more kitchen utensils. Men's cooking classes have multiplied.

But Hwang Kyo-ik, who hosts a talk show called the "Wednesday Gourmet Club", thinks Korean food fever is a symptom of widespread unhappiness amid the country's economic doldrums. Most of the shows are less about cookery than about enjoyment, he observes. Many South Koreans have neither the time nor the means to dine elegantly. *Mokbang* and *cookbang* offer them a feast for their eyes, at least.

Pirates in South-East Asia

Malacca buccaneers

SINGAPORE

Step aside, Somalia: South-East Asia is the new piracy capital of the world

EIGHT men armed with pistols and machetes boarded the *Orkim Harmony*, a tanker, in the early evening of June 11th. Carrying 6,000 tonnes of petrol—worth more than $5m at market prices—the ship was nearing the end of a voyage around the southern tip of Malaysia, from Malacca on the country's west coast to Kuantan Port on its eastern one. The pirates restrained the crew and scrubbed three letters from the hull, crudely disguising the vessel with a new name, *Kim Harmon*. Then they headed north towards Cambodia, in search of a friendly port in which to siphon off her liquid cargo. When the ship was finally spotted seven days later, the hijackers warned away security forces by threatening to harm the hostages, then slipped away in a life boat with whatever loot they could grab. The crew escaped injury except for the cook, who was airlifted to hospital after being shot in the thigh.

The attack on the *Orkim Harmony* was the latest in a spate of hijackings in South-East Asian seas, where the narrow straits separating Singapore and Malaysia from Indonesia provide passage for about one-third of the world's shipping. Fifteen hijackings took place in 2014, up from only a handful the year before, according to the International Maritime Bureau; there have been nine in the past six months alone. These incidents are the most alarming symptom of a regional uptick in piracy, ranging from petty thefts in ports to more daring heists at sea. With the once-perilous waters around Somalia now calmed by an international effort, South-East Asia has regained an old reputation as the region worst-afflicted by piracy in the world.

Ten years ago South-East Asian nations appeared to have pirates on the run, thanks in part to co-ordinated naval patrols in the Strait of Malacca, off Malaysia's south-west coast. But since then the problem has shifted eastward. Recent incidents have been taking place nearer to Singaporean waters in busy channels that allow pirates to hide in plain sight; as well as in the wilder, south-western corner of the South China Sea (see map). Unlike Somali pirates, who aimed to kidnap and ransom crew members—and often the ship itself—South-East Asian hijackers hope to steal petrol, palm oil and chemicals from small, slow-moving tankers, and almost always release the ship and crew when the theft is complete. Another danger is gangs who try to board and escape vessels undetected, pilfering goodies such as cash, engine parts and computers.

At present these crimes affect only a fraction of the 120,000 or so ships which sail near the strait each year. But seamen fret that the attacks are getting more violent, and the use of firearms more frequent. A Vietnamese sailor shot in the head during a botched hijacking last December was one of three South-East Asians killed by pirates in 2014. Even petty thieves can cause accidents if they attempt to board in congested waterways, says Philip Belcher of Intertanko, an association of tanker owners. "It's like someone climbing into your boot while you're driving down a motorway," he says. A big worry is that insurers will raise premiums for ships in the strait, as they briefly did in 2005.

Shipowners gripe that complacent governments have been reducing coastal patrols. Some have accused ReCAAP—an outfit which helps to co-ordinate Asian governments' responses to piracy—of downplaying the latest spike, perhaps to spare countries from embarrassment (ReCAAP has suggested, not unreasonably, that a portion of the recorded increase may be the result of better reporting). Merchants want regional navies to beef up anti-piracy operations.

Bigwigs from Indonesia, Singapore and Malaysia say they are discussing this. But any sallies into the South China Sea could be controversial while tensions are heightened by China's territorial claims there. Lingering animosities between the three South-East Asian countries already hamper operations closer to home, by preventing navy boats from pursuing pirates who flee into neighbours' waters. Even information-sharing is sensitive: Malaysia and Indonesia have not joined ReCAAP—in part, some whisper, because of squabbles over where to site its headquarters, but perhaps also for fear of exposing blind spots in their intelligence-gathering.

Indonesia is particularly recalcitrant. It is much poorer than its neighbours on a per-head basis, and its patrol boats are old and costly to run. A plethora of poorly-policed Indonesian islands make for convenient pirate hideouts; the country's ill-guarded ports allow for many opportunistic thefts. And it probably attaches lower priority to the security of local shipping lanes, reckons Ian Storey at ISEAS, a think-tank, because the benefits of these lanes accrue disproportionately to big ports in Singapore and Malaysia.

Yet some responsibility for solving the problem must also fall on shipowners and operators. Somali pirates were deterred when shippers spent a bit of money to equip their ships with water cannon, razor wire and armed guards. South-East Asian pirates will typically flee if vigilant crews spot them before they board. Shipping companies are often reluctant to report attacks, to avoid alarming their clients and insurers. More alarming is speculation that ill-paid crew members have been complicit in some of the hijackings.

The most durable solution, and the least discussed, would be to target the tricky social and economic problems that encourage pirates to take up cutlasses in the first place. In the past that has meant resolving irksome conflicts. A peace accord between the Indonesian government and rebels in the north-western province of Aceh in 2005 helped to soothe South-East Asia's previous pirate problems. Many of today's pirates are thought to come from shabby Indonesian port towns, where overfishing, illegal fishing and environmental damage have made it more difficult to earn an honest living. Pirates who were active a few years ago are thought to be returning to the trade, embittered by the failure of their efforts to go straight.

Joko Widodo, Indonesia's president, has promised to reinvigorate Indonesia's flagging maritime economy. That is a good idea, though progress will doubtless be slow. In the meantime, the speedy arrest of pirates in some recent high-profile cases should deter hijackers emboldened by early successes, thinks Pottengal Mukundan of the International Maritime Bureau, a wing of the International Chamber of Commerce. Those in cuffs include the alleged hijackers of the *Orkim Harmony*, who were picked up by Vietnamese coastguards on June 19th after trying to pass themselves off as survivors of a shipwreck. But Intertanko's Mr Belcher says shipowners remain largely pessimistic. "It will get worse before it gets better," he says. ■

Also in this section

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Education in Xinjiang

Tongue-tied

SHUFU COUNTY, KASHGAR

Teaching Uighur children in Mandarin will not bring stability to Xinjiang

"I CAN speak Chinese, I'm so awesome!" reads a sign on the wall of the Mingde primary school in Shufu, a town near the oasis city of Kashgar in the far western province of Xinjiang. Nearby, children's artworks hang beneath another banner which proclaims: "The motherland is in my heart." Though every pupil at the school is Uighur, one of China's ethnic minority peoples, most lessons here are taught in Mandarin—a very different language from their Turkic one. It is the same at ever more schools across the region. Educating young Uighurs in Mandarin may one day help them find work—but it is also a means by which the government hopes to subdue Xinjiang and its many inhabitants who chafe at rule from Beijing.

Xinjiang began to fall under China's control in the mid-18th century. It was then mainly populated by ethnic Uighurs, whose culture and Muslim faith set them apart from much of the rest of China; Kashgar is far closer to Kabul and Islamabad than it is to Beijing. Despite the migration into Xinjiang of Hans, China's ethnic majority, minorities (mainly Uighurs) still make up 60% of its residents, compared with less than 10% in China overall.

For decades the region has been racked by a low-level insurgency by Uighurs against growing Han influence. In 2009 around 200 people died in ethnic clashes in Urumqi, the region's capital. Security has since been ramped up—the police and army are ever-present—but last July tensions flared again when an estimated 100 people were killed near Kashgar following attacks on government buildings. Violence has spread beyond Xinjiang's borders too, into China's interior. In 2013 five people were killed when a car driven by Uighurs ploughed into pedestrians in Beijing's Tiananmen Square and burst into flames. Last year 31 people died in a knife attack by Uighurs in the south-western city of Kunming, an incident described by state media as the country's "9/11". Eighteen people were reportedly killed on June 22nd in an attack by Uighurs armed with knives and bombs on a checkpoint in Kashgar.

As well as bulldozing dissent, the government has tried pouring in cash to boost Xinjiang's economy. Yet Hans have disproportionately benefited from the resulting boom; minorities' feelings of alienation and inequality have worsened. Hans and non-Hans in Xinjiang are growing further apart—some Hans are nervous about entering Uighur districts; Uighurs complain of harassment by the police. Officials are beginning to recognise that there is a social problem, as well as a security-related one. There is a renewed focus on breaking down ethnic barriers and promoting a shared national identity.

Mandarin-teaching for Uighurs is seen as a tool to achieve these goals. Since 2011 officials in the region have been promoting what they call "bilingual education". By this they mean that most instruction is to be in Mandarin. Ever more schools are moving towards using Chinese only, with the exception of a few hours of classes each week in Uighur literature. President Xi Jinping emphasises this policy as a way to fight terrorism. Last year he described better education as "essential" to the region's long-term stability. Schools such as Mingde, with its troops of Uighur children wearing the red ties of the Young Pioneers, a junior branch of the Communist Party, embody the government's great hope.

The government's desire to boost Mandarin-speaking ability is reasonable: few Uighurs speak fluent, or even passable, Chinese. Mastering the language should open up opportunities for Uighur children and improve their job prospects (in 2010, 83% of all Uighurs were farmers). Bringing Han and Uighur children into the same classroom, as some urban schools are at last trying to do, should help too.

But the authorities risk arousing complaints that Uighur culture is being marginalised. Even before Xinjiang's ethnic troubles intensified in 2009, schools conformed to Han norms. Recently bans have been made stricter on the observance of fasting rituals during the month of Ramadan. Few Han children in Xinjiang are taught minority languages.

Our culture, not yours

The Xinjiang curriculum is about learning to be Chinese. Schools prize "patriotic education" even more than others in China. At Mingde the Chinese flag hangs at the front of each classroom between laminated photos of the late leaders Mao Zedong and Deng Xiaoping. A kindergarten in Kasghar features a wall poster declaring: "I am Chinese. Beijing is my country's capital, I love China. I love the motherland, I love the Great Wall. I love my father, mother, teacher, classmates, but most of all I love my motherland."

Around two-thirds of minority children ▸▸

now receive Mandarin-language instruction. But educational quality is suffering. Not enough Uighurs speak sufficient Mandarin to teach in it; those who do want better-paid jobs than teaching. It is hard to attract Han teachers to a poor, volatile region. The government is pumping money into the recruitment effort, but it says Xinjiang still needs 30,000 more teachers who can speak both Mandarin and a local language. Uighur-speaking parents can rarely help their children with school work and many pupils have no chance to practise the Mandarin they acquire. Even in a model school like Mingde, staff admit that children speak only Uighur outside class. Many six-year-olds cannot understand basic questions in Chinese. Other skills suffer, too: children typically learn English via Mandarin, for example, even though English and Uighur—unlike Chinese—both use alphabetical scripts.

Some older Uighurs view such instruction as an erosion of their culture. Reza Hasmath of Oxford University says they may therefore either fail to support their children's education or actively resist it (some send their children to illegal religious schools). Despite this—and unlike in Tibet—there have been few reports of public protests against Mandarin-medium teaching. This is probably because other issues, such as the banning of Muslim veils, have raised more hackles, and possibly because some incidents go unreported.

In other parts of China, such as Hong Kong and Shanghai, where Mandarin is not the native tongue, learning the national language does indeed open doors. But in Xinjiang even many Uighurs who speak fluent Mandarin find it hard to get ahead, partly because of racial prejudice. Highly educated Uighurs tend to earn less than their Han equivalents, says Mr Hasmath. Attempts by the Chinese government to promote knowledge of Mandarin and Chinese culture in Xinjiang may generate more problems than they solve. ■

Buddhism and business

Zen and the art of moneymaking

SANYA

Local officials make a packet from a religion of self-denial

THE white steel lady overlooking the South China Sea has three heads, three bodies and toenails bigger than human heads. Guanyin, the Buddhist goddess of mercy, stands atop a temple on a man-made islet, each of her heads facing a different way. Her public-relations staff call the six-year task of putting her there, in the resort town of Sanya on tropical Hainan island, "the number one statue-project in China". The structure's height, at 108 metres, was intended to be auspicious: Buddhists consider the number sacred.

Good fortune was certainly on the minds of local officials when they approved the project, in which the local government has a share. It was intended to be a money-spinner. It costs 60 yuan ($9.66) just to get in the lift that whisks visitors up to pray at those giant feet. That is on top of 126 yuan to enter the Nanshan Cultural Tourism Zone with its Auspicious Garden, Temple of 33 Guanyins and colourful Dharma Door of Non-Duality with its 94,000 portals. Guanyin is clearly not intended as a magnet for the faithful who have given up worldly possessions. Visitors are gouged without compassion, even having to pay for tassels "blessed" by souvenir salespeople. Gift stores are everywhere, selling knick-knacks such as prayer beads and Buddhist statuary. For visitors who want to sleep in the presence of Guanyin, a room at the site's hotel can cost more than $280.

Cheni Foo, a tourist from Copenhagen, surveys the goddess from a boardwalk connecting the islet with the shore. She wrinkles her nose and says she has seen enough. "For me, it's a little bit too fake. It's built for the purpose of tourists." Ms Foo is right. Buddhism is big business in China. In the 1980s the government, which once preached the evils of faith in anything but the Communist Party, began loosening restrictions on the building or restoration of temples—most of which had been damaged or destroyed by Maoist mobs during the Cultural Revolution. New shrines sprang up everywhere, most of them small and discreet. In recent years, however, domestic tourism has boomed, as has curiosity about once-banned religions. Local officials have smelled a moneymaking opportunity.

Enlighten your wallets here

In 2008 China completed what was described as the world's biggest statue—the 128-metre Spring Temple Buddha in the central province of Henan. The company that built Hong Kong's 34-metre-tall Tian Tan Buddha on Lantau Island and Sanya's Guanyin has been working on erecting ten more mega-Buddhas around the country. The government in Gansu province, in the north-west, hopes to create a theme park linking the historic Mogao Caves in Dunhuang (home to remarkably unscathed thousand-year-old Buddhist frescoes) with the sand dunes of a nearby tourist attraction. It wants to sprinkle the desert strip with fake temples and folk villages.

China's Buddhism business is also going global. The faith's most famous commercial site, Shaolin Temple in Henan, which is renowned for its kung fu-trained monks, plans to build a $297m, 500-bed hotel complex and temple—including a martial-arts academy and a 27-hole golf course—in Australia. Tibetan Buddhist temples have been more reserved, however. The government still treats those as highly sensitive religious sites. Chinese and foreign tourists are drawn to them as well—but the complexes are kept under close observation by security cameras and plainclothes police.

Even in non-Tibetan areas of China, some Buddhists are riled by the commercialisation of their faith. At Famen Temple in the northern province of Shaanxi, which houses a finger-bone relic of Buddha, monks protested in 2009 against both an increase in entrance fees and the construction of a wall that would have restricted their access to their temple's door, says Francesca Tarocco of New York University. Last year seven monasteries in Jizu Shan in the south-western province of Yunnan reportedly closed their gates to visitors, incensed that a developer wanted to charge an entrance fee. "Religion is for practice. It's not for show," says Xue Yu, a former monk who is now director of Buddhist Studies at the Chinese University of Hong Kong.

While many tourists are dazzled by the glitz and mystique of China's ersatz temples, some carp about extortionate prices. Visitors to the Guanyin statue in Sanya, however, are allowed one small concession by the park's operators: incense joss-sticks are free. ■

Banyan | The tracks of their tears

Both sides of Hong Kong's political divide should rue the impasse on democratic reform

FOR more than three decades, since well before Hong Kong's transition from British to Chinese sovereignty in 1997, politics there has split into two camps. On one side have been those now loosely known as "pan-democrats", who have argued that only a democratic system can safeguard the freedoms Hong Kong enjoyed (without the democracy) under the British, and that China should be coaxed and hectored into granting it. On the other, "pro-Beijing" politicians have argued that fair elections were less important than smooth relations with the new sovereign power, which would then allow a slow but steady expansion of democratic rights. This month has suggested that both sides have been wrong. The long struggle for democracy, which culminated in last autumn's 79-day camp-out in central Hong Kong by umbrella-wielding campaigners, has suffered a definitive defeat.

A vote in Hong Kong's legislature ("Legco") confirmed that voters among the territory's 7.3m people will not after all elect their next chief executive directly in 2017. This had become the democrats' central demand, and the issue over which people took to the streets last year. But on June 18th Legco's "pan-dems", with a veto-wielding minority of seats, blocked electoral arrangements approved by China, which would have ensured that only candidates endorsed by a 1,200-member pro-Beijing committee could stand for chief executive. So the next election will be like the previous one in 2012, when the 1,200 did all the voting too.

Both "pan-dems" and pro-Beijingers reacted with moist eyes and stifled sobs. Ronny Tong Ka-wah wept on June 22nd as he announced his resignation from Legco and from the pan-dem Civic Party he had co-founded. Mr Tong had sought compromise and will now pursue a "middle way" through a new think-tank. His resignation was seized on by the press as evidence of the enduring rift between moderate and radical democrats. More striking, however, was the unusual unity the group had shown in resisting blandishments and implicit threats before the Legco vote.

For once, it was the pro-Beijing side that seemed disorganised, divided and fractious—as well as lachrymose. The "pro-Beijing" camp's legislators were upset not so much by the expected failure of the "fake democracy" bill, as by their own role in it. Through breathtaking ineptitude, 33 of them, out of Legco's 70 members, managed to miss its most important vote since 1997. To delay proceedings to wait for a colleague, many walked out, hoping to leave Legco inquorate. But not everyone got the message. The bill was defeated by 28 to eight. In mortification two senior pro-Beijing members of Legco also shed tears. Maybe they were quailing at the prospect of a carpeting from Chinese officials.

The fiasco had lent an awkward twist to the script they were all supposed to be following: that, for all its limitations, the Chinese offer at least gave people for the first time a vote on their leader, but that the historic opportunity had been scuttled by short-sighted, self-interested and uncompromising pan-dems. Such perceptions matter, since, over the decades, Hong Kong has acquired many of the trappings of democracy. A by-election must now be held, for example, to fill Mr Tong's seat in Legco, which is filled half by direct elections and half by delegates representing various professional and social groups. The lowest level of government, the District Councils, are elected, with the next polls due in November, though in these the pan-dems always fare badly against the grassroots organisation and finances of the biggest pro-Beijing party, the Democratic Alliance, or DAB.

Legco itself is re-elected in a year's time. The campaign will be marked by mudslinging over this month's setback. Both sides face an uphill battle. The pro-Beijing camp can produce little evidence that its gradualist approach has any chance of success. And the taint of this month's shambles in Legco may not fade for a while. Its legislators made themselves look not just Beijing's lackeys but a bit dim. As for the pan-dems, their central demands—for true "universal suffrage" in the elections for both chief executive and Legco itself—are now clearly unrealistic in the short term. They lack even international support. Britain and some of its EU partners quietly lobbied Legco members to back the Chinese electoral proposal; and for America, Hong Kong was far from the top of a long list of concerns discussed with China in their annual high-level dialogue this week. In any event, opinion polls suggest that, by a small margin, more voters now disapprove of the pan-dem stance over the chief-executive election than support it.

The real risk for the politicians on both sides is that they begin to appear irrelevant. That should also worry China. By failing to offer a system that is broadly accepted as representative, China is forcing its opponents onto the streets. Despite a fishy-looking "bomb plot" uncovered just before the Legco vote, few for now fear this will become violent, though increasing polarisation and disruptive street protests seem inevitable. Yet nothing seems to justify China's fears of democracy in Hong Kong—that it would destabilise the place, install a government hostile to Beijing and spread like a virus across the border. A candidate for chief executive whom it publicly opposed would have very little chance.

For the avoidance of doubt

"Very little", however, is too much for China. In 1987 Deng Xiaoping foreclosed this debate: "The people who rule Hong Kong must love the motherland and love Hong Kong. Can universal suffrage definitely produce such persons?" But the lack of democracy is itself alienating Hong Kong from the motherland. Worse, the people with the least patience for China's arcane ways of rigging elections and the strongest sense of the distinctness of their Hong Kong identity are the young. China should actually be alarmed that some of them now shun the annual vigil on June 4th to commemorate the massacre that ended pro-democracy protests in Beijing in 1989. They have grown up under Chinese sovereignty, but feel it has nothing to do with them. ■

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Salafism

Politics and the puritanical

ALEXANDRIA AND AMMAN

Islam's most conservative adherents are finding that politics is hard. But it beats the alternative

WERE it not for his bushy beard and trim moustache, Nader Bakkar could be mistaken for one of Egypt's secular liberal politicians. The young spokesman for the Nour party is tolerant, reasonable and smart—he is about to begin a fellowship at Harvard. "We are reformers, not revolutionaries," Mr Bakkar (pictured left) says of his party. "Compromise is not a bad word." But his facial hair conveys a different message. Mr Bakkar and his party adhere to the ultra-conservative brand of Sunni Islam known as Salafism.

In the West that brand is most associated with extremist groups such as al-Qaeda and Islamic State (IS), whose members are sometimes called Salafist-jihadists; or the intolerance of Saudi Arabia, where adherents are called Wahhabis. The Saudis have used their oil wealth to spread the influence of Salafism across the Muslim world, funding Wahhabi-inspired mosques and madrassas—and, at times, extremist groups. As a result, some think Salafism is the fastest-growing Islamic movement.

It is also growing more diverse. All Salafists take a fundamentalist approach to Islam, emulating the Prophet Muhammad and his earliest followers—*al-salaf al-salih*, the "pious forefathers"—right down to their facial hair. They reject religious innovation, or *bida*, and support the implementation of *sharia* (Islamic law). Salafist scholars, though, are far from homogeneous, expressing different views on everything from apostasy to activism. Most notably, many Salafists now engage in politics despite a tradition of quiescence. But with little to show for their efforts, they must decide whether to push on, withdraw or pursue politics by other means, such as war or terrorism.

Prior to the Arab spring some Salafists had been members of the Muslim Brotherhood, the region's main Islamist movement, with a long tradition of political activism. But most Salafists shunned politics. The movement is often broken down into three categories. The most infamous are the jihadists, who are but a tiny minority. The most numerous are the purists (or quietists), who believe that politics undercuts the sovereignty of God and is therefore best avoided. Like the Wahhabis in Saudi Arabia, most bend a knee to Muslim heads of state, no matter how awful, in order to avoid creating *fitna*, or chaos.

Rise and fall of the activists

Activist Salafists, those involved in politics, make up the third group. Their number swelled in the aftermath of the Arab spring, when the boundaries between politics and religion blurred, writes Jacob Olidort of the Washington Institute for Near East Policy, a think-tank. "Giving definition and structure to the changing events became a question of necessity rather than choice, especially as Salafists faced pressure from media and other Islamist groups to comment on these events."

Relatively few Salafists participated in the protests, but some saw opportunity in the opening they created, arguing that *sharia* could now be enacted via politics. Encouraged by their brethren in Kuwait, where political Salafism was already well-established, Egypt's Salafists took advantage. The Nour party, which grew out of the Salafist Call, the country's main Salafist organisation based in Alexandria, won over 20% of the seats in parliament in the country's first free election. It then ensured that the country's new constitution (now abandoned) had an Islamist tint.

At the same time, the stature of the purists fell owing to their support for the old guard and their opposition to the protests. Saudi Arabia's top clerics issued a decree stating that "reform should not be by demonstrations and other means and methods that give rise to unrest and divide the community." In a lecture in 2011 Ali al-Halabi, a prominent Jordanian cleric, said the protests were "far from the law of God" and motivated by materialism. But at the time, the purists were often ignored. They now feel vindicated. "The countries of the Arab spring did not gain anything but destruction, corruption and the loss of security," says Mr Halabi.

In Egypt the Salafists' conservative influence contributed to the fall of Muhammad Morsi, the president and a Muslim Brother. The Nour party's decision to support his removal and the coup of Abdel-Fattah al-Sisi alienated many of its former supporters. But it also made it unlikely that the Salafists would suffer a fate like that of the Brotherhood, which Mr Sisi has crushed. "The party has reinforced the idea among quietists that you have to sell out or make deals with the devil in order to be in politics," says Will McCants of the Brookings Institution in Washington. ▸▸

The purists can also find support for their rejection of political engagement in Tunisia, the only democracy to emerge from the Arab spring. Many activist Salafists invested their hopes in the Muslim Brotherhood-inspired Nahda party, which came first in Tunisia's elections in 2011. Nahda's leader, Rached Ghannouchi, even claims to be a Salafist himself. But while the party has embraced conservative Muslims, it has also taken steps to curb their influence. Its decision to renounce *sharia* as the main source of legislation in its draft constitution left Salafists outraged, as did its promise not to impose the veil on women or ban alcohol and interest payments. Unhappy with the secular direction of the country, and with little voice in politics, many Salafists have turned to protests and violence, at home and abroad.

The perceived failure of political engagement by Salafists risks benefiting the jihadists. Tunisia is now the largest source of foreign fighters for IS. The group has also attracted large numbers from other countries where Salafists have little political sway, such as Jordan, Lebanon and Morocco—but not so many from Kuwait, where they still have a strong voice. Governments nervous that the militants may turn on them have enlisted the help of Salafist leaders. Some see the purists as a counter to jihadism, due to their inward-looking focus. Morocco has tried to bring more Salafists into the political fold. Abdelkarim Chadli, a prominent Salafist convicted of terrorism in 2003, recently joined the Democratic and Social Movement, a regime-friendly political party, and vowed to bring other Salafists with him.

Salafists, though, may no longer see the point of political engagement. "Many people say we betrayed the revolution, that we approve of the regime and authority," admits Mr Bakkar. He sees his party's survival as its main accomplishment. But activist Salafists have made little progress towards their goal of creating an Islamic state. The appeal of IS across much of the Middle East is that it has done just that. ■

Israel, Gaza and human rights

Fear of isolation

The UN's latest report on last year's war in Gaza makes Israel nervous

IN UNDER a week, Israel looks set to have suffered two testing legal assaults. First, on June 22nd, the UN Human Rights Council issued a report castigating it for its conduct during the 50-day war in Gaza last year. Then three days later the Palestinians, taking advantage of an enhanced status at the UN that enabled them to join the International Criminal Court (ICC) at The Hague earlier this year, were expected to make their first formal submission to the court's prosecutor, accusing Israel of breaching international law by, among other things, building Jewish settlements in the West Bank. They also charge Israel with committing war crimes in Gaza.

The ICC has already opened a "preliminary examination" against Israel; moving to a full investigation, with charges against individuals, may take years. Israel refused to co-operate with the UN inquiry, saying the council is biased against it and that it went to great lengths to minimise civilian casualties.

The UN report says that 2,251 Palestinians were killed in the war, including 1,462 civilians, of whom 299 were women and 551 children. (The Israelis put the figure at 2,125, of whom they say 36% were civilians.) Israel lost six civilians and 67 soldiers. Some 18,000 housing units were "destroyed in whole or part", says the report, displacing 28% of Gaza's people at the height of the battle. The report chides Israel for using explosives in densely populated areas, too.

The council's main target is Israel, but it also criticises Hamas, the Islamist movement governing Gaza, for firing rockets indiscriminately at civilians in Israel and for executing 21 Gazans during the war for alleged collaboration with Israel. Both actions, says the report, may be classified as war crimes.

The UN document will not simply be funnelled into an ICC investigation. But its raw material may be used. And it will add to Israelis' growing feeling that they are on their own.

Haredi Jews and employment

Eat, pray, don't work

JERUSALEM

Israel cannot afford to keep paying ultra-Orthodox men to shun employment

AT 3AM, a thousand young men are all poring over the same page in the Babylonian Talmud tractate of Kiddushin, which deals with definitions of matrimony in ancient rabbinical law. Dressed identically in white button-down shirts and dark ties, the students of Hebron Yeshiva, founded in Lithuania in 1877 and now situated in northern Jerusalem, are observing a millennia-old tradition of learning through the night on *Shavuot*, which marks the day when Moses received the Torah on Mount Sinai.

This is only slightly exceptional. Any day of the week, save for short holidays, the study-halls at any of the elite *yeshivas* (Torah academies) in Israel are liable to be packed with students spending as much as 18 hours a day analysing Talmudic texts. Once married, most students will graduate to *kollels*, smaller institutes where they live off a meagre stipend, government benefits and perhaps their wives' modest salaries.

For many religious Jews, the flourishing of Torah study in Israel is a fulfilment of the biblical prophecy in Isaiah—"for the land will be filled with the knowledge of the Lord." For Israeli economists, however, the reluctance of ultra-Orthodox (or Haredi) men to work, coupled with their community's high birth rate (double the national average), is a problem. A study recently completed by the finance ministry predicts that on current trends Israel's public debt, currently 67% of GDP, will spiral to 170% over the next 50 years. The ministry says that 45.7% of Haredi men are in the labour force, far less than the national employment rate of 60.4% and lower than for any group except for Arab women (see chart). ▸▸

Workers and scholars

Employment rate, %

Source: Israeli Ministry of Finance

Haredi women are not expected to study: their participation rate is 71%. According to the Central Bureau of Statistics, the Haredim were just under 10% of Israel's population in 2009; by 2059 it predicts they will be around 27%. Israel cannot afford to keep paying them not to work.

At the state's foundation in 1948, Israel's first prime minister, David Ben-Gurion, accepted the rabbis' request to be allowed to rebuild the *yeshivas* which had been destroyed in the Holocaust in Europe. A first quota of 400 *yeshiva* students was exempted from military service. In 1977 the first Likud government, in which Haredi parties were coalition partners, removed that cap. Successive governments have expanded funding for *yeshiva* stipends as well as benefits for large families.

The government before the current one included no ultra-Orthodox parties. So the secular Yesh Atid party, part of that coalition, was able to push through a law criminalising draft-avoiders and cutting benefits. The new coalition formed last month by Binyamin Netanyahu as prime minister includes two Haredi parties. These have been promised a repeal of that law and the restoration of benefits to their previous level. The economics ministry, which runs employment policy, and the Knesset finance committee, which has the final say on benefits, are controlled by senior Haredi politicians.

The new economics minister, Aryeh Deri, is the leader of the religious Shas party. He insists he will block any attempt to cut benefits. He blames, instead, Israeli employers who are not interested in hiring members of his community. "There is clear discrimination, even of Haredi men who have studied for law or accountancy degrees. Employers see the black *kippah* (skullcap), the *yeshiva* on their CV, and won't hire them. That's why so many men remain in *kollel*."

Moshe Friedman, a graduate of Hebron Yeshiva who went on to study for nine years in a *kollel*, echoes Mr Deri. A self-taught software developer, he pitched his digital video-editing startup to Israeli venture-capital funds without success. "Everyone I met immediately asked me, why didn't I serve in the army and what does a Haredi know about technology?"

Israel's celebrated high-tech sector, he says, is "a closed ecosystem where people know each other from the army, hire their friends and help them get funding." He now runs the Kama-Tech programme which works with Haredim on placements with leading tech companies, including the local research centres of Google and Microsoft. But he will have his work cut out: attempts by the previous governments to oblige religious schools for teenagers to teach maths, English and the sciences as well as the Torah have routinely been blocked by religious politicians. ■

South Africa's media

Happy, patriotic news

JOHANNESBURG

Freedom of the press is being chipped away under an embattled ANC

APARTHEID'S enforcers had simple ways of muzzling critical newspapers during South Africa's dark period of white rule: they blatantly censored them or closed them down. Since the end of minority rule in 1994, the country has been blessed with vibrant and muckraking media, protected by a constitution that guarantees freedom of expression. South African newspapers have dug up dirt on crooked arms deals, exposed scandals such as lavish state spending on the private home of Jacob Zuma, the president, and generally held the mighty to account.

An infuriated African National Congress (ANC), which has ruled South Africa for a little over 20 years, has considered, but so far rejected, heavy-handed ways of curbing this boisterous exercise of free speech. These include a "secrecy bill" that threatens to jail journalists or whistle-blowers who leak or publish state secrets.

For now the ANC has relied on more subtle methods of silencing journalists. These include wheezes such as installing a radio-jammer in the parliament building that, for a few hours earlier this year, prevented them from using their mobile phones to report on a controversial appearance before parliament by Mr Zuma in which members of opposition parties were forcibly ejected from the house. Another cunning ploy, earlier this month, was to move an embarrassing meeting of a parliamentary committee to a nearby office building. Security guards were ordered to keep the press out.

Censors at work in the bad old days

Amusing as such shenanigans may seem, they underscore far wider-ranging moves to gag or co-opt the media. The state-owned South African Broadcasting Corporation (SABC) is legally bound to offer unbiased news, but has become little more than a mouthpiece for the ruling party. Recently the main opposition party, the Democratic Alliance, was forced to take the SABC to court when it refused to cover the party's congress. The SABC's cameras were determinedly pointed away from the action in February when armed police entered parliament to eject opposition hecklers by force. A senior manager at the SABC has reportedly demanded a 70% "happy news" quota.

President Zuma has urged all media to be more "patriotic". And his government uses taxpayers' money to bolster private media that sing the ruling party's praises. Its spending on advertising in newspapers and magazines, for example, is openly channelled towards friendly titles such as *New Age*, which is owned by a family that is close to the president.

It also meddles with who owns papers and who works for them. A favourite buzzword of the government is "transformation". Although the senior ranks of news organisations are relatively white and male, the government's view of how they should be transformed is not that they should simply appoint more women and black people. It wants media firms that are run by ANC loyalists. Faith Muthambi, a communications minister with poor communication skills, says that her department will "investigate the possibility of pooling government media assets with a view to support the creation of a black-owned media house in the country".

Similar moves are already afoot under the auspices of other government departments. One enthusiastic investor in media assets is the government's pension fund. Two years ago it helped finance the purchase of Independent Newspapers, one of South Africa's main newspaper groups, by a company led by Iqbal Surve, a businessman with strong ties to the ANC and a former doctor to Nelson Mandela.

Since the takeover readers of the Independent's once-feisty titles, which include the *Cape Times* and the *Star*, have seen a distinct change in coverage. Besides displaying an odd predilection for puff pieces about Dr Surve it has become markedly less critical of the government. Dozens of senior journalists and editors have left or been sacked. The group's executive editor, Karima Brown, was recently pictured at an ANC anniversary rally dressed in an ANC hat. With editors and owners like these, who needs censorship? ■

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Greece's troubles

Athenians at bay

ATHENS

Even if Greece's government manages to strike a last-minute deal with its creditors, it will be hard to get it approved back at home

WHILE Alexis Tsipras, the hard-pressed Greek prime minister, was struggling in Brussels to win concessions on a new bail-out deal, Alekos Flambouraris, his state minister, stayed in Athens to soothe angry members of his Syriza party. Its far-left faction feared that Mr Tsipras was about to cross his "red lines" and accept a tough austerity package, just as his predecessors had done in 2010 and 2012.

Greece desperately needs a deal: its terms were being fought over as *The Economist* went to press. Without one, it cannot pay pensions on June 30th, the day the current bail-out expires, and will also default on a €1.5 billion ($1.7 billion) debt to the IMF. If the bail-out is not renewed, Greek banks may lose the "emergency liquidity assistance" they have been getting from the European Central Bank. This has enabled the banks to survive six months of accelerating withdrawals by frightened depositors. By one recent estimate, €45 billion is now stashed under Greek mattresses. Without the ECB, capital controls would have been imposed, stifling an economy weakened by six years of recession.

Yet the terms of any new bail-out are going to be tough. Greece's latest proposals to release the rest of its €7.2 billion bail-out, greeted as "positive" by its European creditors, were quickly unpicked by the IMF. A leaked list of "prior actions" (which must be legislated by Athens before any new aid is disbursed) drew various red lines through plans to avoid spending cuts by increasing taxes. A one-off tax of 12% on corporate profits above €500,000, the biggest single revenue-raiser, was struck out altogether. The creditors argued that putting such heavy emphasis on higher taxes would drive the country deeper into recession, pushing unemployment past 30%.

Mr Tsipras fought hard to avert more cuts in pensions, which he had promised to protect. Many of Greece's 2.9m retirees have seen their pensions slashed by 45% since 2010. But the IMF wanted a new cut of €1.8 billion in pension spending by reducing incentives for early retirement and abolishing a top-up scheme for low-income pensioners. Mr Tsipras gave way to IMF demands on value-added tax, agreeing that most goods should come under the highest 23% rate, and scrapping the 30% discount enjoyed by Aegean islanders.

Getting even this close to a deal has been a bruising experience. It will also be hard to sell. Mr Tsipras came to power in January pledging to end austerity but at the same time to ensure Greece stayed in the euro. He claimed he could extract billions from the country's European partners to rebuild the economy and persuade the IMF to reduce Greece's mountainous debt, equivalent to 180% of GDP. In return, Greece would crack down on tax evaders and curb the influence of "oligarchs" who dominate economic activity. Unemployed young Greeks rushed to vote for Syriza and its charismatic 40-year-old leader. Older voters were reassured that veteran leftists like Mr Flambouraris were allies of the inexperienced Mr Tsipras.

Syriza still has a big lead in the polls over its closest rival, the centre-right New Democracy party, even though Greeks have become more critical of Mr Tsipras's handling of the bail-out negotiations. Some of the prime minister's toughest opponents come from his own party. Extremists in its far-left faction now say Greece should abandon the euro and readopt the drachma. But the party mainstream, representing about 60% of members, has remained loyal to Mr Tsipras. In the parliamentary group, some 20-30 of his 149 deputies could vote against the government when a new deal is put to a vote.

That could in theory scupper the deal even if, as expected, all 12 deputies from Independent Greeks, Syriza's right-wing coalition partner, back it. But pro-European parties in New Democracy and the small centre-left To Potami (The River) party will vote in favour to ensure Greece stays in the euro. That would be humiliating for Mr Tsipras, and it could also undermine his position as Syriza's leader. One challenger might be Yanis Varoufakis, the outspoken finance minister, who may refuse to put his signature to a new bail-out deal. Another might be Zoi Konstantopoulou, the authoritarian parliamentary speaker.

Mr Flambouraris has told his ten-member political committee that they must work fast to rally dissident lawmakers. Any new deal, including the prior actions, has to be rushed through parliament under emergency procedures by midnight on June 28th. The ECB may then find a way for the Greek government to raise enough money to pay pensions and the IMF. Weary Greeks would breathe a huge sigh of relief—but only until the next crisis. ■

France and America

I spy, you spy

PARIS

The French are "shocked, shocked" by American spying—but not their own

WHEN it emerged two years ago that America's National Security Agency (NSA) was spying electronically on European leaders, France's Socialist president, François Hollande, called it "totally unacceptable". He had words with the Americans and there was a minor fuss, but it soon died down.

There was a similar show of indignation on June 24th, after the revelation by WikiLeaks that from 2006 to 2012 the NSA had spied on three French presidents: Mr Hollande and his two centre-right predecessors, Nicolas Sarkozy and Jacques Chirac. After an emergency meeting of the French national defence council, the Elysée again called the practice "unacceptable". The Americans had given "undertakings" to France in 2013 and 2014, which should be "strictly respected". Yet this time the protests are more awkward, since France is busy legalising electronic-eavesdropping powers for its own spies.

The revelations, published on June 23rd by Mediapart, a website, and *Libération*, a daily, have not so far unveiled state secrets. They consist of classified NSA reports, based on intercepted phone calls by French presidents and senior officials, mostly in Paris, Washington and New York. Among the documents is a list of French surveillance targets and their telephone numbers, including the president's mobile. The American embassy in Paris, understood to be the nerve centre of the operation, is in the same street as the Elysée.

Some of the NSA reports are banal or even comical. One, from 2008, is entitled "Sarkozy Sees Himself as Only One Who Can Resolve World Financial Crisis", a thinly disguised dig at the former president's self-importance. But others reveal sensitive activities, such as Mr Hollande's approval of a secret meeting with the German opposition soon after his election to discuss the consequences of Greece leaving the euro, which was done behind Chancellor Angela Merkel's back.

The NSA has said it is "not targeting and will not target" Mr Hollande. But, rather like the White House's statement after the NSA was found to have tapped Mrs Merkel's phone, this made no reference to the past. Mr Hollande telephoned Barack Obama who, according to the Elysée, restated his commitment to end past practices. The Socialist Party said it was "dismayed" by the revelations, which reflected America's "stupefying state paranoia".

That the Americans were snooping on the president's phone is uncomfortably personal. Yet the French are cynical when it comes to espionage, mainly because their services are at it, too. "The indignation today is surprising, because political authorities know their communications are intercepted," says Philippe Hayez, a former intelligence director. The French ambassador to Washington tweeted that "all diplomats live with the certainty that their communications are tapped."

One reason why the French understand America's modern surveillance capability is their close co-operation on counter-terrorism. France collects and shares with the Americans plenty of intelligence from the African Sahel, for instance. There have also been revelations about electronic snooping at home. In 2013 *Le Monde*, another daily, revealed that the DGSE, the foreign security service, runs a mass interception operation of internet communications. "The only rule in this game is that you don't get caught," says François Heisbourg of the Foundation for Strategic Research.

This week, ironically, the French parliament approved a new intelligence law giving more power to France's own spies, partly by legalising activities the intelligence services are already assumed to be doing. The bill was speeded up after the *Charlie Hebdo* attacks in January. Among other things, spies will be allowed to plant hidden microphones, to tap phone and internet communications and to crunch vast quantities of metadata from private internet providers. The law prompted little public debate and was passed with strong support from both the left and the right. ■

Bread in France

Forget the baguette

PARIS

The rise of sliced bread in the home of haute cuisine

THESE are momentous days for sliced bread, at least in France. The land of the long crusty baguette boasts more artisanal bakers supplying freshly cooked loaves than any other country in Europe, says the International Association of Plant Bakers. Yet sales of pre-cut bread, wrapped in cellophane and twist-tied with plastic fasteners, are booming.

The market in packaged bread in France is now worth over €500m ($560m) a year, says Xerfi, a consultancy. In mid-June the country's biggest industrial bakery opened in Chateauroux, with a surface area equivalent to six soccer pitches. Owned by Barilla, an Italian food group, the bakery will churn out 160m packets of sliced bread a year, almost exclusively for the French market. Last year sales of Harrys, its leading sliced-bread brand, reached 125,000 tonnes, up by 25% on 2007. Jacquet, a rival French baker, offers 18 different varieties of pre-packaged slices.

Why are the French suddenly so keen on sliced bread? Partly because of its long-lasting convenience at a time of squeezed lifestyles. Nothing beats a freshly baked baguette, but it is best eaten within hours of leaving the oven. France has a high share of women in the workforce, and harried workers no longer have time to pick one up daily, as tradition dictates. In big cities, lunchtime habits are also changing: traditional three-course meals are giving way to *le snacking*, especially among the young. A poll suggests that 26% of the French now take 15 minutes or less to eat lunch. So sandwiches are on the rise. Over 2 billion were sold in France in 2014, and just over a third are now made from sliced bread, not baguettes.

The other answer is smart marketing. Sliced bread without crusts is a new fad, heavily promoted to children on television. Equally surprising is the appeal of Harrys, which sells sliced bread branded as "American sandwich". Of "American inspiration", the brand reflects "modernity and liberty", says Géraldine Fiacre, a marketing director at Barilla. The Harrys brand was devised after the second world war by a French baker who was intrigued by the flat sandwiches eaten by American soldiers at a NATO air base in Chateauroux. Charles de Gaulle later ordered the American troops out, but France's new mega-bakery is just down the road from the old base.

Political scandals in Italy

Roman carnival

Renzi considers Rome's swamp

ROME

A string of scandals rocks Italian politics and Matteo Renzi's government

WHAT links a one-eyed bank robber and Europe's biggest asylum reception centre to Sisters Marcella and Consolata of the Servants of the Congregation of Divine Providence? The answer: all are caught up in colourful recent scandals that menace the credibility and reputation of Matteo Renzi's reforming government.

The latest involves the allegedly fraudulent bankruptcy of a chain of nursing homes. The two nuns were among those arrested. Police in Trani wanted to nab a senator, Antonio Azzollini, but could not because of his parliamentary immunity. Prosecutors have applied for it to be lifted. Mr Azzollini denies any wrongdoing.

He belongs to the New Centre Right (NCD), a junior partner in Mr Renzi's coalition. The NCD, made up of erstwhile followers of Silvio Berlusconi, the former prime minister, has become an embarrassment to the government. Mr Renzi needs its support in parliament, yet polls show it has the support of less than 3% of voters. And its propensity for attracting unwelcome publicity seems limitless.

Already, two NCD ministers have left the cabinet under a cloud. Earlier this month, it was reported that a third, Giuseppe Castiglione, was formally a suspect in a probe into the award of a €100m ($112m) contract to run a centre for asylum-seekers in Sicily. On June 23rd Mr Castiglione, who denies the allegations, was the target of three parliamentary no-confidence motions, all defeated with the votes of Mr Renzi's Democratic Party (PD).

The investigation in Sicily grew out of another that affects the PD more directly, which became known in December. Among those arrested was Massimo Carminati, who lost an eye in a gunfight with police near the Swiss border in 1981. Mr Carminati's record includes convictions for bank robbery, receiving stolen goods and illegal possession of arms. In November he will stand trial on charges of leading a gang which, says Italy's highest court, employed Mafia-like methods. These were used to steer municipal contracts to allied firms and co-operatives. Prosecutors claim that Mr Carminati's gang cultivated mutually profitable relations with politicians and local officials in Rome. The city prefect has until the end of July to decide whether to ask for the city council to be disbanded for Mafia infiltration.

Most of the Roman mobsters' links appear to have been with the right. Rome's previous mayor, Gianni Alemanno, a former neo-fascist, is among those under investigation (though he has not been charged and denies wrongdoing). But the gang's tentacles are also said to reach into the centre-left. One of its most active helpers was allegedly an official who once worked closely with another former mayor, Walter Veltroni, the PD's first leader and candidate for prime minister at the 2008 general election.

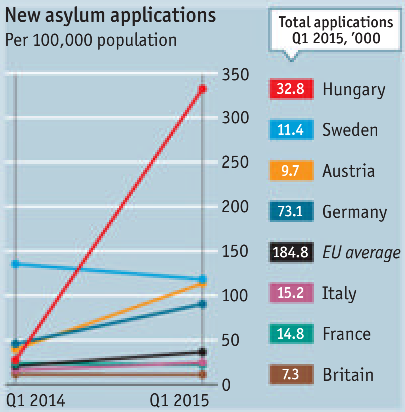
Suspects detained in a second wave of arrests included a former member of the city executive of the incumbent PD mayor, Ignazio Marino. No aspersions have been cast on Mr Marino, but his handling of the scandal (and indeed of Rome) has often seemed clumsy. There are rumours that Mr Renzi would like to replace him. Evidence of corruption in Rome is particularly sensitive at the moment. The capital has been promised €500m to help it cope with the Holy Year declared by Pope Francis, which begins in December. It will receive another torrent of cash if its bid for the 2024 Olympics proves successful.

When the scandal surfaced, Mr Renzi sent in the PD's president, Matteo Orfini, to investigate. A report Mr Orfini commissioned paints a dire picture. In 27 of 110 branches, the watchword was "power for [the sake of] power"; 40 more were actual or prospective "personal fiefs". This raises the question of how true that may be of the PD's local parties in cities the leadership has yet to investigate. ■

Asylum-seekers in Europe

THIS week Hungary suspended its adherence to the Dublin regulation, which says that asylum-seekers' claims must be processed in the first country they reach. The move came days after the Hungarians said they were building a four-metre-high fence on the border with Serbia. In the first three months of 2015, Hungary received 32,810 new asylum applications (70% of them from Kosovars), up from 2,735 a year ago. Germany takes in the most and Italy complains the loudest, but Hungary, followed by Sweden and Austria, has the largest number of asylum requests as a share of population.

New asylum applications
Per 100,000 population



Source: Eurostat

Turkey's parliament

Coalition dreaming

ISTANBUL

As expected, forming a coalition in Turkey is proving challenging

THE inauguration of Turkey's new parliament on June 23rd was a heady day for this wobbly democracy. Pious Muslim women were able to take the oath with their heads covered for the first time without being harassed by secular dinosaurs. Three Armenians, two Yazidis, a Syriac, a Roma and numerous Kurds and Alevis (and a total of 96 women) made for the most colourful chamber in the republic's 92-year history. And though an openly gay candidate for the People's Democracy party (HDP) did not win, his party easily cleared the 10% threshold imposed in the 1980s to keep small parties out.

None of the day's cheer will have rubbed off on Recep Tayyip Erdogan, Turkey's president, who brushed aside constitutional constraints to campaign for the incumbent Justice and Development (AK) party. He hoped AK would win enough seats to amend the constitution, either outright or via a referendum, to elevate the presidency from a quasi-ceremonial job into an executive one. In the event AK took ▸▸

only 258 seats, 18 short of a majority. Turkey faces coalition rule for the first time since 2002. Frenzied chat over potential partners has not let up since.

Many predict that AK will link up with the far-right Nationalist Action Party (MHP). The parties are ideologically close. For all his grandstanding about refusing to talk to the Kurds and reviving corruption probes against former AK ministers, Devlet Bahceli, the veteran MHP leader, can be accommodating. He is a former deputy prime minister, who signed a 1999 law that saved the Kurds' imprisoned leader, Abdullah Ocalan, from hanging. Moreover, a string of Kurdish victories against Islamic State (IS) in Syria has spurred a new hawkishness within AK that sits well with the MHP. Worries about a newly independent Kurdish entity along Turkey's borders have increased since Syrian Kurds, backed by American air power, drove IS out of an important border town, Tel Abyad.

Others claim that a "grand coalition" between AK and the main secular opposition Republican People's Party (CHP) is all but sealed. Its supporters argue that this would halt the trend of growing authoritarianism, adventurist foreign policy and economic decline that marked the past five years of AK rule. But a third of CHP deputies were selected in primaries and "many are unlikely to toe the party line", says Aykan Erdemir, a former CHP MP. "AK would not want such unpredictable partners."

Either way, the parliament needs to choose a Speaker before AK as the biggest party gets an initial crack at forming a government. A first round of balloting will be held on June 30th. If a government is not formed within 45 days of the selection of a Speaker (the deadline for which is July 1st), another election must be called.

Many say this is what Mr Erdogan wants. A new election would let him revive his plans for an executive presidency, but only if AK wins more seats. Yet Metropoll, a pollster, found in a recent survey that if an election were held now, the result would be much the same: a hung parliament. Besides, 353 first-time MPs (including 133 from AK) would be loth to risk their seats. Ahmet Davutoglu, the AK prime minister, is not keen on a new election (or on giving Mr Erdogan more power).

Mr Erdogan's surprise meeting with Abdullah Gul, a former president and co-founder of AK, on the sidelines of the funeral of another former president, Suleyman Demirel, has fuelled gossip that he may want Mr Gul to replace Mr Davutoglu as the AK leader. Yet the risk-averse Mr Gul is unlikely to venture back without watertight guarantees of his own political independence. "The idea that Gul has a future is wishful thinking," argues Behlul Ozkan, an academic. But then so is much of the speculation that these days is passed off as news in Turkey. ■

Polish politics

Women at war

WARSAW

The next general election will be fought between two female candidates

WHEN Ewa Kopacz succeeded Donald Tusk as Poland's prime minister last autumn, she became only the second woman in the job, after Hanna Suchocka in 1992-93. After the general election in October, the next government will again be led by a woman—but it may not be Ms Kopacz. Her centre-right Civic Platform (PO) is trailing behind its biggest rival, the right-wing Law and Justice (PiS) party. And at its convention on June 20th PiS announced that, if it wins, its deputy leader, Beata Szydlo, would become prime minister.

Ms Szydlo rose to prominence by managing the campaign of Andrzej Duda, who was elected president in May. Boosted by this upset, PiS now hopes to return to power after eight years in opposition. The choice of Ms Szydlo suggests the party has learnt from past mistakes. Jaroslaw Kaczynski, its veteran leader, had been expected to run a PiS government, as he did in 2006-07. But the success of the milder Mr Duda, who styled himself a moderate, persuaded Mr Kaczynski to stay out of the limelight and nominate Ms Szydlo instead. He called her "at once a completely extraordinary and ordinary Polish woman".

Ms Szydlo was quick to dismiss fears that Mr Kaczynski would steer a PiS government from the sidelines. Her emphasis on listening and dialogue is far from the confrontational style associated with Mr Kaczynski and his late twin brother and former president, Lech, who died in a plane crash in 2010. This week Mr Duda symbolically handed his former campaign bus to Ms Szydlo, with her face now adorning it. "My journey will be the biggest debate with Poles," she said.

With the spotlight on Ms Szydlo, Ms Kopacz found it hard to shine at PO's convention, held on the same day. Her party has taken a new hit with the resurgence of last year's wiretapping scandal, involving illegal recordings of senior figures at smart Warsaw restaurants, when files from the subsequent inquiry were leaked. Ms Kopacz reacted by replacing a clutch of those implicated, including three ministers and Radoslaw Sikorski, a former foreign minister, who stepped down as Speaker of parliament. Most Poles think that she made the right decision, a poll suggests.

Yet PiS still has the upper hand. One poll this week gave it a ten-point lead over PO (though whichever wins may have to form a coalition with other parties). Ms Kopacz is trying to bring in young faces, whom she calls "PO's untapped strength". But PO's and PiS's attempts to freshen up their images are little more than a "political facelift", says Karolina Wigura, a sociologist who directs the new Public Debate Observatory at Kultura Liberalna in Warsaw. Both remain ill-attuned to the worries of a young generation of Poles, she suggests. The election will be a battle between the same old parties, even if this time two women are leading the charge. ■

Beata will be hard to beat

Charlemagne | The ties that bind

Greece and the euro zone cannot go on like this—but they probably will

AFTER a week of manic summitry the euro zone once again finds itself in the wearily familiar position of trying to stop Greece from going bust. Finance ministers once again convened in Brussels on June 25th in their latest attempt to do a deal before Greece's current bail-out expires on June 30th. As *The Economist* went to press, the outcome was hard to predict. But it could not have been clearer that any agreement will cover only Greece's immediately pressing needs. Despite very different ideologies, Greece and its creditors are locked together in the deathly embrace of their shared currency. And all this over a country with debts representing about 3% of the euro zone's GDP.

The endless twists of the bail-out talks are confusing, but it does not take close study to see that the results are bad. After five years, two bail-outs and a debt haircut, Greece's economy is 25% smaller than at its peak in 2008, unemployment stands at 26% and the public debt is nearly 180% of GDP. The public administration is broken, the old diseases of corruption and clientelism more rampant than ever. To obtain the money Greece needs to pay back earlier loans, Alexis Tsipras, the prime minister, is being urged to sign up to austerity measures prescribed by outsiders, just like the governments that he denounced with such vigour from the opposition benches. The big difference this time is that, after five months of stonewalling and rancour, any vestiges of trust between Greece and its creditors have evaporated.

That has left Greece, and the euro zone, a lot worse off. Most Germans now want Greece out of the euro. The Bundestag and other creditor parliaments will struggle to approve yet another bail-out for Greece, especially if, as seems possible, it involves a promise to lighten its debt burden. As for the long-suffering Greeks, the only lesson they can draw from the sorry story is that they were imprudent to elect the wrong sort of government when they were still in hock to their creditors.

How can all this have happened? Wind the clock back to May 2010. Greece's first bail-out was born of a constellation of fears. European Union leaders worried that a write-off of Greek debt would unleash Lehman-style contagion. Germany fretted that, without the imprimatur of the IMF, any bail-out would be insufficiently rigorous. Creditor countries doubted they could get vast rescue loans approved by their parliaments. Thus emerged a programme that bound together a troika of ill-fitting institutions—the European Commission, the European Central Bank and the IMF—as monitors of an ill-designed rescue of a country that should never have joined the euro in the first place.

After five years of this ménage à trois, every member of the troika is, like the families in "Anna Karenina", unhappy in its own way. The ECB is divided over the support it has lent Greece's tottering banks, and frustrated with do-nothing politicians who rely on it to keep the euro zone afloat with such unconventional tools as quantitative easing. The commission now talks more about austerity than about the jobs and growth promised by Jean-Claude Juncker when he took over as president last November. And the IMF has been sucked into a European political vortex that infuriates its non-European shareholders. It has feuded with the commission over Greece's debt, which it wants restructured to make the sums add up. Having been "socialised" into the peculiar ways of the euro zone over the past five years, says Mujtaba Rahman of the Eurasia Group, a consultancy, the IMF is no longer prepared to sacrifice its credibility for European solidarity.

It is easy to see why. Greece has always struggled to implement previous agreements and has missed most of the fiscal targets set by them, not least because of the recessionary impact of austerity. A government ideologically opposed to bail-outs is hardly likely to make a success of one that has been forced on it. Meanwhile, uncertainty has plunged Greece back into recession and again priced it out of capital markets. It will find itself holding out the begging bowl again before too long.

In Greece's case, hope has replaced judgment and the outcome of the drama is hard to know. But the difficulties over doing a deal will not have persuaded Germany that the euro zone is ready to tackle its problems without the IMF to stiffen its sinews. In the longer term some hope the European Stability Mechanism, the €500 billion permanent bail-out fund, can become a European Monetary Fund that could oversee future rescues, freeing the IMF from its European burden. And now that it is the supervisor of the biggest European banks, the ECB should reconsider whether it should be part of the troika, even if its role in averting bank runs requires at least some involvement in bail-out talks.

In search of presidentialism

As ever, there are bigger ideas floating around. A new report on euro-zone governance, written by the presidents of five European institutions, will be discussed at this week's EU summit. It contains some good ideas, says Guntram Wolff of Bruegel, a think-tank, such as "competitiveness authorities" that might help to restrain the wage divergences that have plagued the euro zone in the past. But many previous reports are gathering dust in the far reaches of back offices. And with Greece on the edge, Britain renegotiating its EU relationship and Russia menacing Europe's east, there is little appetite for grand new plans for deep economic integration—and certainly not for ambitious treaty change (which the five presidents themselves want to avoid).

Sceptics at the euro's launch, including the German Bundesbank, uttered many warnings that monetary union could not work without political union. The euro zone has spent five years desperately scrambling to prove them wrong, inflicting immense damage in Greece and elsewhere. It will keep trying, and Charlemagne can only hope that it succeeds. Otherwise, if you want a vision of the future, imagine frustrated euro-zone leaders arriving in Brussels for "last-ditch" bail-out summits—forever. ■

Also in this section

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The Bank of England

Cruising, for now

Mark Carney has had a successful two years as governor. His biggest challenge is still to come

"I'M GOING to where the challenges are greatest." So declared Mark Carney when he was appointed governor of the Bank of England in November 2012. "Britain needs the very best...and in Mark Carney we have got him," purred George Osborne, chancellor of the exchequer, at the same time. Soon after Mr Carney assumed office, Britain's economy took off; today it soars. That suggests the world's only glamorous central banker should congratulate himself on a successful transatlantic rescue mission when he celebrates two years in the job on July 1st. In reality, monetary policy has been mostly on autopilot. Mr Carney is still waiting for the right moment to change course.

In late 2012 the economy was sluggish. But by the time Mr Carney had crossed the Atlantic, the recovery was already under way; in the first half of 2013, while Mr Carney was readying himself for the job, GDP grew at an annualised rate of 2.5%. House prices had begun to rise and share prices had returned to their pre-crisis high.

That did not stop Mr Carney from pushing the throttle on his arrival, with "forward guidance": a conditional promise not to raise interest rates until unemployment—then close to 8%—fell to at least 7%. The threshold was crossed five months later—much quicker than forecast—as Britain created more jobs than anyone expected. Since then the bank has said the path of interest rates depends on a range of economic indicators, including the amount of slack in the labour market.

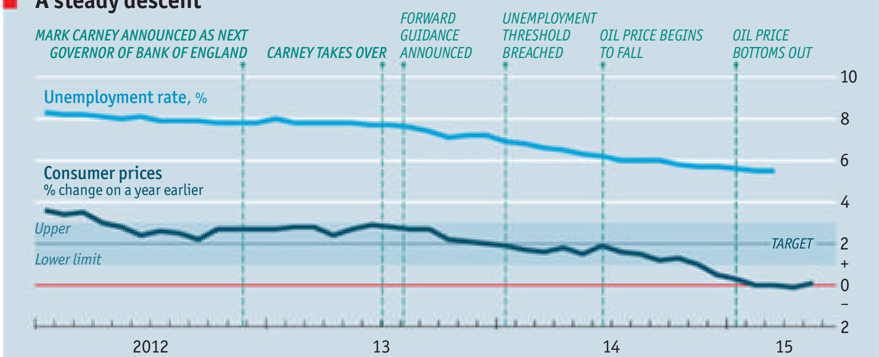
A generous observer would say forward guidance succeeded. It did not hurt, but it is more likely that the policies of Mr Carney's predecessor, the brainy but fusty Mervyn King, began to pay off. They included a scheme to funnel cheap funds to banks, launched in 2012, which encouraged lending. Except for forward guidance, monetary policy has been sleep-inducingly constant under Mr Carney. Interest rates have stayed at 0.5%, where they have been since 2009; quantitative easing (creating money to buy government debt) has been neither scaled up nor wound down.

The continuity has not been for lack of turbulence. The City complains that Mr Carney has given mixed messages on rates (one MP compared him to an "unreliable boyfriend"). Between August and December 2014 two of Mr Carney's nine-strong monetary-policy committee (MPC), concerned about a tightening labour market, broke ranks to vote for rate rises. More recently deflation has been the main worry, thanks to plummeting oil prices. In April Mr Carney became the first governor since Lord Cobbold in 1960 to see negative inflation, and has spent most of his energies since then emphasising that the bank will ignore this temporary headwind.

Though Mr Carney has not much changed monetary policy, he has been busy reforming the bank, which is a more professional outfit than two years ago. Under Mr King, the bank was accused of being stuffy and hierarchical. Mr Carney hired a chief operating officer and brought in management consultants to shake things up. The result was a "strategic plan", clearly defined cultural values and a new layer of management. The impact of these changes can be overplayed, say insiders, but the bank does feel modernised.

Most importantly, the bank is more transparent. Mr Carney appears more often in the media than his predecessors, and is more open about the bank's views on ▸▸

A steady descent



Source: ONS

subjects such as the "natural" rate of interest (the rate at which inflation is stable). Thanks to Mr Carney the bank is no longer "excessively closed and secretive", says Simon Wren-Lewis of Oxford University. This makes policy more predictable.

Researchers have been liberated. Previously the bank would censor even obscure papers that contradicted its public stance, says Tony Yates, a former bank economist. Now its wonks are encouraged to engage with the outside world. On June 19th the bank even entered the blogosphere with its own offering, "Bank Underground". Blog posts will express the views of the authors, rather than bank bosses. The first post hinted at greater downside risks to inflation than acknowledged by rate-setters. This project would have been unthinkable in the past, says Mr Yates.

Not all of the reforms have gone smoothly: Mr Carney's team made a U-turn on a plan to close the bank's library after staff launched a campaign to save it, complete with badges. And the new cultural niceties are at odds with Mr Carney's temper, which can be fiery.

But the bank has changed. It has also grown. Mr Carney joined just after it assumed responsibility for prudential regulation—or keeping the financial sector safe—from the disbanded Financial Services Authority. The new responsibilities have meant staff numbers have swelled from 1,700 in 2010 to 3,700 today. This expansion brought new powers. In mid-2014 the bank's new Financial Policy Committee (FPC), worried about household debt, used these for the first time, by introducing a cap on the number of risky high-loan-to-income mortgages banks can issue. It is hard to know the cap's effect, but the housing market cooled after the intervention.

The new division of labour works well: the bank's interest-rate-setters can focus on the economy knowing that it is the FPC's job to worry about low rates stoking asset-price bubbles. This separation is absent in America, where a debate rages about whether to raise rates to flatten fizzy markets. And the intellectually nimble Mr Carney—who wrote a doctoral thesis on microeconomics, built a career in finance and became a central banker only later—is adroitly managing both branches of policy.

Fasten your seat belts

But his talents will only be tested when he pulls the levers of monetary policy. Markets have not fully priced in a rate rise until mid-2016. It could happen much sooner, because the labour market is heating up. The number of openings per jobseeker is almost back at pre-crisis levels. Data released on June 17th showed that pay excluding bonuses is 2.7% higher than a year ago. Strip out the stingy public sector and in the past three months pay has grown at an annualised rate of 4.3%. Yet productivity remains stagnant. That means firms' costs are rising.

If these trends continue, they will push up inflation, warned Jon Cunliffe, one of Mr Carney's deputies, in a speech on June 22nd. Inflation is currently 0.1%, but the bank expects it to pick up sharply at the end of the year when the one-off effect of the oil-price collapse in 2014 dissipates.

Mr Carney likes to emphasise that his gaze is on the horizon, as the bank reckons it takes 18-24 months for changes in interest rates to have their full effect. If that is true, the bank is unlikely to tolerate these trends much longer. Rates could rise as early as November, to coincide with the bank's quarterly report on the economy. On June 23rd Martin Weale, one of the MPC's hawks, said in an interview with the *Financial Times* that the bank should be ready to raise rates even earlier, in August.

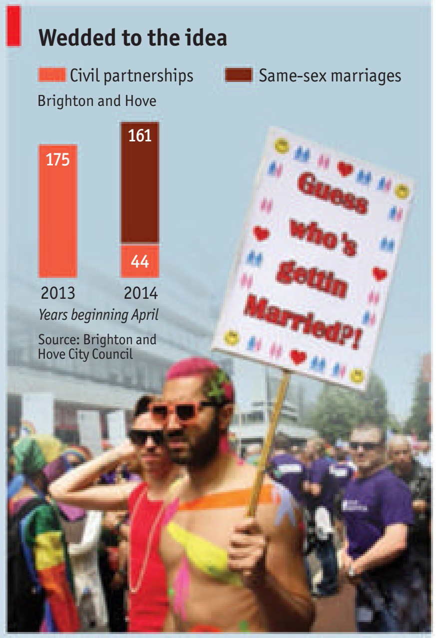
Mr Carney's problem is poor visibility. Nobody knows if inflation-moderating productivity growth will appear soon, let alone what it will be doing in two years. That makes timing rate rises hard. Mr Carney must soon assume the controls and tackle this unenviable task. Though the economy is flying high, steering a course is going to get harder. ■

Gay marriage

They do

Same-sex couples are choosing marriage over civil partnership

A RAINBOW parade will whirl through London on June 27th to mark Pride, a weeklong gay jamboree. Britain's "LGBTQ+ community", the term used by the march's organisers to cover the ever-broadening spectrum of human sexuality, has plenty to celebrate. Since 2005 gay couples have been able to form civil partnerships, marriages in all but name. Since 2014 they have also been allowed to wed (except in Northern Ireland).



Civil partnerships already conferred marriage-like rights and obligations. So before the parliamentary vote on equal marriage in 2013 traditionalists such as Philip Hammond, now the foreign secretary (who declined to fly the rainbow flag over British embassies this week, in contrast to his predecessor), opposed the law on the basis that "there was no huge demand for this". It turns out that they were wrong. Given the choice, most gay couples are opting to marry—and many in civil partnerships are converting.

Last year the Office for National Statistics reported that 1,409 gay couples tied the knot in the first three months of the new law. That was nearly as many as formed civil partnerships during the same period a year earlier. But because no new data on civil partnerships were released, it was hard to know whether the marriage boom represented a change in behaviour or simply a short-term boost in demand.

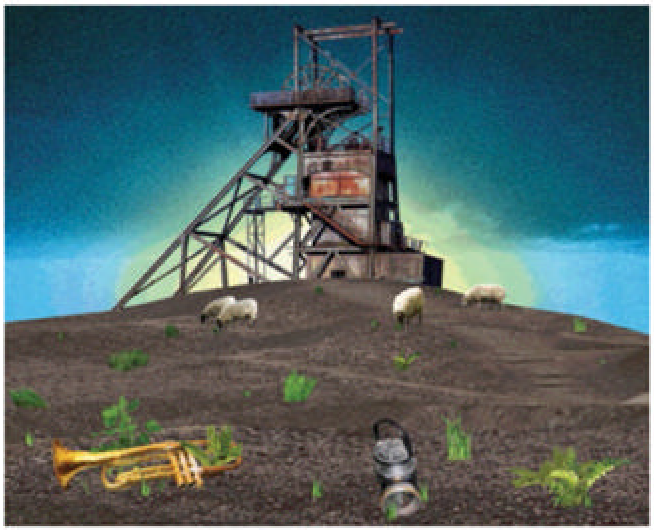
More recent evidence suggests gay couples are indeed swapping civil partnerships for marriage. In Brighton, a proudly pink city that has granted more gay unions than any other council, marriage is nearly four times as popular as civil partnership (see chart). Westminster used to grant more than 200 partnerships a year. Last year it carried out only 38, versus 131 same-sex marriages. Islington, another gay-friendly London borough, has performed 137 gay weddings so far this year, and only 24 civil partnerships.

Since December couples have been able to convert existing civil partnerships to marriages. No national data have yet been released, but Brighton reports that by April 267 couples had converted—equal to about one in five of all the civil partnerships the city has ever granted.

Gay-rights groups, which fought for years to get civil partnerships, are in no rush to abolish them. Nor are conservatives: the Church of England, for instance, sees them as preferable to gay marriage. Last year a government consultation on their future shrugged its shoulders. So they will go on—but they are already becoming rare. In February Brighton performed only one.

Bagehot | The end of industry

The impending closure of Britain's last deep coal mines is a moment for reflection and awe



TRUDGING from the mineshaft, black with coal-dust from their plastic helmets to their steel-capped boots and naked legs, the Hatfield miners appear as a vision from a former age. The three-metre thick Barnsley seam they have spent the past eight hours clawing at is, in fact, merely half a mile underground. Yet the geo-economy which, over the course of three centuries, it has brought into being, sustained and sometimes blighted, in pit villages across South Yorkshire and machines, factories and power-stations across Britain, is almost dead now.

At their peak, shortly before the first world war, the deep mines of Yorkshire, Durham, South Wales and other sedimentary places, engines of the Industrial Revolution, employed over a million men and boys. They were the foundation of the modern British economy, "a sort of caryatid", wrote George Orwell, "upon whose shoulders nearly everything that is not grimy is supported". But mining has ever since been in decline, marked by sudden bursts of pit closure more divisive, and calamitous for the communities affected, than any other aspect of Britain's deindustrialisation. Twenty-three pits closed in 1985, after the year-long miners' strike and the industry's subsequent privatisation; 16 in 1989; and in 1991 another 14. Now, only three deep mines remain, employing 2,000 miners, including 436 at Hatfield, close to Doncaster. And in the next few months they too will close.

Under the terms of a government bail-out deal with UK Coal, a property and mining firm, its two collieries in Yorkshire and Nottinghamshire will close next month and in November. That should leave Hatfield, which is owned by its employees, as Britain's last pit; under the terms of a similar deal, it is due to close in August 2016. But this now looks optimistic, owing to a sudden crash in the global coal price, coinciding with a rise in an environmental levy Britain charges coal-fired power generators. Besides Hatfield's ancient winding wheel, in place since the pit was opened in 1916, a vast mountain of unsold coal is rising. Unable to shift it at the global price, which is much less than its production cost, the mine is in a desperate way. Failing an unlikely injection of public money, which its directors were in London pleading for this week, probably in vain, it could close within weeks.

No wonder if the Hatfield miners, weary from their shift, tread even more heavily than usual as they head for the showers, spitting gobfuls of chewing tobacco which, like snuff, another mucous-inducing defence against dust, they are among the last Britons to use. Mining is all most of them know. "There's not many people want a 54-year-old unemployed miner," says Derwin Martin, a brawny Yorkshireman who has worked at the colliery since 1978, and can describe its most intricate workings in lucid detail. The mine's computerised monitoring systems often break down, he says; its basic Edwardian infrastructure, of grease-blackened winches, winders and separation drums, rarely does. Mr Martin's father, brothers, uncles and cousins all worked at the colliery. His grandfather was a Welsh miner, as were his fathers before him.

The Hatfield miners are angry, as well as nervous, for Britain will burn cheap Russian and Colombian coal long after its own mines have closed. In view of the pithead, rail trucks bulging with the stuff rattle across the Hatfield estate, bound for Drax, Europe's biggest coal-fired power-station. "All we're saying is, 'Why can't some come from British mines?'" says Tony Shaw, branch secretary of the National Union of Mineworkers.

It is tough, though not a rerun of the 1980s, when pit villages across Wales and northern England fell to mass unemployment, drug use and delinquency. The job losses will be much smaller. The tight local culture, based on shared endeavour, village cricket and the miners' social club, which was the main victim of the strike and subsequent closures, is already gone. By historic standards, moreover, Britain's last miners are well prepared for life above ground. They are relatively old and well off—the average age at Hatfield is 54 and the average salary £38,000 ($60,000)—and the government, long-since wary of aggrieved miners, is offering pretty decent retraining packages. Yet coal-mining is no ordinary British industry and its death rattle is momentous.

The camaraderie evident among the Hatfield miners, founded on 12-hour shifts underground, labouring together half-cooked and semi-naked, is something irreplaceable. In the lamp room and in the shower they greet each other warmly and tease each other relentlessly, throwing barbs that would be devastating if their solidarity were not so clearly understood. Often, they discuss the mine, which dominates their lives, almost as if it had a cussed character of its own—"pit pissed", the real mine-heads are said to be. Their fraternity recalls nothing so much as soldiers at war. Asked why he has put up with the dust, heat and threat of injury these past four decades, Dave Wilson, 67 and black with coal, gives the answer of all fighting men: "Friendship with the lads—everybody looks after each other."

Love in the dark

It is a working life that has changed remarkably little in a century—no more than have the polished-steel safety lamps the miners carry to check for gas. (They also carry hand-held computers for this task, but don't perfectly trust the batteries.) It is still tough. "Cuts and fractures is part of us culture," deadpans Mr Wilson. It is still politicised and Labour-voting—the election of the Conservative government last month, the miners say, "was a final kick in the bollocks". It is informed by an elephantine cultural memory, haunted by past mine owners, always referred to as "Mr" someone, even if hated, and in which Nottinghamshire miners are all scabs. And even now, on the cusp of its extinction, it is defiant—like those grumbling miners who said their salaries were nothing to what City bankers take home. Bagehot had expected to pity them and their almost-dead trade, and does. He also feels awe. ■

Also in this section

Diasporas

Gone but not forgotten

Governments believe their diasporas can solve all sorts of problems. But they are a picky, unbiddable bunch

IF YOUR surname is McNamara and you live outside Ireland, expect a letter. Ireland Reaching Out, a non-profit organisation financed largely by the Irish government, has pioneered what it calls "reverse genealogy". Rather than waiting for people to trace their Irish ancestry, it constructs family trees from root to branch, tracking down the descendants of those who left for America, Australia and other countries. Volunteers then invite them to visit the homeland. It is a mighty task: Mike Feerick, the outfit's founder, wants to build a database of the Irish diaspora containing 30m or 40m names.

Last year Ireland appointed its first minister for the Irish diaspora; this spring it unveiled a diaspora strategy. As well as Ireland Reaching Out, the government supports hundreds of groups that serve needy Irish emigrants or court successful ones. One of them, Connect Ireland, uses the diaspora as spies for inward investment: it pays for tip-offs that lead to foreign companies creating jobs in the country.

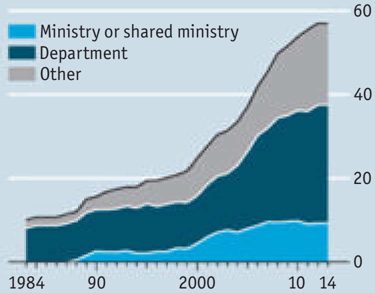
In the early 1980s barely a dozen countries had a ministry, a government department or some other official institution dedicated to their diasporas. And a few countries, including America, still ignore those who have left—except perhaps to send them tax demands. But these are a shrinking minority (see chart). Kingsley Aikins, an Irishman who advises governments on how to deal with their far-flung folk, has travelled in the past few weeks to Lebanon, Malawi and Wales.

Ministers and bureaucrats are multiplying partly because diasporas are too. The World Bank reckons that about 250m people live outside the country of their birth; the number of foreign migrants living in OECD countries rose by 38% in the 2000s. And diasporas are not just composed of emigrants. The Irish government thinks that everybody of Irish descent—perhaps 60m or 70m people—is part of the Irish diaspora. Israel claims all Jews.

Countries are also paying more attention these days because they believe their diasporas can make them rich. When the World Bank began to publish estimates of remittance flows in 2003, "you could see the dollar signs flashing in finance ministers' eyes," says Kathleen Newland of the Migration Policy Institute, a think-tank. And that was only the beginning of an infatuation. Politicians and officials have since concluded that diasporas can help cure an extraordinarily wide range of national ills, from poor global reputations to weak infrastructure to a shortage of scientific talent. But can they?

Home thoughts for abroad

UN states with diaspora institutions, %



Source: Alan Gamlen, Victoria University of Wellington

A few months after his victory in India's elections last year, Narendra Modi addressed a whooping crowd of some 20,000 Indian-Americans in Madison Square Garden in New York. Thanks to them, the new prime minister said, India was no longer seen as a land of snake charmers but as a technology powerhouse. This was flattery, but with serious intent. India sees its diaspora, which the government thinks is about 25m strong, as a means of projecting soft power and burnishing the country's image. "No country has had such a large brain drain and been so proud of it," says Devesh Kapur of the University of Pennsylvania.

Inspired partly by the example of Israel, many countries have come to believe that their diasporas can advance their geopolitical interests. The Turkish government counts on its diaspora in Europe, especially Germany, to push for closer relations with the EU; Mexico knows that Mexican-Americans will campaign against attempts to crack down on illegal immigrants. In exchange for their help, and to bind them to the politics of their homeland, a growing number of countries offer diasporas long-term visas (as India has done), dual citizenship or some voting rights. In 2010 France's parliament created 11 new constituencies for the French abroad.

Poor and middle-income countries also see their diasporas as a source of cash. Emigrants send remittances, often in vast quantities—India receives $70 billion a year, and remittances to Tajikistan are worth half of the country's GDP. Because they are a source of foreign exchange, rating agencies can take remittances into account when assessing a country's creditworthiness. Future flows of money can be securitised, as Brazil and Jamaica, among others, have done. Governments have also hawked infrastructure bonds to their diasporas, who might buy them for patriotic reasons, and also might not object to repayment in local currency. Israel, which has been doing this since 1951, is once again the country to copy.

Prodigious sons

These days, however, diasporas are increasingly seen as talent pools that can be pumped. When its economy crashed in 2009, Ireland summoned some of its most successful overseas progeny to an economic forum, which continues to meet every two years. Mexico used to think of its diaspora in America mostly as working-class remittance senders. It now encourages its young citizens to study in American universities—and then bring their skills home. Ghana, which has a particularly talented diaspora (see box), has set up a support unit to schmooze them.

No country is hungrier than China. Emulating Taiwan, which built a technology industry with the help of Taiwanese Stanford graduates, it is trying to woo its most talented foreign-educated citizens to come back; those who do are called "sea turtles". Provincial cities offer tax breaks to returning entrepreneurs and create industrial parks for them. Under the "thousand talents" scheme (which is even more ambitious than it sounds) academics who have built careers abroad are offered far more money than is usually paid to Chinese professors. The wooing is broad and relentless: one Chinese-British academic contacted for this article had been approached that very morning.

She is not interested, though—and in that she is typical. Patrick Gaulé, a researcher in Prague, has tracked the careers of foreign-born scientists in America. He estimates that less than 9% will return during their working lives. Scientists from well-off countries are most likely to go back: the Taiwanese are about five times more likely to return than are the mainland Chinese, for example. Surveys of PhD students in America find that 82% of Chinese and 84% of Indians plan to stay.

Apart from all the obvious things that bind people to their adopted homes—friends, children in school, husbands and wives reluctant to leave—it is often hard to find jobs in the countries where they were born. Returnees may have fewer contacts than those who never left. And Kaifu Lee, who was born in Taiwan, worked in America and now invests in technology firms in China, says that although foreign-educated computer scientists are technically excellent, they can suffer from inflated expectations—the result, in part, of comparing themselves to the earlier returnees who built China's great technology firms. And never mind the tax breaks and the industrial parks, he says: almost everybody who returns wants to be in big cities like Beijing, Shanghai and Shenzhen.

Nor can diasporas cure many financial ills. Whereas India and a few other countries have done well out of diaspora bonds, others (such as Ethiopia) have struggled to find buyers: expats turn out to be less patriotic and more hard-headed than is often supposed. Remittances are reliable—more so, in a recession, than foreign direct investment. But even these suffer from exchange-rate fluctuations: flows from Russia to Central Asia have plunged in dollar terms as the rouble has collapsed.

Trying to use diasporans to lobby for national interests is even harder. People leave countries for a reason, and that reason is often disdain. Mexicans "did not leave Mexico *por gusto* [for pleasure]", says Carlos González Gutiérrez, the Mexican consul in Austin, Texas. Older migrants in particular frequently distrust the government. And expat politics is often a hothouse, in which intransigent views flourish and ancient battles are endlessly refought, whether or not they benefit the homeland.

Even when expats are on the side of the government, they are tough to wrangle. The American branch of Overseas Friends of BJP dispatched volunteers to India and manned phone banks during last year's Indian elections. No sooner had its man, Mr Modi, been elected prime minister than the outfit sent him a list of demands. Overseas Indians would like the vote, please. They would also like more flights between America and India, kinder treatment at consulates, fewer restrictions on buying land and better arrangements for shipping dead bodies back to India.

A thankless, noble task

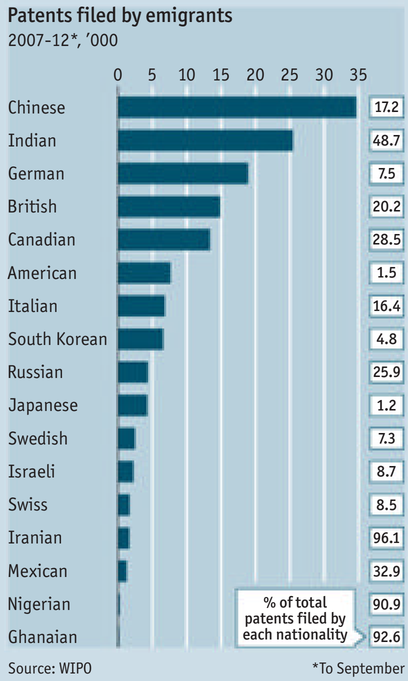
So the wooing is hard. Yet the effort is worthwhile, even if a country's diaspora resists its entreaties. Indeed, it is worthwhile precisely because diasporas are so churlish and hard to court. The difficult things that expats tend to demand of their governments—representation, a good business climate, decent investment returns—are the sort of things that governments ought to be trying to provide anyway.

India reformed its antiquated venture-capital regulations at the instigation of Indian-Americans in Silicon Valley. China is now cutting some of the red tape that is required to start a business partly because of pressure from returnees, says Wang Huiyao of the Centre for China and Globalisation, a think-tank in Beijing. And China is no longer just trying to bring back its diaspora: it also wants Western talent.

"The diaspora is a powerful engine of change, and for good," says Mr González Gutiérrez, in Texas. "They are the first people to advocate for openness, for free markets, for better-quality democracy." Most countries could do with more of that. ■

How valuable are they?

Many countries say their diasporas are valuable. But is this fact or flattery? One measure comes from the World Intellectual Property Organisation. Before September 2012 scientific and technical patents recorded not just where an inventor was working but also where he or she was born. It is thus possible to measure expats' brain power. By this yardstick Britain, Canada, China, Germany and India have the most talented diasporas. Relative to their home populations, though, expats of African countries such as Ghana and Nigeria are the most accomplished. Between 2007 and 2012 more than nine-tenths of patents filed by people born in those countries were registered by expatriates. Surprisingly, a higher proportion of Brits who register patents are working abroad than is the case for Chinese people (20% v 17%). China's liberal patenting system is one reason; another, perhaps, is the British talent for melting into other countries and thriving there.



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Medical testing

Young blood

Theranos, an ambitious Silicon Valley firm, wants to shake up the market for medical testing

IN ARIZONA, Independence Day will come a day early this year. On July 3rd a new law will allow anyone to order a laboratory test, with no need to see a doctor. Tests for sexually transmitted diseases, prediabetes, vitamin levels and fertility will be on the menu. A cholesterol test can be had for $2.99. The company that lobbied for the legal change, and hopes to benefit most from it, is Theranos, a young and ambitious blood-analytics company from Palo Alto in Silicon Valley.

Theranos is already providing cheap, quick and easy tests—some with a three-hour turnaround—at clinics it is opening inside branches of Walgreens, a big pharmacy chain. The first clinics are in Phoenix, Arizona and in its Californian home town. Many tests can be done on just a spot of blood from a finger prick. The rest use only a tiny paediatric needle and, again, require only a small amount of blood. Theranos, led by Elizabeth Holmes, a charismatic young university drop-out (see box, next page), believes its technology can bring about a global revolution in diagnostics, an important albeit unglamorous corner of medicine.

Much attention has been showered on Theranos, partly thanks to its supposed $9 billion valuation, a figure based on reports that the privately owned company has raised more than $400m from selling shares to investors. Debbie Wang, an analyst at Morningstar, an investment-research firm, says that "it is not clear what sort of assumptions have been built into that valuation".

The most fundamental assumption, clearly, is that Theranos is poised to disrupt a huge business. In America, tests costing around $60 billion are run each year, most of them either in hospitals' own labs or outsourced to specialist testing firms; and makers of test equipment enjoy sales of $25 billion (out of a global equipment market worth $56 billion a year).

Theranos both makes kit and runs tests. As yet it has only a tiny share in testing and is not selling kit. In the equipment-making business, a handful of long-established firms together hold more than half of the global market, led by Roche and Abbott (see chart, next page). In America and Europe the market seems mature, says Mickel Phung of Decision Resources, a data-analysis firm, but there is much growth potential in emerging markets with growing populations and increasing spending on health.

As for the testing market, an important question is to what extent Theranos is a threat to the "reference" laboratories to which hospitals and doctors' surgeries outsource many tests. In America this market is a near-duopoly between LabCorp of North Carolina and Quest Diagnostics of New Jersey. Each offers a broad range of perhaps 3,000-4,000 different tests, but each depends heavily on the technology it buys from the equipment-makers. Thus far Theranos only offers about 250 tests, and aspires to 1,000. But its test technology is all home-grown.

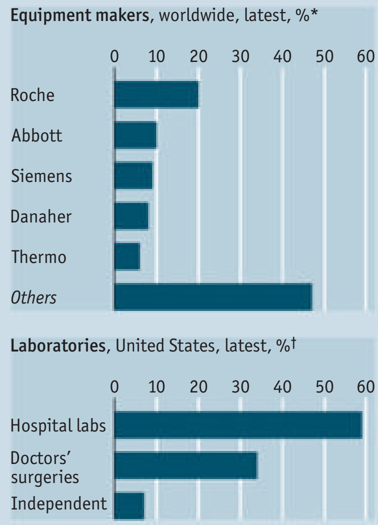
Besides their range, LabCorp and Quest, both stockmarket-listed and worth $12 billion and $10 billion respectively, have other advantages. They are well embedded in the American health-care ecosystem, and have national networks of laboratories and collection services. Theranos's central laboratory capacity is tiny, only 5% of LabCorp's, reckons Morningstar. Whereas Silicon Valley firms based on digital technology, such as Facebook and Uber, can quickly achieve global scale, Theranos's growth now depends on building its network of laboratories and opening new testing centres—in other words, it has to attain scale the old-fashioned way.

The alliances that Theranos is beginning to form with big companies in other parts of the health-care system should give its established rivals some pause for thought. Pfizer and GlaxoSmithKline have used Theranos to run blood tests on patients undertaking drug trials, since its tests can be taken many times a week. In March it announced an alliance to provide test services for Cleveland Clinic, a chain of hospitals and health centres.

As regards selling tests directly to patients, so far Theranos has clinics in only 40 Walgreens branches; and Nimesh Jhaveri, an executive at the chain, emphasises that their alliance is in "pilot mode". Though Arizona is liberalising, elsewhere in America there is a patchwork of regulations on whether consumers can order their own tests. In some places it is allowed, or at least not explicitly forbidden. In others it is permitted with limitations. Some states ban it, though testing firms sometimes sidestep ▸▸

Big in testing

Diagnostic market



*Of $56bn annual revenues †Of $60bn annual revenues

Sources: Morningstar; company reports

the rules by employing an in-house doctor to rubber-stamp each order.

It is possible that much of Theranos's growth will come from expanding the market for testing rather than by taking business off established firms. It may do so not only by encouraging consumers to take tests on their own initiative, but by making it more likely that they will comply when their doctors ask them to go for testing. Because of the cost, the fear of big needles and the delay in getting results, patients often fail to take the tests they are told to.

Despite concerns about taking testing out of the hands of physicians, experience with over-the-counter self-testing kits, particularly for HIV, has shown that increased access brings more frequent testing. Patients with positive results have tended to see a doctor and start their treatment sooner than they might otherwise.

New areas of testing are opening up, to which Theranos could, in principle, apply its technology. In "companion diagnostics", for example, a blood sample is analysed to see if a patient is suitable for a particular drug. "Molecular diagnostics" looks for such things as gene sequences that betray the presence of a cancer or infection.

However, the more attractive the diagnostics market looks, and the stronger the case for modernising it, the more competition Theranos itself is likely to get, from firms old and new. LabCorp recently announced that it will also allow consumers to bypass doctors and order its tests online. A startup from Arizona, HealthTell, is developing a number of diagnostic tests that, like Theranos's, need only a single drop of blood. For some types of test, there will be competition from makers of increasingly sophisticated home-testing kits.

It is not clear how much Theranos can rely on patents to protect it from competition. Ms Holmes personally holds many patents but the company says little about the technology incorporated into its tests. Intellectual-property lawsuits have hitherto been less common in the diagnostics business than in other technology-based industries: companies have usually found it easier to come up with a new way to conduct a test than to challenge a rival's patent in court. However, as Theranos becomes a bigger challenger to established firms, it could find itself spending more time in the company of patent lawyers. Last year it won the first infringement case brought against it. The challenging patent-holders abandoned their claim and agreed to bring no further suits for five years.

The investors who have pumped money into Theranos presumably have a clearer idea than outsiders about such things as the strength of the company's patent protection and the applicability of its technology to new areas of testing. It is clear that there is much potential for doing a broader range of tests, more often, more cheaply and with less trypanophobia. But there is a long road ahead to get to Theranos's vision of the future of testing. And it is unlikely to arrive there alone. ■

Elizabeth Holmes

Holmes is where the heart is

Theranos's boss says her mission extends beyond making a fortune

TECH entrepreneurs often have their own distinctive uniforms. For Facebook's Mark Zuckerberg, it is jeans and a hoodie. For the late Steve Jobs, it was jeans and black turtleneck. Elizabeth Holmes has plumped for something smarter: matching black jacket, trousers and turtleneck. It saves having to decide what to wear each morning, she says with typical single-mindedness.

At the age of 19 Ms Holmes had an idea about how to improve the way blood tests are done. So she dropped out of Stanford University, where she was studying chemical engineering, and with money that had been set aside for her college education she quietly founded Theranos, a diagnostics company.

That was in 2003. She says she spent the next ten years in "stealth mode", without press releases or even a company website. During that time she perfected a way of doing hundreds of tests cheaply and quickly on a drop of blood, using lab-on-a-chip technology. Today, aged 31, she is estimated by *Forbes* magazine to be worth $4.7 billion, and thus to be the world's youngest self-made female billionaire. She is the author, and co-author, of numerous patents and patent applications.

Yet Ms Holmes seems uninterested in money or kudos. She says her mission is to use testing to help people stay healthy. She wants to detect diseases such as diabetes, cancers and heart disease far earlier, before they produce symptoms, and in doing so save lives.

Admirers have compared her to technology titans like Jobs. But her focus on humanity's big problems makes her more like Elon Musk, who wants not just to make money building space rockets and electric cars, but to colonise other planets and save this one from climate change. This week Ms Holmes announced that she was taking her mission beyond America's borders, by launching a not-for-profit project to bring cheap medical tests to Mexico, with backing from Carlos Slim, a Mexican telecoms magnate.

Theranos is still privately owned—Ms Holmes says she holds more than 50% of its stock—and remains secretive about its revenue streams and plans. Although it is hard to know if the company merits its rich valuation, one encouraging sign for other investors is the company's stellar board of directors. It includes two former secretaries of state (George Shultz and Henry Kissinger) and a number of high-profile investors including Larry Ellison of Oracle. If an ability to win over luminaries is a diagnostic test for the health of young companies, Theranos passes.

Too busy for costume changes

The Yukos affair

A ghost bites back

Shareholders in what was once Russia's biggest oil company scent victory

YUKOS once epitomised the transformation of Russian business from its chaotic, robber-baron state in the 1990s to something approaching international norms. But the downfall in 2003 of the country's largest and best-run oil firm exemplified something else: the way in which the Kremlin was seizing control of the commanding heights of the economy. A series of dubious lawsuits and auctions bankrupted and dismembered Yukos. Its boss, Mikhail Khodorkovsky, went to jail and most other managers fled abroad.

That left the company's shareholders hugely out of pocket—and furious. But after a decade of litigation to establish jurisdiction and applicability of international law in the case, they are beginning to gain redress. Their biggest victory came with a $50 billion judgment against Russia last year by the Permanent Court of Arbitration in The Hague. Russia had signed an international agreement called the Energy Charter, which protects cross-border investment. Though Russia never ratified its membership and has now withdrawn from the treaty, the judges (including one nominated by Russia) ruled unanimously that it had breached the charter's terms and must compensate the investors.

Russia has refused to pay up (and is still trying to contest the ruling on technical grounds). But under an international convention on arbitration judgments, signed in 1958, they can be enforced in any signatory country. So the investors are seeking court orders to freeze, and ultimately seize, Russian state assets all over the world. Though diplomatic bank accounts, embassy buildings and the like enjoy special protection, other assets, such as those used for commercial purposes, do not. Tim Osborne, a lawyer who represents the plaintiffs, says his team is starting with "low-hanging fruit" such as bank accounts and property owned directly by the state. But in future he will look at state-controlled companies, such as Rosneft, an oil giant which ended up with many of Yukos's assets.

Russia has reacted furiously. After a court in Brussels froze some bank accounts this month, it bawled out the Belgian ambassador in Moscow for what it termed an "openly unfriendly act" and a "gross violation of the universally recognised norms of international law", threatening "reciprocal measures". The court later unfroze the accounts, accepting that they were covered by diplomatic immunity. Also this month, French officials froze funds in a local subsidiary of VTB, one of Russia's biggest banks, and in other Russian companies. Mr Osborne's team has also lodged applications in Britain and America; Germany will be next, in a few weeks, he says.

To make matters worse for the Kremlin, the judgment in The Hague is just one of several lawsuits in which Yukos-related litigants have won, including a case at the European Court of Human Rights in Strasbourg, in which Russia was ordered to cough up €1.9 billion ($2.1 billion). It is refusing to pay that too.

Identifying relevant assets and preventing them from being moved out of the country is easier than actually seizing them. Russia has plenty of experience in fending off creditors: Franz Sedelmayer, a German whose business in Russia was nationalised, spent 20 years fighting 140 court cases. He eventually got his money after seizing property belonging to Russian trade missions. Enforcing judgment in the Yukos cases is also likely to be slow. "We are in for the long haul," says Mr Osborne.

However, Anders Aslund, an expert on the Russian economy at the Atlantic Council, a think-tank, says that the impact of the legal tussles on Russia will already be "massive", as its state banks will be unable to operate normally abroad. Critics of Vladimir Putin's regime are cheering. So too are lawyers—on all sides. Insiders estimate the plaintiffs' costs so far at $100m, and Russia's at $200m, with many years of juicy litigation ahead. ■

Crawling towards compensation
Timeline of the Yukos affair

2003	Mikhail Khodorkovsky arrested
2004	$27bn tax demand cripples Yukos; main assets bought by Rosneft
2007	Yukos shareholders file claim at Permanent Court of Arbitration (PCA)
2009	PCA and European Court of Human Rights (ECHR) arbitrators agree to hear Yukos-related cases
2011	ECHR rules that Russia violated human rights in Yukos case
2012	Stockholm arbitrator rules in favour of Yukos's Spanish shareholders
2014	PCA awards $50bn to Yukos shareholders; ECHR awards €1.9bn
Jan 2015	Russia breaches ECHR deadline to provide plan for paying compensation
Feb 2015	Dutch court rules against Rosneft in case brought by Yukos subsidiary
Jun 2015	French and Belgian courts freeze Russian state assets

Source: *The Economist*

Israel and energy exports

Much hot air about gas

JERUSALEM

Government plans to boost energy investment generate scepticism

SIXTEEN years after the first discovery of commercial-scale natural-gas reserves under the Mediterranean off Israel's coast, the country's transition from dependence on imports to energy exporter is proving slow. Next week the government will publish a long-overdue outline for regulation of the natural-gas industry. There will be a new framework for pricing and competition in those fields that have already been discovered and licensed, and a long-term plan for the exploration and exploitation of yet-to-be-found undersea riches.

Opposition politicians and NGOs have been conducting a noisy campaign against the Israeli-American consortium that currently holds the licences to the largest gasfields, and against the sudden haste with which the new government, sworn in just six weeks ago, has been conducting its regulatory review. The head of the country's competition authority, David Gilo, recently resigned after rowing with the prime minister, Binyamin Netanyahu, over how to break up the consortium's monopoly over gas production. The finance minister, Moshe Kahlon, recused himself from any decisions on energy matters, because of his friendship with a shareholder in one of the gasfields involved.

Israel can only dream of having the massive gas reserves enjoyed by near-neighbours such as Iran or Qatar. But at a conservative estimate, there already appears to be enough recoverable gas under Israeli waters to provide all the country's power-generating needs for 40 years. Under a deal being negotiated between the government and the consortium members, Delek Group of Israel and Noble Ener- ▸▸

Source: Noble Energy

gy of the United States, the firms will sell two small gasfields quickly; then in six years Delek will sell its entire stake in Tamar, the largest field currently in production, and Noble will reduce its stake to 25%. That will leave them with Leviathan, a bigger field due to come on-stream in 2020.

In return the government will reject calls for it to impose formal price controls on gas sold domestically. Instead it is expected to go for a looser arrangement, to ensure that at least the price of gas inside Israel is no more than the export price. A limit on exporting—no more than half of the gasfields' output—may be eased.

Why, after years of delays, is the government in such haste to strike a deal with the Delek-Noble consortium and to draw up a new energy policy? Officials point to the imminent deal between Iran and its negotiating partners to curb Iran's nuclear programme: once it is struck, sanctions on Iranian energy projects will be lifted and, they argue, all the investment will go there. Like Mr Gilo, the government's critics think that in its rush, it is failing to bring sufficient competition to the industry.

Whatever the motives, Israel's new energy policy should offer investors a stable and transparent regulatory regime. Even if sanctions against Iran are lifted, that country's unreliable legal system and poor infrastructure mean that it may take years for it to start to attract foreign energy firms. In the meantime Israel has good prospects of attracting fresh investment, if it gets its rules right. So far only a quarter of the country's waters have been explored.

Having depended on imports of Egyptian gas until recently, Israel has now signed deals to sell its gas back to Egypt, as well as to another Arab neighbour, Jordan. Not so long ago Israel was having to go as far afield as Mexico to secure energy supplies. Now the government's challenge is to overcome the public's nervousness about selling any of the country's precious reserves to outsiders. ■

European cruise ships

Riding the wave

MONFALCONE

The world's enthusiasm for cruising is lifting Europe's shipbuilders

THE halls at Fincantieri's Monfalcone yard near Trieste in northern Italy are surprisingly quiet, as the vast blocks that will one day be turned into floating cities are welded together. On June 22nd Pierfrancesco Vago, executive chairman of MSC Cruises, added to their number when he flipped a switch to begin cutting steel plates for the first of the two new *Seaside* ships MSC has commissioned. The order is part of a €5.1 billion ($5.7 billion) investment in new ships by the Swiss-based firm, the world's fourth-largest cruise operator.

Fincantieri has 14 ships in design or construction, and Virgin Cruises, a newcomer, wants it to make another three. In 2009-10 Fincantieri's yards were operating at 50% of capacity. This year the figure will be 70-75%, and in 2016-17 over 90%, says Giuseppi Bono, its chief executive.

Things are humming at Europe's other main builders too. On June 15th Carnival Corporation, the largest cruise operator, revealed details of an agreement to buy four whoppers from Meyer Werft in Germany and Meyer Turku in Finland. On June 19th the world's biggest cruise vessel, Royal Caribbean's *Harmony of the Seas*, was eased into the water at STX France in Saint-Nazaire. Of the 32 cruise ships on firm order, 30 are being built in Europe, says SEA Europe, a maritime-industry group.

Cruising is only a small subset of tourism but it matters a lot in Europe because of the link to shipbuilding. Gone are the days when European yards produced most of the world's floating tonnage: China, South Korea and Japan churn out most of the oil tankers and cargo ships these days. Still, Europe has clung on to some of the clever stuff, including cruise ships.

Figures this week from Cruise Lines International Association (CLIA) Europe, a trade group, tell the tale. Expenditure flowing directly into the European economy from all cruising activities has increased steadily since 2009, despite economic woes and cruise-ship disasters. In 2014 it totalled €16.6 billion, up by 2.8% from 2013. The rise was almost entirely due to increased spending in European shipyards—up by 12.8% to €4.6 billion—for the third year running. Whether it lasts depends on demand from passengers and the evolution of rival builders.

Demand is rising. More than 22m people took an ocean cruise in 2014, over 12m of them from America, 6m from Europe and a fast-growing group from Asia. Operators are falling over themselves to expand the market beyond the "newly-weds, overfeds and nearly-deads" who traditionally defined it. Some ships are geared to families; others are hair-raisingly eclectic. Themes range from shopping and gambling to social justice: beginning in April a Carnival cruise to the Dominican Republic will let passengers tend cacao plants, make artisanal chocolates and teach English.

New competitors as well as new offers expand demand, but barriers to entry are high. Ships are expensive to buy and complicated to run. The three biggest operators have four-fifths of the passengers. MSC Cruises needed ten years of support from its parent cargo-shipping company before it established itself in the market.

Challenges to Europe's shipbuilding hegemony have so far fallen flat. Europeans say their Asian rivals lack the supplier networks to deliver sophisticated vessels. STX, a South Korean company, is having to sell the European shipyards it acquired not long ago. Meyer of Germany bought STX Finland (now Meyer Turku) in 2014; Mr Bono declines to say whether Fincantieri wants to buy STX France. Mitsubishi Heavy Industries of Japan may hesitate to venture further into cruise ships since two it is making for Carnival are running late and costing it money. The last real attempt in the United States ended ignominiously over a decade ago, when *Pride of America* was towed to Europe for completion.

This state of affairs will not last forever, says Ian Rennardson of Jefferies, an investment bank. Chinese shipbuilders, like Chinese passengers, are warming to cruising. In 2014 Carnival said it had signed an agreement with China State Shipbuilding Corporation that envisaged building a cruise ship with Fincantieri. The Europeans will not repel boarders for ever. ■

Health insurance

Better together?

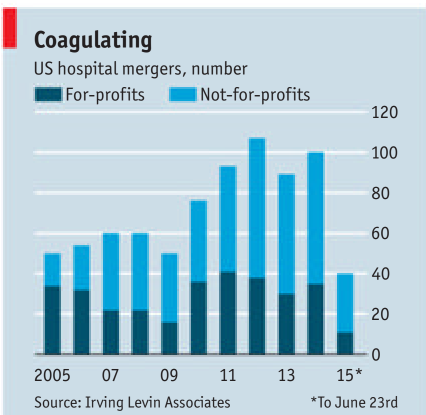
Like hospital operators, health insurers in America are seeking to merge

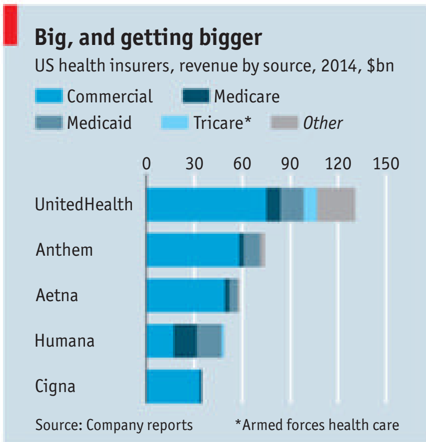
REFORM of American health care was always expected to have an enormous impact on the sector. Sure enough, one of the more immediate effects was a frenzy of hospital mergers, as providers sought to raise their efficiency in response to measures in the Affordable Care Act of 2010, alias Obamacare, designed to curb their cost increases.

A similar consolidation among health insurers was also predicted. But since the new insurance exchanges set up under Obamacare only went into operation last year, it has taken until now for it to be clear how big the merger wave may be. The largest insurer, UnitedHealth, has approached the number three, Aetna. The second-largest, Anthem, is trying to buy the number five, Cigna—which on June 21st rejected Anthem's $47.5 billion bid. And the number four, Humana, has been looking at selling itself to either Aetna or Cigna.

The frantic takeover activity seems to rest on the assumption that, should the Supreme Court reject, in the next few days, a case brought by opponents of Obamacare, the firms must be ready to move. The case claims that the subsidies 6.4m people are receiving, to help them buy health insurance on exchanges run by the federal government, were not authorised by Congress. In part the logic of the mergers is that the exchanges and the subsidies, by helping millions of poorer Americans shop for health insurance, will make it a larger but lower-margin business, so firms must combine to cut costs. If the Supreme Court takes those subsidies away, Obamacare's insurance exchanges will be thrown into chaos, and the firms may well call off their mergers until the dust settles.

There are various other factors driving





insurers to merge in a post-Obamacare world. Scale will be needed to win the best deals from a hospital sector that has already raised its bargaining power through mergers. All the insurers and Medicare (the government health plan for the elderly) are seeking to make hospitals switch to "value-based" payments—in essence, paying them for outcomes, rather than the number of treatments provided. The insurers with the most customers will be able to negotiate the best deals with the providers of care. Big insurers may also be able to negotiate better deals for drugs.

Lance Hood, an adviser to the Obamacare exchange set up in the state of Washington, says the planned consolidations are also driven by the need to achieve a broader national presence and to accelerate a move towards insurers selling directly to consumers online. (In the past most health plans were sold to employers.)

Yet mergers will not necessarily mean that any savings the insurers achieve when bargaining with hospitals will be passed on to customers. Indeed, Leemore Dafny, a professor at the Kellogg School of Management, says her research provides convincing evidence that consolidation in insurance markets tends to result in higher premiums. Cigna currently offers some of the most competitively priced policies for smaller businesses, says Donna Childs, an insurance analyst. If it is absorbed into something bigger, such customers will lose bargaining power. On the positive side, merged firms may be able to offer customers a wider choice of hospitals and doctors.

Even if the Supreme Court does not scupper the current round of mergers among insurers, they may stumble at the next hurdle, scrutiny from competition authorities. A senior antitrust official at the Department of Justice says that instead of considering each proposed deal in isolation (which would probably suit the companies involved), the DOJ will be mindful of the effect that the consolidation is having on the overall shape of the industry. That sounds like a warning not to expect the deals to be waved through. ■

Consumer firms in Germany

Spending on the Spree

BERLIN

As Germans open their wallets, they will not lose their love of a bargain

GERMANY'S neighbours in the European Union have long wished that its parsimonious citizens would save less and spend more, to boost the economy of the whole region. Might this now be happening, as Germany enjoys growth in both jobs and wages? Unemployment, down to 6.4%, has continued to fall despite the introduction of a national minimum wage in January. Last year nominal pay rose by 2.9%, and with inflation negligible it was the best year for real wage growth since 1999, notes Heiko Peters, an economist at Deutsche Bank.

Despite worries about the knock-on effects of a possible Greek exit from the euro, the German public's confidence has climbed steadily, according to a survey by GfK, a market-research outfit (see chart, next page). As a result, spending is beginning to tick upwards. And outsiders are noticing: earlier this month Hudson's Bay Company, a Canadian retailer, outbid an Austrian firm, Signa, to buy Kaufhof, Germany's biggest department-store chain.

Cosmetics and personal-care and health products are the fastest-growing category. Their sales rose by 6.6% in the first four months of 2015 compared with the same period last year, according to government statistics. That is good not just for listed giants like Beiersdorf (maker of Nivea cream) and Henkel (Schwarzkopf shampoo), but newer, smaller outfits making such things as organic cosmetics, some- ▶▶

Come shop with us

Feeling better

GfK German consumer-confidence index

Source: GfK

thing Germans are especially keen on.

Compared with, say, Britons, Germans have been unwilling to pay for television. But Sky, a satellite-TV operator, is enjoying rising sign-up rates in Germany. This may bode well for Deutsche Telekom and Vodafone (the latter has bought Kabel Deutschland, a cable-TV and internet provider). Both have invested heavily in upgrading the country's notoriously poor broadband services.

Germans are spending a bit more online, though they are mostly hunting for bargains rather than indulgences. This is good for Amazon: the American online retailer has suffered criticism in Germany over its tax and labour practices, but the country is still its second-biggest market worldwide. A local rival, Zalando, has just entered the M-DAX, Germany's second-division share index, just nine months after going public—and it has edged into profit, something Amazon famously doesn't worry about. Many of the most popular brands of clothes sold on Zalando are mid-market ones like Gap and Topshop, rather than high-end Italian couture.

Tourism is likely to get its share of Germans' rising spending, but asked which company may be the biggest winner, Fred Jeanmaire of Columbia Threadneedle, an asset manager in London, makes a surprising suggestion: not Lufthansa, the national flag-carrier, but Ryanair, a budget airline from Ireland. It has a market share of just 4% in Germany, but Mr Jeanmaire thinks it has every chance of reaching its target of a 20% share in five years. Though consumers will spend more, they will not entirely shake off their frugal ways.

Likewise, as shoppers spend more on groceries, it is likely that the beneficiaries will not be upmarket outlets, but discounters such as Aldi and Lidl. To ensure that they hang on to their customers as they begin to spend more freely, the two discount chains have broadened their range and improved the quality of their produce, says Denise Klug of Planet Retail, another market researcher. Lidl is running its first television ads, emphasising quality as well as prices; Aldi is trumpeting its commitment to animal welfare, an increasingly salient topic in Germany.

Shoppers will continue to be cautious in loosening their purse-strings, warily eyeing the situations in Greece and in Russia (where Western sanctions are hitting demand for German goods). The weakness of the euro, which has boosted German exporters' profits and made them more generous with pay rises, may not last. Likewise cheap energy prices, which have helped keep inflation low.

For these reasons it is hard to find a German analyst who is confident that the good times for consumers will stay. Frugality is an ingrained habit among German shoppers, and the businesses that will do best out of their increased confidence may be those that appeal to their desire for a bargain. ■

Corporate social responsibility

The halo effect

Do-gooding policies help firms when they get prosecuted

"THERE is one and only one social responsibility of business," wrote Milton Friedman, a Nobel prize-winning economist. "To use its resources and engage in activities designed to increase its profits." Plenty of climate-change campaigners would argue with that (see page 59). But even if you accept Friedman's premise and regard corporate social responsibility (CSR) policies as a waste of shareholders' money, things may not be absolutely clear-cut. New research suggests that CSR may create monetary value for companies—at least when they are prosecuted for corruption.

The largest firms in America and Britain together spend more than $15 billion a year on CSR, according to an estimate last year by EPG, a consulting firm. This could add value to their businesses in three ways. First, consumers may take CSR spending as a "signal" that a company's products are of high quality. Second, customers may be willing to buy a company's products as an indirect way to donate to the good causes it helps. And third, through a more diffuse "halo effect", whereby its good deeds earn it greater consideration from consumers and others.

Previous studies on CSR have had trouble disentangling these effects because consumers can be affected by all three. A recent paper by Harrison Hong of Princeton University and Inessa Liskovich of the University of Texas attempts to separate them by looking at bribery prosecutions under America's Foreign Corrupt Practices Act (FCPA). The authors argue that since prosecutors do not consume a company's products as part of their investigations, they could be influenced only by the halo effect.

The study found that, among prosecuted firms, those with the most comprehensive CSR programmes (as measured by MSCI ESG, a provider of corporate indices) tended to get more lenient penalties. Their analysis ruled out the possibility that it was firms' political influence, rather than their CSR stance, that accounted for the leniency: companies that contributed more to political campaigns did not receive lower fines.

In all, the authors conclude that whereas prosecutors should only evaluate a case based on its merits, they do seem to be influenced by a company's record in CSR. "We estimate that either eliminating a substantial labour-rights concern, such as child labour, or increasing corporate giving by about 20% results in fines that generally are 40% lower than the typical punishment for bribing foreign officials," says Mr Hong.

The authors also found that all forms of CSR are not created equal. Spending on employee and community relations had a much bigger impact on the prosecutors than did promoting diversity or being environmentally friendly.

Mr Hong and Ms Liskovich admit that their study does not answer the question of how much businesses ought to spend on CSR. Nor does it reveal how much companies are banking on the halo effect, rather than the other possible benefits, when they decide their do-gooding policies. But at least they have demonstrated that when companies get into trouble with the law, evidence of good character can win them a less costly punishment.

Schumpeter | The great gambler

Kirk Kerkorian made a fortune the old-fashioned way—by wheeling and dealing

HE WAS one of the great dealmaker capitalists of the past century. He bought and sold the MGM studios three times. He did more than anyone else to create the neon-lit fantasy land that is Las Vegas. He tried to buy Chrysler, and at one point was a big shareholder in Ford and General Motors. Kirk Kerkorian accumulated all the accoutrements of the mogul lifestyle: a lavish estate in Beverly Hills, friendships with Frank Sinatra and Cary Grant, three wives and a legendary divorce battle. (The third Mrs Kerkorian, who only stuck around for a month, tried to sue him for $320,000 a month in alimony and child support until it turned out that the child was the product of a liaison with a rival tycoon, Steve Bing.) Yet Mr Kerkorian was a very private man: he shunned the Hollywood social scene, and only saw the films he financed when they reached the cinema. After he hit 50, he focused obsessively on his tennis.

He was as self-made as you can get: the son of an Armenian immigrant farmer, he moved home at least 20 times as a child, started bringing in income at the age of nine, got sent to reform school for punching a teacher's son and made a living as a boxer, "Rifle Right Kerkorian". Then, with the war coming, he qualified as a pilot and got a job flying Canadian bombers to Britain's Royal Air Force. Mr Kerkorian saved enough money from these daredevil missions to establish his own business, Trans-International Airlines, flying high-rollers and celebrities from Los Angeles to Las Vegas. He worked as mechanic, cleaner, ticket collector and pilot, and often joined his passengers at the gambling table.

Mr Kerkorian's real passion was not running a business but doing deals: he made more than $100m by selling, buying back and reselling his airline. His move into Vegas in the 1960s inevitably brought him into contact with the Mafiosi who then infested the city. But despite their sniffing around, law enforcers and journalists found no sign of collusion with the Mob. His audacity marked him out. He outmanoeuvred legendary dealmakers like Howard Hughes and Ted Turner. He built the biggest hotel in the world three times, in 1969, 1973 and 1993.

Often, he appeared to act on a hunch. He bet heavily on Chrysler on the strength of meeting Lee Iacocca, its then boss, at a racetrack. But his deals were united by two great themes: land and leisure. He embodied a great American tradition of spotting the next frontier and snapping up bits of it before anyone else. He was among the first to realise after the war that the country was in for a leisure boom—that people were going to get richer and that they would spend their surplus wealth on having fun and travelling. Two deals he made in his 80s—buying the Mirage resorts for $6.4 billion in 2000 and the Mandalay Resort Group for $4.8 billion in 2004—gave him control of more than half of the hotel rooms on the Vegas strip. His fortune hit an estimated $16 billion in 2008, making him one of the world's 50 richest people, but fell to around $4 billion after the financial crisis.

Bold dealmakers like Mr Kerkorian used to be more common in Western boardrooms. Hollywood was created by European émigrés, such as Sam Goldwyn and the Warner brothers, who were driven by their gut instincts. Vegas was full of tycoons with outsize personalities. Mr Kerkorian died three days before Ralph Roberts, another American of émigré stock, who started with a small Mississippi cable-television outfit and, by dint of countless transactions, turned it into a corporate colossus, Comcast.

There are still a few such types around—Rupert Murdoch and Donald Trump have far more orthodox biographies than Mr Kerkorian but are both dealmakers to their fingertips. But in general, their type are making way for new sorts of billionaires: tech folk who build fortunes on the back of their own inventiveness; and private-equity and hedge-fund types who do so through financial engineering. Mr Kerkorian once said, "I didn't go to school but I went into buying and selling businesses at an early age." But today it is harder than ever to get rich (legally, at least) without the benefits of an academic education. In the most lucrative areas of business, such as technology and finance, formal qualifications are more or less a condition of entry. It is harder than ever for a teenage school-leaver to start at the bottom and rise to the executive suite.

At the same time, it is getting more difficult for a self-made man or woman to make a living out of old-fashioned wheeling and dealing. Established businesses, often run by dull company men, are better than they used to be at spotting neglected niches and filling them. Regulators and prosecutors have got better at catching up with anyone who tries to cut corners on the way up. The two worlds that provided Mr Kerkorian with his fortunes—Hollywood and Vegas—are now dominated by corporate stiffs with their entourages of accountants, lawyers and PR people.

Look east, and south

To find the new generation of bold capitalists you need to look to emerging markets, where living standards are still rising rapidly and regulators are weak. Chinese business is dominated by colourful tycoons who seized their chance when private enterprise was made legal. South-East Asia's sprawling business groups are the agglomeration of their owners' inveterate dealmaking. Eike Batista of Brazil has lost the fortune he made in mining and oil exploration, and Vijay Mallya of India has seen his airline collapse. But do not be surprised if both men pick themselves up, dust themselves down and make themselves a fresh fortune somewhere else. Even if they do not, there are still plenty of other wheelers and dealers out there, making fortunes out of big bets on the next frontier and providing the newly affluent with entertainment. "Sometimes you lose," Mr Kerkorian once said after one of his occasional setbacks, "but that's the nature of the game. There's always another game." These days the best games are a long way from Las Vegas. ■

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Divestment campaigns

Fight the power

Investors are being pressed to sell their holdings in coal, oil and gas

ON JUNE 1st a pressure group called "Reclaim the Power" organised a day of action against the energy industry in Britain, including blockades of offices, protests at art galleries sponsored by oil firms and a 1960s-style "love-in" in which agitators lay in a bed outside one of David Cameron's offices in an effort to persuade the prime minister to become greener.

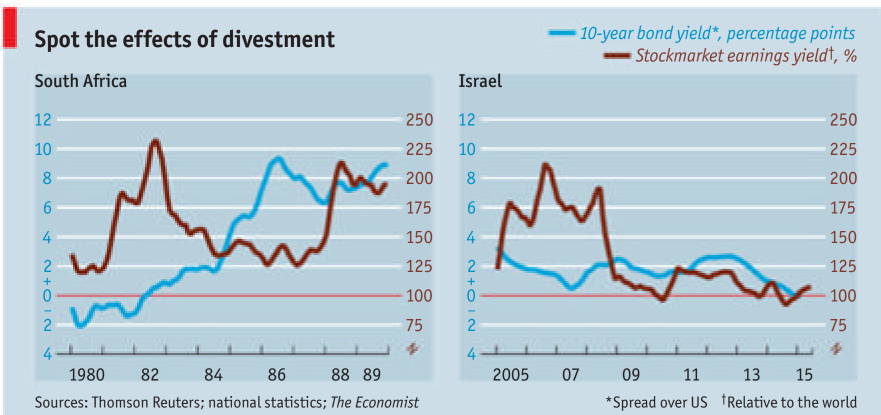
Their actions were part of a wider campaign, marshalled by 350.org, that seeks to dissuade investors from owning shares in the companies that produce fossil fuels and thus contribute to climate change. So far the protesters have managed to persuade 220 cities and institutions to divest some of their holdings, varying from the very small (the Australian Guild of Screen Composers) to the large (the $21 billion endowment of Stanford University). This month the campaign landed its biggest recruit yet: Norway's sovereign-wealth fund, which has assets of almost $900 billion, agreed to sell $9 billion-worth of shares in firms that mine coal and tar sands, a particularly polluting form of oil.

Divestment is not a new idea. A campaign against the apartheid regime in South Africa got going in the 1980s; others have long been waged against the arms trade and tobacco firms. Recently, activists have targeted Israel for its treatment of Palestinians; their campaign is known as BDS (boycott, divestment and sanctions).

Such protests naturally result in passionate debates about the rights and wrongs of each issue. But they also raise practical issues for investors considering whether to take part. The most obvious for money managers is whether divestment is a negation of the "fiduciary duty" to safeguard the interests of their beneficiaries, be they future pensioners or the citizens of Norway, by earning the highest possible return. Tobacco companies, critics of divestment point out, have yielded fantastic returns, despite much public opprobrium, gargantuan legal settlements and ever more stringent restrictions on smoking.

On the other hand, there is little evidence that ethical investing—or its close cousins, sustainable investment, environmental, social and governance (ESG) policies and corporate social responsibility (CSR)—diminish returns. A survey published in 2009 of academic papers that focused on CSR, including environmental measures, found a mildly positive correlation between the pursuit of socially responsible policies and financial performance. A more recent study by MSCI, an index firm, covered the period from February 2007 to March 2015; it found that investment portfolios with greater exposure to firms with high ESG ratings, or to firms that had recently increased their rating, performed better than the market as a whole.

On the specific issue of climate change, Mercer, an actuarial consultancy, recently



issued a report that argues, "Investors cannot assume that economic growth will continue to be heavily reliant on an energy sector powered predominantly by fossil fuels." If climate change begins to cause economic and social havoc, governments will have to act, either by restricting energy use or by taxing carbon emissions. In such circumstances, Mercer contends, it will not be possible for energy companies to exploit all their known reserves: some will become "stranded assets". The average annual returns from coal could fall by anywhere between 18% and 74% over the next 35 years, the report concludes. If such estimates are right, then eliminating exposure to the sector would be perfectly compatible with fiduciary duty.

A second question is whether divestment will make any difference to firms' behaviour. It is impossible to sell an energy company's shares without a buyer, and the buyer will presumably care less about climate change. For the energy company, life may even get easier.

Clearly, if a critical mass of investors refused to own the shares or bonds of a company (or of firms from a particular country), the reduced demand would show up in a higher cost of capital. However, it is very hard to isolate the impact of divestment campaigns from other factors. The first chart on the previous page shows South Africa's bond yield (relative to Treasury bonds) and the price-earnings ratio of its stockmarket, relative to the global index, in the 1980s, as the campaign against apartheid was gaining strength. The cost of capital for the government and local firms did indeed rise. But the South African economy was heavily dependent on gold mining at the time, and the fall in the bullion price may have been a bigger factor. The second chart shows the price-earnings ratio and relative bond yield of Israel since

Buttonwood | Wishful thinking

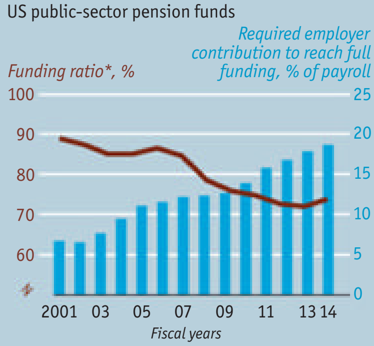
Betting on equities has not eliminated America's pension deficit

WALL STREET has been in buoyant mood in recent years. The S&P 500 equity index has reached repeated record highs. One might think that would be great news for America's public-sector pension plans, which hold more than half their assets in equities.

Only up to a point. The latest report* from the Centre for Retirement Research (CRR) at Boston College estimates that the funding ratio of pension plans—the proportion of liabilities covered by assets—has risen from 72% in 2013 to (drum roll) 74% last year. A fifth of all schemes have a funding ratio of less than 60%—a group that includes not just the usual suspects in Illinois and New Jersey but some in Alaska, Arizona, Connecticut and Kentucky.

A widening gyre

US public-sector pension funds



Source: Centre for Retirement Research

*Discounting liabilities by assumed portfolio return

To make matters worse, this calculation makes a very generous assumption. Most liabilities of a pension plan fall well into the future—a stream of payments to current and future beneficiaries who may live into their 90s. These payments must be discounted to work out the sum in contemporary dollars needed to cover them, but at what rate? Private-sector pension plans are required to use long-dated AA-rated corporate-bond yields, currently around 4%. But public-sector plans are allowed to use the expected return on their investments, which they estimate to be 7.6% on average. The higher the discount rate, the smaller the liabilities seem.

This more generous approach means the aggregate deficit of public-sector plans is "just" $1.1 trillion. But if public plans used the same discount rate as private ones, the deficit would increase to $3.9 trillion and the funding ratio fall to 45%.

This is not an arcane matter of accounting. Deficits have eventually to be closed. That means lower benefits for the retired, bigger contributions from existing employees (a pay cut) or higher contributions from the employer—which means tax increases for state or city residents, or cuts to other services.

No wonder that no one is getting to grips with the problem. Unions do not like to draw attention to the deficits, for fear benefits will be cut. Politicians do not want to pick a fight with the unions, or increase taxes and annoy voters. Instead, states and cities tend to hope that rising markets will make the problem disappear.

The allure of pension promises is that the crunch point—when schemes run out of cash to pay their members—may be decades away. By the time that happens, the current group of politicians will be out of office. Nevertheless, the contribution rate required to meet even the generous funding standard has been rising rapidly this century—it is now almost treble its 2000 level (see chart). Worse, states only cough up seven-eighths of the required payments, so the hole is growing ever bigger.

The problem with relying on the markets is that high returns look unlikely. Neither cash nor government bonds are going to deliver 7.6% a year. That leaves equities. Investors tend to believe low interest rates help equities; certainly shares tend to rally when central banks cut. But research by the London Business School, covering 20 countries over 113 years, shows that real (inflation-adjusted) returns on stockmarkets suffer when real interest rates are low. The average return when real rates were below average was 3%, compared to 7.6% when rates were above average. A real return of 3% when inflation is 2% would imply nominal equity returns of 5%—a far cry from the returns being counted on.

There is little sign that states will face reality soon. A recent rule change by the Governmental Accounting Standards Board was intended to bring the deficit calculations of public plans closer to those of the private sector. In practice, however, the CRR found that only seven of 150 plans had reduced their discount rate by more than half a percentage point.

All of this is an absurdity. It pretends that it is cheaper for the public sector to fund a pension promise than it is for the private sector. (If anything, it should be a little more expensive: public-sector workers seem to live slightly longer.) The private sector has tried to tackle the problem over the past 20 years by closing the most expensive schemes—those linked to a worker's final salary—to new members. Even so, Standard & Poor's calculates that American companies have an aggregate pension deficit of $389 billion, or $585 billion if other post-retirement benefits (largely health care) are included. The problem is at least recognised on private-sector balance-sheets. The public-sector shortfall is still swept under the carpet.

* "The Funding of State and Local Pensions: 2014-2018", Alicia H Munnell and Jean-Pierre Aubry

Economist.com/blogs/buttonwood

BDS started in 2005; if anything, the country's cost of capital has fallen. Its booming tech and pharmaceutical industries and a big gas discovery have caused capital to flood into the country, boosting growth and improving the fiscal outlook.

However, Danielle Paffard, who co-ordinates 350.org's divestment campaign in Britain, says raising the cost of capital isn't really the point. The real aim is to deny energy companies the political, social and cultural backing to influence decisions on climate change. The parallel is with the tobacco industry, where the lobbying power of cigarette-makers was eroded over time, paving the way for curbs on smoking in the name of public health. The motivation is also moral: "Climate change will have a particularly severe impact on the poorest and most vulnerable who have contributed least to the problem," Ms Paffard says.

Public enemy

So far, the campaign has had more success with endowments and charities than with big pension funds. A survey conducted on behalf of the Independent Petroleum Association of America, an industry group, found that 88% of institutional investors were unlikely to be persuaded to divest by the campaign. Many track big stockmarket indices, in which energy companies and power utilities play a large part and cannot be avoided. That problem could disappear. The ever-inventive finance industry has come up with low-carbon indices that track the overall market quite closely (a tracking error of 0.3% a year) but exclude the most polluting stocks in each sector.

For investors concerned by climate change, another option is engagement. Saker Nusseibeh of Hermes Investment Management says, "The divestment campaign makes more people aware of the problem but it doesn't solve the issue. It merely passes it on to the next owner." Instead, Hermes might try to persuade a coal-mining firm in its portfolio not to develop new mines and instead pass the profits from its existing operations to shareholders as dividends. By the same token PFZW, a giant Dutch pension fund, is asking fossil-fuel producers to invest in cleaner technologies. At the same time, it is increasing its investments in renewable energy and clean technology, aiming to quadruple them by 2020.

Divestment campaigners know they are in for the long haul. Energy producers have seen their share prices slide over the past year—but that is down to a lower oil price, rather than an environmental epiphany among investors. Ironically, the price slide has been driven by the emergence of fracking as a new source of oil: something green campaigners are dead against. But tougher regulations to stem climate change are also emerging. The battle for hearts and wallets, like the planet, is heating up. ■

Banking in Mexico

A light in the darkness

MEXICO CITY

Technology is taking finance where banks fear to tread

SOME mountainous parts of Mexico are so remote that the electricity grid fails to reach them, let alone the banking system. A five-year-old social enterprise, Iluméxico, hopes to change that. It provides more than 20,000 people with loans to buy low-cost solar panels and batteries, enabling them to switch lights on, watch television and charge mobile phones, sometimes for the first time.

It also introduces them to the financial system via those same mobile phones. It has launched a pilot project enabling them to pay off the loans in instalments via an SMS-based payment system, Transfer, owned by Banamex, one of Mexico's biggest banks. Most have no credit history, so Iluméxico takes a big risk in lending to them. Manuel Wiechers, its boss, says they are often late with their payments because rural incomes are unstable. But they are keen to maintain access to credit, so their ultimate default rates (currently 5.8%) are only slightly above the national average.

Until recently such people had little hope of getting credit other than from loan sharks or pyramid schemes. Mexican high-street banks have signally failed to provide services to the rural poor: the country has fewer branches per 10,000 people than neighbouring Guatemala, which has a much lower GDP per person. Less than 7% of the 4m microbusinesses that make up 95% of all firms in Mexico had access to

bank credit in 2013.

So Mexican authorities are hoping that technology can help Mexico to "leapfrog into modernity", in the words of Agustín Carstens, governor of the central bank. Mobile banking offers a simple way to expand services to the unbanked. The bigger challenge is credit, which is where "fintech" firms such as crowdfunding platforms see an opportunity.

On June 19th the National Banking and Securities Commission (CNBV), which regulates the industry, gave its first licence to a peer-to-peer (P2P) lender, Kubo.Financiero, which aims to provide loans to microbusinesses such as mom-and-pop grocery stores, funded by anyone with spare cash to lend. The CNBV is creating a regulatory framework that will enable more crowdfunding platforms to become regulated bodies. It has also been trying to encourage more mundane efforts to reach the unbanked, through mobile banking. ▸▸

One of the 4m

This has come after much foot-dragging. Mexico has been relatively slow to embrace new financial technology in general and mobile banking in particular, because of fears about money-laundering and the power of Carlos Slim, Mexico's richest man, to use his dominance in the mobile-phone market to stifle competition. Yet the mood has changed. "If anybody has any ideas about how to bring technology into financial transactions, our doors are open," Mr Carstens says.

Vicente Fenoll, who founded Kubo after 18 years in microfinance, says that despite its officially sanctioned status it is still keen to be a disruptive force. Banks that lend to Mexico's tiniest firms often do so at extravagant interest rates (90% a year is not unheard-of). He claims that a digital platform and better credit-screening algorithms will enable him to charge half those rates. "We are the Uber of [Mexico's] financial sector," he says. That is a whopping claim. Currently Kubo has only 47m pesos ($3m) of loans outstanding, compared with total bank credit of 2.8 trillion pesos.

Even a more conventional technology, the banks' mobile-phone platforms, has a long way to go. Banamex officials say Transfer, which is three years old, has 2.7m users—less than 3% of all the mobile phones in Mexico. Carlos Orta of the CNBV says these new technology platforms are "more of a complement than a substitute" to offline banking.

Unsurprisingly, the banks accept little blame for the low credit penetration. Alberto Gómez of Banamex, which is owned by Citigroup, an American bank, says it stems from high levels of informality among small firms, and strict money-laundering and know-your-customer rules. The cost of administering such regulations is more or less the same no matter how big or small the account, making it even harder than usual to profit from customers who do not have much money. He also says there is not a lack of credit supply in Mexico, just one of demand.

But the banks, many of which are foreign-owned, are also notoriously risk-averse. Banco de México, the central bank, said in a report in April that less than 30% of formal Mexican firms with fewer than 100 employees had access to bank credit, compared with a Latin American average of 45% (see chart on previous page). Banks also had an "explicit policy" of not lending to firms that are less than two years old. Mr Carstens says many potential borrowers do not apply for loans because they know they will not get them.

Yet when they do, evidence suggests that their creditworthiness is fairly similar to wealthier borrowers. With a click-based, rather than brick-based, banking model they will inevitably become cheaper to reach. If banks do not seize the opportunity, outfits like Kubo surely will. ■

Financing Europe's small firms

Treasure hunt

PARIS

With bank lending still subdued, small businesses look elsewhere for cash

ANDY MURRAY, a tennis ace, made headlines this month—off the court as well as on it. He is teaming up with Seedrs, an up-and-coming British crowdfunding platform through which small companies sell stakes in themselves. The Scot will advise Seedrs on the health, sports and wearable-technology sectors as well as make the odd investment himself. Through such websites, individuals and funds provided over €1.5 billion ($2 billion) in equity and debt to European small and medium-sized enterprises (SMEs) in 2014, according to researchers at Cambridge University and EY, an accounting firm.

That is a pittance compared with the €926 billion of total new external funding made available to European SMEs the year before, mostly by banks. But the amount is more than doubling each year. That is heartening, since European banks, nursing big losses from the financial crisis and trying to rebuild their capital ratios, have trimmed lending to businesses by 12% over the past six years.

A tale of two systems

Sources of corporate finance, % of GDP

Sources: AFME; BCG

Crowdfunding is just one of a number of ways in which European SMEs, typically far more reliant on bank financing than their American counterparts (see chart), are trying to compensate for the continuing decline in bank lending. Others include issuing publicly tradable debt or equity; placing securities privately with institutional investors; and accepting loans from non-bank financial institutions ("shadow banks"). Banks and others are also securitising loans to SMEs (ie, pooling them, dividing the pool into tranches with different degrees of risk, and selling the resulting securities to investors).

Governments are keen to promote all this, to limit the economic harm done by sickly banks. In France, for example, the finance ministry has taken a lead since 2012 in creating a pan-European market for private placements. In 2013 and 2014 decrees created SME debt funds and loosened the rules to let insurers invest up to 5% of their liabilities in unlisted companies. In 2014 a regulatory framework for peer-to-peer lending was put in place. Earlier this month the government pushed through parliament the *loi Macron*, which contains among its many reforms permission for one company to lend directly to another.

Italy created a mini-bond market in 2013, granted the public export agency (SACE) permission to lend directly to SMEs in 2015, and in March opened equity crowdfunding to "innovative" SMEs. Spain set up its own mini-bond market in 2013. In March Britain exempted private placements from withholding tax on revenues.

The Bank of England and the European Central Bank are working to produce a standard for simple and transparent securitisations that will entail less onerous capi- ▸▸

Dragon v bear

Chinese shares' manic rally had made them the world's top performers over the past year, but they fell nearly 15% between June 15th and 19th, their sharpest sell-off since the depths of the global financial crisis. They have since bounced back a little, but it may be only a matter of time before the correction resumes. High-growth companies are still priced at more than 100 times last year's earnings, redolent of the giddy heights of America's dotcom bubble in the late 1990s. The only certainty is that more volatility is in store. Shares swung more than 7% within a few hours on June 22nd. Weaker trading volumes suggest that investors are starting to tire of the wild ride.

Source: Bloomberg

tal charges for their buyers. Improving finance for SMEs is a central focus of a plan pushed by the European Commission to unify the continent's capital markets.

All this seems to be having an effect. Private-debt funds (investment funds that lend directly to SMEs) account for about 6% of SMEs' estimated total funding, according to the Alternative Investment Management Association (AIMA), an industry group. That share will increase to 15-20% within the next five years, AIMA reckons. A survey of hedge funds, private-equity funds and traditional asset managers with $440 billion under management revealed that 82% of them are lending to SMEs, mostly in Britain but also in France, Germany and the Netherlands. Banks and non-banks are increasingly lending alongside each other.

European private placements are multiplying too. In 2014 firms (around half of them French) raised about €6.7 billion in the market, twice the level of recent years. They raised another €11 billion through similar German *Schuldscheine* and €13 billion in American private placements.

Securitisation has been dwindling for the past few years but volumes may now stabilise. At the end of 2014 European SMEs had almost €107 billion in securitised debt outstanding, according to figures from the Association for Financial Markets in Europe, another industry group. That is a far cry from the €175 billion in the second quarter of 2012. New SME securitisations in 2014, however—some €33 billion—were well up on the €20 billion of 2013.

Almost all SME securitisations involve loans originated by banks and spun off their balance-sheets; the banks still sit in between borrowers and lenders. But Monica Curti of Moody's, a rating agency, points to another development that she believes will lead to further "disintermediation" of banks. A French investment group, Giac, is securitising pools of bonds issued by SMEs, not bank loans. Last year eight Italian water utilities pooled and securitised their mini-bonds. Igor Zelezetskii, also of Moody's, thinks securitisation will prove a shot in the arm for peer-to-business lending too.

Such steps cannot come soon enough. With bank lending still shrinking, novel forms of corporate finance will have to grow exponentially to fill the void. At least alternatives exist—and are prospering. ■

Inflation in India

Of rainfall and price rises

JALNA

Why central bankers fixate on the monsoon as much as farmers

ON A brutally hot day in May, Gani Patel is sitting in Vipin Seeds, a farm-supplies store in Jalna, a small town in a drought-prone region of India. The talk in the shop is of prospects for the monsoon, the three-month rainy season beginning in June. Business is slow. Last year's rains were below normal, so farmers are short of cash. Mr Patel grows cotton and maize on his 12-acre farm in Bhakarwadi, around 45km from Jalna. In case the rains disappoint again, he plans to install a drip-irrigation rig to make the best use of the water he draws from his two wells.

Much in India's economy depends on the monsoon. Farming is India's largest employer. Three-fifths of the land under cultivation is watered only by rainfall. Food accounts for almost half of the consumer-price index, so prices ebb and flow with the rains. A forecast at the start of June by the India Meteorological Department that the rainy season would again fall short was worrying. Then the heavens opened. Rainfall across India in the first three weeks of June was 21% above its 50-year average. Mumbai had its wettest 24 hours in ten years on June 18th-19th, causing trains to be cancelled and schools to shut.

A good start to the monsoon makes it more likely that the Reserve Bank of India (RBI) can meet its self-imposed target of driving inflation below 6% by the start of 2016. The RBI has lowered its main interest rate in three steps this year, from 8% to 7.25%. The heavy rains have raised the prospect of another cut. But the central bank has a longer-term goal to consider. In March the government set it a central target for consumer-price inflation of 4% from 2016-17, with a range of 2-6% to allow for volatile prices. To meet the goal, the many man-made influences on high food prices will need to be curbed.

The double-digit food inflation that India endured until 2013 was in large part the result of policies to boost rural incomes. NREGA, a make-work scheme introduced in 2006, put a floor under rural wages, thus increasing the cost of farm labour. In response, farmers lobbied for—and received—hefty rises in the minimum support prices the government pays for staples, such as rice, wheat and sugar. Higher prices, in turn, fed demand for even higher wages. For a while an "institutionalised wage-price spiral" was left unchecked, says Sajjid Chinoy of J.P.Morgan, an investment bank. The spiral was broken when the previous government stemmed the increase in support prices. To the RBI's relief, the price floors announced on June 17th were just 3-4% higher than last year.

Deeper reforms are needed if prices are to rise by just 4% a year. Farms are generally too small to be efficient. Costs are added at each link in the long supply chain from farm to fork. A lot of food goes to waste before it reaches consumers for want of decent storage facilities and refrigeration (see page 31). Modern supermarkets account for only 2% of grocery sales. Complex and changeable rules on foreign direct investment have kept the global chains from making bolder bets in India.

Even without changes to all this, the importance of food prices should diminish as India becomes richer and spends more money on other things. For now, though, the strength of the monsoon is of as much interest to the RBI as it is to Mr Patel. ■

Dampening down inflation

Free exchange | Have your cake and eat it

Democracy, it turns out, is good for growth after all

CHINA'S blistering economic performance in recent years has brought advocates of democracy out in hives. GDP growth in the one-party state, at an average of 10% over the past decade, has easily outpaced that of its democratic emerging-market rivals. India saw annual growth of 6% over the same period; Brazil, just 2%. Some say that democracy is to blame for India's and Brazil's slower progress. Politicians in such places cannot lay the foundations for long-term growth, the argument goes, since voters want instant gratification. Are freedom and prosperity really at odds?

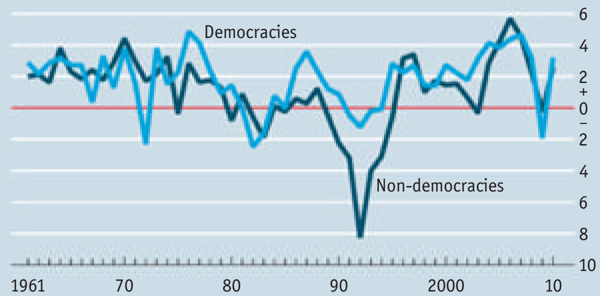
The idea is not new. In 1994 Torsten Persson of Stockholm University and Guido Tabellini, then of the University of Brescia, published a paper* that argued that in democracies, vote-hungry politicians divert resources away from people who could use them more efficiently by lavishing spending on their constituents in the form of unemployment benefits and pensions. This and political gridlock, another unfortunate aspect of democracy, both tend to slow growth. Another paper published in 1994, by Robert Barro of Harvard University, analysed data from some 100 countries before concluding that the "effect of democracy on growth is weakly negative".

Democracy's economic denigrators have not had it all their own way, however. In a paper published in 2008 Daron Acemoglu of the Massachusetts Institute of Technology argued that in non-democracies, well-connected firms use political power to shut out competition. Ukraine, an oligarchy, has a backward economy partly because investors have typically been barred from large parts of the economy, such as the gas sector. That is not the only problem with repressive regimes. When people have no political power, the risk of conflict rises: think, for example, of the protests in Hong Kong last year. That may scare away investors. Autocracies also tend to skimp on schools and health care, which pushes down on the productive potential of the economy.

Mr Acemoglu, along with three colleagues, has now come back to the question in a new paper. It notes that comparing the economic impact of different political systems is tricky. The average "free" country, according to a classification by Freedom House, an advocacy group, has a GDP per person of $17,000, four times that of the average "unfree" or "partly free" country. That could be seen as an indicator in itself, but it also presents a problem. Economists have long reasoned that poor countries should grow faster than rich ones, since they can boost growth dramatically with simple investments in schools and roads, whereas rich nations have exhausted such easy gains. Given that authoritarian countries are poorer than democracies, they should also grow faster. Add in all manner of economic and cultural differences, and disentangling the effect of democracy itself is tough.

Voting for prosperity

GDP per person*, average change on a year earlier, %



Source: "Democracy Does Cause Growth", Acemoglu, Naidu, Restrepo & Robinson, 2015

*Excluding countries which did not experience a transition between non-democracy and democracy

The paper also identifies another methodological problem. In the years leading up to a change in the political regime—ie, when a country goes from being an autocracy to a democracy (or vice versa)—GDP growth stumbles. Small wonder: such transitions often involve mass protests or violent coups. Alternatively, a flailing economy may itself make a change of regime more likely. Researchers, though, have typically failed to account for the volatile behaviour of GDP in response to such events.

Autocracies 1, democracies 1.2

The authors look at data for 175 countries from 1960 to 2010 and assess their degree of democracy based on an index that measures things like free elections and checks on executive power. They then compare growth rates and political freedom, having made adjustments for the odd behaviour of GDP during transitions and for the relative poverty of unfree countries, among other distortions. They find that a "permanent" democratisation—where there is no slide back into autocracy—leads to an increase in GDP per person of about 20% in the subsequent 25 years. When a given country is in such a democratic state, it grows faster than when it is not (see chart). The authors reckon that higher investment in schooling and health care and lower social unrest are the reason. There is also no clear evidence to suggest that poor countries benefit less from democratisation, as many had assumed.

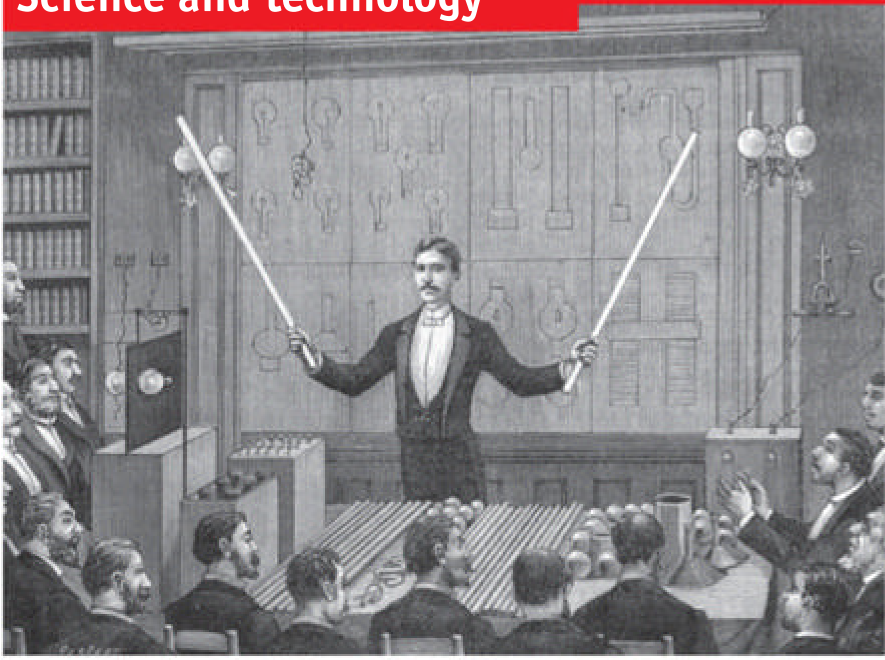
By now, sceptics will have spotted a problem. Some factors may help a country both to become more democratic and to grow faster. Take South Korea's transition to democracy in 1988. In the subsequent five years its income per person grew at an average annual rate of 6%. That makes political freedom look like an economic boon, but it is not so simple. In the years leading up to the transition, university attendance grew rapidly. As the number of educated Koreans rose, calls for democracy got louder. Yet better education may also have led to stronger economic growth in itself. That makes it hard to tell whether democratisation causes growth, or growth causes democratisation.

To help solve this problem, the authors need a clean variable, one that runs from political system to economic outcome, not the other way round. Their answer lies in the fact that democratisation in one country tends to make it likelier in a nearby country, too. Tunisia's revolution in 2010 was partly responsible for Egypt's, for example, which soon followed. Crucially, however, Tunisian politics had little effect on Egypt's growth rate. That, the authors say, means the democratisation of nearby countries can be used as a proxy for the democratisation of the country itself. This approach yields similar results: democracies fuel growth.

Not everyone will be convinced. Historians will protest that trying to compress the infinite variety of global politics into a few variables is a hopeless task. Each democracy and autocracy operates in a different way, after all. Democracy advocates may not even get that excited: few fling themselves into the cause of self-determination in order to boost GDP. But freedom and growth make for a pretty unbeatable combination. ■

* Studies cited in this article can be found at www.economist.com/democracy15

Economist.com/blogs/freeexchange



Also in this section

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Wireless charging

Coiled and ready to strike

SEATTLE

Electronics has already cut the data cord. Can it now cut the power cord as well?

DRONES may one day transform the way parcels are delivered, crops monitored and suspects apprehended. Those who talk up these possibilities, though, often neglect to mention the drawbacks of such robot aircraft—one of which is that most cannot fly for more than a quarter of an hour before they need to find a human being to swap their batteries for them or plug them into an electrical socket.

Joshua Smith, a computer scientist at the University of Washington, in Seattle, hopes to change that. In May he started a company called Wibotic that plans to recharge drones (and also earthbound robots) without them having to establish an awkward physical connection with a plug. A 'bot whose batteries were low would simply manoeuvre itself to within half a metre or so of a recharging station to top them up. LaserMotive, another Seattle-based company, is even more ambitious. It is developing a system designed to replenish the batteries of drones that are still aloft, using lasers and photovoltaic cells.

The idea of wireless power-transmission of this sort goes back more than a century. In 1893 Nikola Tesla (pictured above), who was one of the pioneers of industrial-scale electricity, illuminated light bulbs across a room in a demonstration at the Columbian Exposition in Chicago. And that was a mere fleabite compared with his grander ambitions. He claimed to believe it possible to broadcast power around the world using a system of towers and balloons, and even convinced J.P. Morgan to back a trial.

That failed, as most other physicists of the time predicted it would. (Tesla was a good scientist, but also an inveterate showman.) More modest remote power-transmission is, however, now attracting attention again. The technology Tesla pioneered is already being used to charge mobile phones, and researchers are working on similarly wirelessly powered kitchen appliances, military equipment such as heads-up displays, and medical devices ranging from heart pumps to brain monitors. IHS, a market-research firm, estimates that sales of such machines, now half a billion dollars a year, will grow 30-fold over the next decade.

A question of standards

Lasers aside, the principle behind most wireless power-transmission is a piece of basic physics known as induction. In this process an alternating current passing through a coiled wire creates an oscillating magnetic field. That field then induces another alternating current in a second, nearby coil. If the transmitting and receiving coils are close together and aligned in the same direction, almost all of the power will be transmitted. Separate the coils by more than a few millimetres however, or wiggle them around, and the efficiency of the process drops off quickly.

Inductively coupled systems like this thus work well for things like repowering electric toothbrushes. They would be impractical, though, for a drone trying to hover over a charging station. Wibotic's answer is to use tuned electrical circuits in place of simple transmitting and receiving coils. When such circuits are tuned to the same resonant frequency, they exchange energy more efficiently. That permits power to be transferred over distances up to the diameter of the coils, or even slightly farther. Besides being used to power up drones, chargers that worked this way could be shaped into bowls, to accommodate things like smart watches, or simply built invisibly into desktops.

Like induction itself, resonant induction is not a new idea (Tesla's Victorian demonstrations used it). But those demonstrations were optimised to work at one, specific distance. Modern resonant circuits are able to change their electrical properties on the fly. That, Wibotic claims, permits its equipment to cope with wobbly drones and windy days. Wireless charging also allows devices to be sealed against water or mess. Philips, a large electronics manufacturer, has, for example, demonstrated a cordless food processor powered by a coil sunk into a counter.

For remote charging to take off metaphorically as well as literally, though, devices employing it need to be interoperable. That means establishing industry standards. Unfortunately, in a competition reminiscent of that in the 1890s between alternating current (Tesla's preference) and direct current (promoted by Thomas Edison), three main consumer standards have emerged.

One, from the Wireless Power Consor- ▸▸

tium, a group of around 200 technology firms, is called Qi. It operates up to about five watts—the sweet spot for charging mobile phones. A second, that of the Power Matters Alliance (PMA), is a direct competitor of Qi. The third, Rezence, devised by the Alliance for Wireless Power (A4WP), permits higher power levels. To make matters still more complicated, PMA and A4WP merged earlier this month, meaning that one organisation now promotes two standards. And Apple, ever idiosyncratic, made a wireless charger for its Watch that complies with none of the others.

Standards wars are often won not by the sweetest technology but by whatever comes out first and fastest, and thus rolls over the opposition. In this case all three contenders seem to have a chance. Qi is the standard of choice for phone cradles in a dozen models of car, and more than 80 models of smartphone can draw power from these cradles. Qi is also built into some flat-pack tables and bedside lamps sold by IKEA.

PMA, however, is beating it in the fast-food market. Chargers conforming to its standard can already be found in several hundred American branches of McDonald's and Starbucks that hope to lure customers with the promise of refreshment for their gadgets as well as themselves. Even Rezence, which has virtually no existing applications, is in the running. Intel, the world's biggest silicon-chip maker, is adopting it for the next generation of its microprocessors destined for tablet and laptop computers.

Luckily for confused consumers, receivers that can work with two or even all three standards are starting to be built into phones and other gadgets. And, whichever does come out on top, Alex Gruzen, boss of WiTricity, a remote-charging equipment company that is a founder member of A4WP, thinks Intel's intervention will prove a turning-point. He compares it to the moment, in 2003, when the firm decided to incorporate wireless networking into its processors. This launched the Wi-Fi revolution. Something similar may now happen in the field of wireless power.

The Tesla exception

That something, moreover, may not be restricted to machines small enough to be picked up and carried. The rise of electric cars opens yet another market for remote power-transmission. Carmakers are keen to avoid the standards war that has broken out among makers of smaller gadgets. The Society of Automotive Engineers, an industry body, has consulted manufacturers, wireless-power companies and energy suppliers, and has already agreed on such things as the power level (around 20kW) and operating frequency (85kHz) of future car-charging systems.

The first cars to include such systems should arrive in 2017 or 2018. Ironically, models made by Tesla Motors will not be among them. Elon Musk, the firm's boss, is no fan of wireless power. He thinks it inefficient and underpowered compared with the (wired) "Superchargers" that Tesla Motors has developed. These provide six times the wattage of wireless, and have already been installed at hundreds of places around the world.

Fixed-point recharging stations, whether wired or wireless, are not, though, the limit of some peoples' ambitions. Qualcomm Halo, a company working with Daimler on automotive charging, envisages wireless chargers being integrated into the roadway itself. That would certainly help electric-car makers compete with rivals using other forms of power, for the batteries required to give a car a reasonable range are its most expensive component. Indeed, such technology already exists in a limited form. Electric buses in parts of South Korea, Italy, Britain and California are, today, recharging themselves from underground wireless chargers.

If convenient wireless charging lets carmakers halve the size of electric-vehicle batteries, it could slash thousands of dollars from their prices. That would make a huge difference to the economics of owning and running them. Nikola Tesla failed to beam power between continents but his tricks may yet succeed in something equally dramatic: decarbonising the world's road vehicles. ■

Tropical ecology

Blood earth

Hollow trees that host bats benefit from free fertiliser

A HOLLOW tree, you might reasonably suspect, is a dying tree. But often that is not the case, especially in the tropics. Lots of trees in tropical forests remain alive long after their cores have rotted away—a tribute, it would seem, to their resilience. However, hollow trees are so common that a thoughtful ecologist might wonder if there were more to it than mere cussedness in the face of adversity. Perhaps hollowness is actually an arboreal advantage.

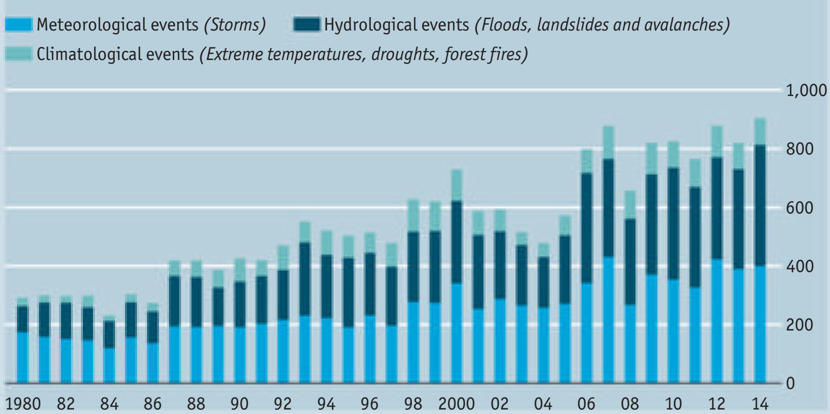
Christian Voigt of the Leibniz Institute for Zoo and Wildlife Research, in Berlin, is just such an ecologist and he did, indeed, have that thought. And, as he reports in this month's *Biotropica*, he has now turned thought into action with some ingenious observations.

Dr Voigt developed a hypothesis based on three facts. First, the soils of many tropical forests are near-bereft of vital nutrients such as nitrogen and phosphorous. The huge mass of plants in such forests sucks these elements from the ground, and competition for what remains is intense. Second, hollow trees are favoured roosting ▸▸

Wise after the events

In May India was struck by a deadly heatwave. Temperatures as high as 47°C caused 2,200 deaths. This week a heatwave in Pakistan claimed the lives of hundreds more. As the chart shows, the number of extreme weather- and climate-related events is rising. Serious storms have more than doubled in frequency since the early 1980s. Floods and heatwaves have more than tripled. The human consequences may be serious. A study published this week by the *Lancet* Commission on Health and Climate Change suggests that previous estimates of the future effect of global warming on health, made by the World Health Organisation and the Intergovernmental Panel on Climate Change, are underestimates because they failed to take into account vulnerabilities caused by ageing, migration and population growth.

Disasters caused by weather and climate



Source: Munich Re

Your friendly, neighbourhood muckspreaders

sites of bats. Third, bat excrement is rich in precisely those nutrients that are scarce in the soil. Put these facts together, Dr Voigt theorised, and being hollow might indeed be an advantage to a tree.

To test his idea, he went to Costa Rica and set up shop in La Selva, a biological reserve in the country's north. There, he conducted a study that relied on a fourth fact. This is that nitrogen comes in two isotopic forms, the heavier of which, ^{15}N, is more common in bat guano than in forest soils because of the way bats process nitrogenous compounds in their bodies.

He and his colleagues began by looking at ten artificial bat roosts scattered around the reserve. They collected soil from within these roosts and compared the nitrogen in it with that of soil collected ten metres from each roost. Nitrogen in the roost soil, they found, was 8.8% ^{15}N. That from ten metres away was 2.1% ^{15}N. As would be expected, the roost soil had been "fertilised" by the bats.

That done, the researchers looked at natural roosts in hollow trees of a species called *Dipteryx panamanesis*. When they sampled these, they found 7.7% ^{15}N inside the hollows and 5.2% ten metres away. This is not a statistically significant difference, which suggests the trees are absorbing much of the nitrogen dropped by the bats.

To confirm that idea, they analysed the nitrogen content of seeds from the hollow *Dipteryx panamanesis* specimens looked at in the study and compared it with that from seeds of uncolonised trees of similar size. The seeds from the colonised trees had more ^{15}N in them and, moreover, the size of the surplus was correlated with the number of bats in the colony.

Bats, then, seem good for trees. It would thus be no surprise if hollowness is an adaptive trait rather than a useful accident—though this remains to be determined. Most intriguing, however, was that the seeds' ^{15}N content was enhanced not only by bat numbers but also according to bat species—specifically, the presence of one called *Desmodus rotundus*. Exactly why this should be also awaits investigation, but it is probably connected with bats' diets. Most of the types of bat that roost in hollow trees are insectivorous. *Desmodus rotundus*, though, prefers different fare. In English, it is called the vampire. ■

The sport of kings

Horsey, horsey, don't you stop

Racehorses have not yet reached their physical limits

RECEIVED wisdom, among both scientists and breeders, is that a modern, thoroughbred racehorse runs about as fast as it is possible for anything horse-shaped to run. Examinations of historical records, conducted over the past few years, have concluded that winning times have stagnated. Undermining received wisdom, though, is one of the most enjoyable pursuits in science. And, in a paper just published in *Biology Letters*, Patrick Sharman and Alastair Wilson of the University of Exeter, in England, have done just that.

Those previous studies of equine velocity focused on results from the winners of a small number of elite races. Mr Sharman and Dr Wilson used two much bigger sets of data—one covering 2,243 races run in Britain between 1850 and 1996 and the other more than 50,000 races held (also in Britain) between 1997 and 2012.

In all, they looked at 616,084 times set by 70,388 horses. They found that, contrary to received wisdom, the average speed of racehorses has continued to increase—with a particularly rapid improvement after 1975. At the top of the sport, in elite competitions such as Royal Ascot, the picture is more complicated. Over middle distances (8-12 furlongs, a furlong being just over 200 metres) and long ones (14-20 furlongs) Mr Sharman and Dr Wilson found that winning times had indeed stagnated in recent decades. But over the shortest distances (five to seven furlongs) things had continued to improve. Specifically, the speed of the best short-distance horses rose by about 0.1% a year between 1997 and 2012. That might not sound much, but it was enough to reduce the average winning time over six furlongs from 72.92 to 71.74 seconds—a difference at the finishing line of more than seven lengths.

Mr Sharman, who describes himself as a racing fan first and a geneticist second, offers two explanations for his contrarian result. One is the sheer size and diversity of his data-sets, which offer a much more comprehensive view of the field than was previously available. Prestigious races of the sort focused on in the past tend to be middle-distance events, so the short-distance effect was not perceived.

The other explanation lies in the level of detail he examined. As any racing fan will tell you, the harder the ground, the faster a horse can run. Surprisingly, previous analyses had ignored this and looked merely at raw running times. Mr Sharman, by contrast, tried to account for the going. Horses have tended to run on softer ground in recent years, he notes (perhaps because harder ground is riskier as well as faster), and that tends to drag times down.

All this suggests that horses have not actually reached a hard, genetic limit to their performance. A little more imagination by breeders might thus pay dividends.

At the moment, breeders of thoroughbreds have only limited genetic material to work with. The animals in their stables are all descended from but a few dozen sires and dams. Indeed, 95% can trace their lineage back to a single 18th-century stallion called the Darley Arabian. Other parts of the horsey population—despite being slower overall—may contain genes that, if they could be isolated, might let thoroughbreds go faster still.

Extracting these genes using the tried and trusted methods of selective breeding would, however, be a decades-long project, and Mr Sharman notes that racing has been slow to adopt the sophisticated genetic techniques which have caused things like poultry yields to shoot up recently. It might therefore be worth trying a bit more science before declaring that horses will never run faster than they do today. ■

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Science fiction

Chronicle of a war foretold

The story of a conflict between America and China makes a fine example of future-war fiction

Ghost Fleet: A Novel of the Next World War. By P.W. Singer and August Cole. *Houghton Mifflin Harcourt; 404 pages; $28*

GEORGE TOMKYNS CHESNEY'S "The Battle of Dorking", published in *Blackwoods Magazine* in 1871, was a story about innovation that proved to be an innovation itself. It related, in the form of a memoir written some 50 years in the future, the downfall of Britain at the hands of Prussia, beginning with the destruction of the Royal Navy by high-tech "fatal engines" and culminating in the defeat of the army in the titular battle. An instant *cause célèbre*—leaders in the *Times* and all that—and a runaway success, it produced a swathe of imitators and a new way of talking about war that has proved popular ever since.

A distinctive feature of the new genre was that it frequently presented new technologies as decisive, both a thrilling idea and a necessary device if, as the norms of the genre required, dominant nations were to be portrayed, initially at least, as victims. The books also often had messages to impart—of the wrongheadedness of politicians or senior officers, of national decline, of geopolitical change.

"Ghost Fleet" is an entertaining new entrant into this tradition. Peter Singer, who has thought about military matters at various Washington think-tanks, and August Cole, a former defence reporter for the *Wall Street Journal*, spin a story of a war between America and China a decade or so hence that takes place mainly in the Pacific, but also in cyberspace and outer space.

The Pentagon, long used to dominance, currently worries a lot about China's defensive prowess; Chinese targets may be so well protected by missiles and radars that it would be hard for America to attack them, if such a move seemed necessary in order to assist an Asian ally. To fit the form of the future-war genre, though, "Ghost Fleet" looks not at China's ability to fend off America but at its means to attack. Moving to forestall any American claim on vast energy resources it has discovered in the western Pacific, a post-communist Chinese government uses new technologies and subterfuge to destroy America's aircraft-carriers, submarines and surveillance satellites, cripple its computer systems and subvert weapons systems that depend on Chinese-made microchips. With some Russian assistance, China invades Hawaii and establishes its dominance across the ocean. America is forced to regroup and come up with a counter-attack, one that depends heavily on the USS *Zumwalt*, its capable, slightly-but-not-very conflicted captain, Jamie Simmons, and its master chief, Jamie's estranged father Mike.

The plot rattles through its three acts in a manner well suited to beaches and long-haul flights. It is perhaps a little anticlimactic; the novelties and narrative twists deployed in the initial attacks make them more thrilling than the big battle at the end. The heart of the matter is not the plot, however, but the nifty details used to shape and adorn it.

Fighters on both sides take officially sanctioned stimulants and other drugs as a matter of course, with some combatants surgically enhanced so as to surpass human norms; familiarity with, and reliance upon, augmented-reality eyewear becomes a dividing line between seamen old and young; Walmart puts its supply chain onto a wartime footing; robot lobsters support SEAL teams. Throughout there are echoes of earlier future-war stories, from Tom Clancy's "Red Storm Rising" to Hector Bywater's "The Great Pacific War"—a novel from 1925 whose inclusion of a surprise Japanese attack on the American fleet came to look eerily prescient in 1941.

The technology is not all high, and the fighters not all straightforwardly heroic or villainous. The American resistance on Oahu—the "North Shore Mujahideen"—moves by mountain bike, uses GoPro cameras to record the carnage caused by its improvised explosive devices and provokes atrocities to keep the occupiers from winning the submission of the islanders.

The book makes fairly clear which side the authors take in various current military debates. They think more should be spent on dogfighting drones. They want a defence industrial base that is nimbler and more secure. They are keen on weapons that can smite things far faster than current missiles can, such as rail guns and laser beams. Their version of the *Zumwalt*, which in the real world is an experimental destroyer close to being commissioned, and which in the novel's world has already been mothballed to the "ghost fleet" of the title, is kitted out with both.

They are intriguingly hard to read, ▸▸

though, on the key issue of the future of the aircraft-carrier. As missiles get better, the craft seem all but certain to become more vulnerable, as the American carriers in "Ghost Fleet" prove. But the book is silent on what to do about that in a world where America depends on them above all other tools for the projection of power.

Unlike Chesney, whose story ended with Britain a province of the German Reich, the authors do not underline their messages by having America's defeat made permanent. Instead, after heroism, high-jinks and sacrifice, the Pacific is returned to something like the status quo. But if aircraft-carriers really are on the losing side of the sort of technological progress the book portrays, the real-world status quo looks unlikely to persist over the decades to come. ■

Vaccination

The lifesaver

Jonas Salk: A Life. By Charlotte DeCroes Jacobs. *Oxford University Press; 559 pages; $34.95 and £22.99*

THE 1910s were not always kind to New York. In mid-1916 the city faced a polio epidemic that killed a baby every 2½ hours. Hospitals were full, and paralysis would leave many survivors in wheelchairs, on crutches or bedridden for life. Two years later a vicious form of influenza killed over 33,000 New Yorkers and 20m worldwide.

Jonas Salk, born in 1914 in a tenement in the city, was spared. In her biography of the man who developed the first polio vaccine and played a major role in developing the first flu vaccine, Charlotte DeCroes Jacobs, a professor emerita of medicine at Stanford University, weaves together intimate and historical details. She paints a picture of a sensitive, genuinely kind idealist who pursued what he thought was right with gentle but unrelenting tenacity.

The first half is a fascinating—and at times nauseating—tour of vaccine-making's past: myriad monkeys sacrificed gruesomely on the altar of science; zealous researchers drinking minced rat brain teeming with polio to prove the concoction could vaccinate; inmates of mental asylums deliberately infected with influenza. The last was a practice that Salk and his mentor, Thomas Francis, used in 1942 to test their vaccine, which became the first ever against the disease.

In 1955 Salk won the race to develop an effective polio vaccine, using a version containing poliovirus killed by chemicals. He beat the scientists promoting live-virus vaccines, most prominent among them Albert Sabin, who would remain Salk's caustic nemesis. The previous year Ms Jacobs had been one of the second-graders vaccinated in the 14,000 American schools selected for the Salk vaccine trial; parents of children not in the trial begged for a place.

The vaccine won Salk the adoration of the public. This never faded, even though America's health authorities chose Sabin's oral polio vaccine in 1962, before reverting to Salk's on safety grounds in 1999 (Sabin's vaccine causes paralysis in rare cases)—and even though Salk never made any further important discoveries, as he veered into what he called "biophilosophy" and became busy with the Salk Institute.

His vision for the centre was of a scientific Shangri-La where biology and humanism melded, and ideas roamed free of worries about money for salaries. The emphasis on arts and humanities eventually waned, but the Salk has gone on to become one of the world's top research institutes.

Journalists loved Salk for his soft-spoken way of explaining vaccines to television viewers, for showing them around his lab, and for posing obligingly with his unwilling family. That, Ms Jacobs surmises, is why they never published details of his many affairs. These were more common in older age, when Salk's second wife, Françoise Gilot (a French artist who had been Picasso's mistress) spent most of the year away. Loneliness seems to have played a role, but also a desire for the deep, intimate connection that he never found in his life.

Salk's scientific peers, by contrast, never gave him the praise he wanted. Many detested the way he danced with the media—they thought it unbecoming of a researcher. Some claimed he gave no credit to others where it was due (they were wrong, Ms Jacobs argues). Their scorn hurt him, she thinks. But perhaps it did not matter all that much. Asked why he did not get a Nobel prize, Salk replied: "Everybody thinks I got it. So that's fine." ■

Drug-trafficking

On the cocaine trail

Zero Zero Zero. By Roberto Saviano. *Penguin Press; 416 pages; $29.95. Allen Lane; £20*

ROBERTO SAVIANO'S first book, "Gomorrah", put him in grave danger. An exposé of the Neapolitan mafia, the Camorra, it sold over 10m copies. But it also struck a nerve with its subject, and death threats soon followed. Mr Saviano, an Italian journalist, now moves between safe houses under 24-hour police protection. He dedicates his new book "to all my Carabinieri bodyguards. To the fifty-one thousand hours we've spent together and to those still ahead."

His movement may have been curtailed, but not his anger or ambition. His latest book, "Zero Zero Zero", is an exploration of the global cocaine trade, from the foothills of the Andes to the nightclubs of Europe. It is a well-trodden trail, but the book provides a useful overview of the industry, explaining the incongruous mix of co-operation and cruelty in each link of the supply chain.

Cocaine-trafficking is risky but enormously profitable. As Mr Saviano points out, a kilo of the drug costing $1,500 in Colombia fetches $12,000-$16,000 in Mexico and $77,000 if it makes it to Britain. According to the accountant of Colombia's Medellín drug mob, the group was trafficking 15 tonnes of cocaine into America every day in the 1980s. Thirty years later, the figures are still staggering. In Italy the Calabrian 'Ndrangheta has now overtaken the Sicilian Cosa Nostra as the country's most powerful mafia group. It turns over an estimated €53 billion ($59 billion) a year, almost half of which comes from drug-trafficking.

The book does a fine job of tracing the international co-operation required to get the drug to market. In Colombia, producers struck distribution deals with their Mexican counterparts after American authorities grew adept at intercepting their cocaine shipments. In exchange for a large chunk of the profits, the Mexicans agreed to move the drugs across the border. Alliances have also been formed with groups from further away. The Russian mafia supplies Latin American gangs with Soviet-era weapons. West African government officials store drug shipments off the coast.

In an often grisly series of passages, Mr Saviano details some of the murderous national rivalries that occasionally make the front pages. In 2006 Mexico was plunged into violence when the president, Felipe Calderón, declared war on the drug gangs by sending 6,500 troops to the troubled state of Michoacán. Over 47,000 people were killed by violence associated with organised crime between 2006 and 2011, says the government. In the first six years of the drug war 31 Mexican mayors were killed, 13 of them in 2010 alone.

The most vivid sections are those describing the industry's countless victims: the young man from Guinea-Bissau who spends a flight to Lisbon praying that the 60 capsules of cocaine in his stomach will not burst; the Colombian beauty queen whose husband has disappeared; the American undercover agent who is tortured to death when his cover is blown, his body dumped beside a Mexican road.

Structurally, the book is a bit of a mess. Lacking a coherent narrative, it is more a collection of articles, lurching from one topic to another. The effect is often disorientating and sometimes offputting. A chapter on Los Zetas, a ferocious group of Mexican traffickers composed of former soldiers, is followed, inexplicably, by a syrupy poem about cocaine. Better editing would have made for an easier read.

Despite its shortcomings, the book lands a resounding thump to the solar plexus. Taken as a whole, it is an angry rebuke to all those—traffickers and politicians alike—who perpetuate the violence. "I want to scream this loud enough so that people will know," writes Mr Saviano. His rage, both at his own predicament and that of other victims, is palpable. "As terrible as it may seem, total legalisation may be the only answer," he concludes. By reminding readers of the senseless suffering wrought by the cocaine trade, this book makes a powerful case for a new approach. ■

Gian Lorenzo Bernini

Getty got it, good

An important 17th-century carving gets the attention it merits at last

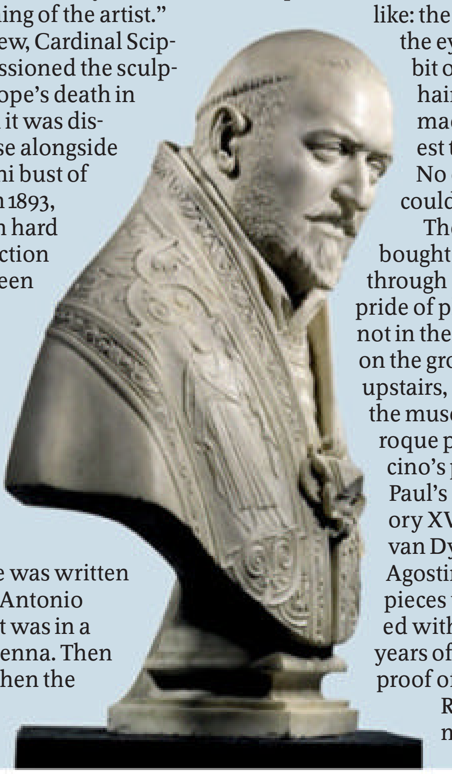
IT IS not every day that you get a phone call announcing the discovery of a long-lost Baroque masterpiece, even if you are the director of the Getty Museum in Los Angeles. When Alexander Kader, Sotheby's head of European sculpture, rang Timothy Potts, the boss of the Getty, in March, saying he might have found Gian Lorenzo Bernini's first marble carving of a pope, Mr Potts booked himself on a plane to London.

"Bernini was the master of the 'speaking likeness'," he says. "He found a way of breathing life into marble, of capturing the essence of a person. Not just the physical likeness of the pope, but his personality and stature, his benevolent seriousness and living presence. It makes you go weak at the knees when you see it, even if you know nothing of the artist."

Pope Paul V's nephew, Cardinal Scipione Borghese, commissioned the sculpture shortly after the pope's death in 1621. On its completion it was displayed in Villa Borghese alongside another famous Bernini bust of the cardinal himself. In 1893, when the family fell on hard times, it was sold at auction in Rome, having first been photographed for the catalogue. Along with this snapshot, the bust was also known by a bronze version now in the National Gallery of Denmark and through the original records of its commission.

In 1916 the sculpture was written up by an art historian, Antonio Muñoz, who claimed it was in a private collection in Vienna. Then the trail disappears. When the Getty put on its first major exhibition of Bernini sculpture in 2008, the Paul V bust was represented only by the photograph of 1893.

It turns out, though, that despite the vicissitudes of the second world war and the advent of communism, the bust had survived in perfect condition in Bratislava, not an hour's drive from Vienna. A Slovakian artist, Ernest Zemtak, kept it in his home. In 2014, a decade after he died, his heirs sold it at auction in the city, though with the lesser attribution, "after Bernini". Bought by a private collector with a good eye and a connection to Sotheby's, it was soon brought to London where Mr Kader put it on a shelf in his office. "You stand eye to eye with him, and all you can do is look at the detail. The representation of the face is so lifelike: the wrinkles around the eyes, the last little bit of carving on the hair or the moustache made with the lightest touch of the chisel. No one but Bernini could have done that."



The Getty, having bought it privately through Sotheby's, put it in pride of place on June 18th, not in the sculpture gallery on the ground floor, but upstairs, surrounded by the museum's great Baroque paintings: Guercino's portrait of Pope Paul's successor, Gregory XV, and Anthony van Dyck's portrait of Agostino Pallavicini. The pieces were all completed within two or three years of each other, visual proof of the height of Rome's Baroque moment.

Deng Xiaoping

Still in the shadows

Deng Xiaoping: A Revolutionary Life. By Alexander Pantsov and Steven Levine. *Oxford University Press; 610 pages; $34.95 and £22.99*

BIOGRAPHERS of Communist-era leaders in China face enormous challenges. Since Mao Zedong took control of the country in 1949 its most powerful figures have hardly ever given interviews to journalists. Those who have lived or worked closely with these politicians tend either to sing their praises, condemn them out of hand (usually from the safety of exile) or, in most cases, keep quiet. Official policy documents, even secret ones, are often coloured by the biases of their drafters, whose aim may be to distort or exaggerate a leader's preferences in order to promote the interests of a faction. A plethora of rumour clouds the picture further.

Writing about the life of Deng Xiaoping is one of the toughest challenges of all. For stretches of his career Deng was among Mao's closest henchmen; separating his views at the time from those of Mao is fiendishly difficult. From 1978, two years after Mao's death, until the early 1990s, Deng's was the hand that guided China's extraordinary economic transformation. Yet during this period he often operated behind the scenes; others held the post of Communist Party chief. After his retirement in 1989, he continued to play an important role with no more title than that of chairman of the China Bridge Association. (The card game was a favourite pastime.)

Two America-based scholars, Alexander Pantsov and Steven Levine, have made a painstaking and worthwhile effort to decipher what they describe as the "intricate phenomenon" of Deng. They have made extensive use of a hitherto untapped source: once-secret archives kept by the Soviet Union. The authors call these "extremely important"; such documents also provided much fodder for another biography they co-wrote, "Mao: The Real Story", which was published in 2012. Yet if the Soviets knew much more about Deng than other foreign observers, the archives quoted in the two authors' latest work do not offer a lot of evidence. The book contains many interesting details, especially of Deng's career before he became the paramount leader, but few surprises.

As the authors explain, Deng had emerged by 1958 as Mao's main interlocutor with the Soviets, who had played a critical role in helping Mao gain power. But by the late 1950s once-close ties between the two countries were unravelling. A cold war between Russia and China broke out in the 1960s that did not end until 1989, the year Deng—by then 85 years old—officially retired. Thus for some of the most critical years of this biography, the Soviets were probably as much in the dark about the goings-on of China's political elite as the Americans were.

Indeed, by the late 1970s the Americans may well have had better insights. The authors describe Deng's meeting in the Oval Office with President Jimmy Carter in 1978, during which he informed his host of his plan to invade Vietnam. The Soviet leader, Leonid Brezhnev, on the other hand, was "really flummoxed" by the Chinese decision to launch an attack early the following year on his country's South-East Asian ally with almost 250,000 troops. The sources the authors cite for Brezhnev's surprise are American ones.

The paucity of credible information about what Deng really thought and said at critical moments in China's Communist history was particularly glaring during the Tiananmen Square protests of 1989. Did he give the army a green light to kill? Was he surprised by the bloodshed? Did it weigh on his conscience? The Soviet sources appear to have nothing to offer. The authors often write with confidence about Deng's mood at other junctures. Yet about what Deng was doing and thinking on the night of June 3rd 1989, as troops moved into the square, having killed hundreds if not thousands of people, they are silent. The "many Chinese people with personal knowledge of Deng" whom Mr Pantsov is said to have interviewed appear to have offered nothing on these questions too.

Messrs Pantsov and Levine say that theirs is "the only complete and objective" biography of Deng, describing another substantial work on Deng's life—"Deng Xiaoping and the Transformation of China" by Ezra Vogel, a retired Harvard professor—as "uncritical and unrealistically positive". Their dismissiveness is jarring. Both books (Professor Vogel's was published in 2011) help in important and different ways to improve our sketchy knowledge of Deng. Both may one day need substantial revision when China's information floodgates eventually open. ■

Guggenheim Helsinki

Lacking spark

The design for the newest Guggenheim museum fails to excite

IN SPITE of the enormous success of the Guggenheim museum in Bilbao, the €130m ($145m) design chosen for the Helsinki outpost will not quieten misgivings about the foundation's aspiration to create a global cultural network.

The competition was won by an indistinct jumble of pavilions faced in charred wood that reflects all too well the ambiguities of the Guggenheim's intentions. The design, announced on June 23rd, is as quietly deferential as Frank Gehry's Bilbao design is self-consciously flamboyant. Along a quay now devoted to parking and a port warehouse, the Paris-based Moreau Kusunoki Architectes have proposed nine loosely arranged pavilions, six of which house gallery suites. Glassed-in passages and gathering spaces among the pavilions glue them into an ensemble.

The pavilion roofs turn up in identical gentle curves, with the taller ones huddling at the base of a tower topped by a restaurant—a lighthouse for dining. The visitor experience is rather shapeless, too. Most people will make their way from the city centre along a cheerless esplanade to a broad entrance plaza. They wander around a glassed-in garden and down the passageways to find the gallery entrances, and cross through the passages as they move between pavilions, which enforces a rhythm of viewing and pausing.

These in-between spaces seem the least realised of the design. Are they display spaces or hallways? Visitors tend to treat hallways as places where art that does not matter is hung.

The airport ambience of the public spaces could be enhanced by more consistently drawing in light and views to let the city resonate with the art. Nor does Moreau Kusunoki exploit the rich possibilities available for bringing daylight into galleries. Several will be lit by roof clerestories, but the architects could add sidelight. Advanced tools make it possible to provide ample daylight without harming artworks.

It is extraordinary that a design that triumphed over 1,700 competitors should turn out to be rather ordinary. It is respectful, yet teases out no identity unique to Helsinki. Moreau Kusunoki makes nothing of the waterfront site (in contrast to the much-loved Oslo Opera House, where the alluringly warped roof dips into the sea). The design considers no new way to look at art that would make it a must-visit. (The Guggenheim Bilbao transformed yet belongs.) It does not look like a gaudy franchise of a global brand bent on commodifying culture, as opponents feared it would, but neither does it look essential.

Lacking a convincing artistic role or architectural rationale, the Guggenheim has repeatedly resorted to dubious economic-development claims to overcome local scepticism. These include the shopworn "Bilbao effect", but efforts to replicate the Bilbao magic have foundered, from Guadalajara to Rio de Janeiro and Salzburg to Vilnius. Branches have closed in New York, Berlin and Las Vegas. Even Bilbao's remarkable catalytic effect occurred in the context of a massive planning and infrastructure overhaul of the entire city.

The Helsinki effort is also haunted by the gigantic Guggenheim Abu Dhabi. For years construction has been said to be imminent. But if migrant labourers should endure exploitative working conditions in the emirate, the damage to the Guggenheim could be severe. Its global idea is looking increasingly threadbare. ■

If you build it, will they come?

Courses

Economic data

% change on year ago

	Gross domestic product latest	qtr*	2015†	Industrial production latest	Consumer prices latest	2015†	Unemployment rate, %	Current-account balance latest 12 months, $bn	Current-account balance % of GDP 2015†	Budget balance % of GDP 2015†	Interest rates, % 10-year gov't bonds, latest	Currency units, per $ Jun 24th	Currency units, per $ year ago
United States	+2.9 Q1	-0.2	+2.3	+1.4 May	nil May	+0.4	5.5 May	-406.4 Q1	-2.4	-2.5	2.38	-	-
China	+7.0 Q1	+5.3	+6.9	+6.1 May	+1.2 May	+1.4	4.1 Q1§	+291.5 Q1	+2.8	-2.7	3.21§§	6.21	6.23
Japan	-0.9 Q1	+3.9	+0.8	+0.1 Apr	+0.6 Apr	+0.6	3.3 Apr	+77.4 Apr	+1.9	-6.9	0.45	124	102
Britain	+2.4 Q1	+1.2	+2.4	+1.2 Apr	+0.1 May	+0.3	5.5 Mar††	-161.3 Q4	-4.7	-4.4	2.19	0.64	0.59
Canada	+2.1 Q1	-0.6	+1.8	-0.6 Mar	+0.9 May	+1.1	6.8 May	-42.2 Q1	-2.8	-1.8	1.78	1.24	1.07
Euro area	+1.0 Q1	+1.5	+1.5	+0.8 Apr	+0.3 May	+0.2	11.1 Apr	+302.8 Apr	+2.3	-2.2	0.83	0.89	0.73
Austria	+0.3 Q1	+0.7	+0.9	+0.8 Apr	+1.0 May	+1.1	5.7 Apr	+3.2 Q4	+1.6	-2.1	1.21	0.89	0.73
Belgium	+0.9 Q1	+1.3	+1.2	+1.8 Mar	+0.6 May	+0.3	8.5 Apr	+12.1 Mar	+0.6	-2.6	1.24	0.89	0.73
France	+0.8 Q1	+2.5	+1.2	-0.1 Apr	+0.3 May	+0.2	10.5 Apr	-17.1 Apr‡	-1.0	-4.1	1.23	0.89	0.73
Germany	+1.0 Q1	+1.1	+1.8	+1.4 Apr	+0.7 May	+0.5	6.4 May	+287.0 Apr	+6.7	+0.7	0.83	0.89	0.73
Greece	+0.2 Q1	-0.7	+1.4	+0.3 Apr	-2.1 May	-0.9	25.6 Mar	+1.9 Apr	+2.7	-3.7	10.60	0.89	0.73
Italy	+0.1 Q1	+1.2	+0.6	+0.1 Apr	+0.1 May	+0.2	12.4 Apr	+48.5 Apr	+1.9	-2.9	2.14	0.89	0.73
Netherlands	+2.5 Q1	+2.3	+1.8	+0.8 Apr	+1.1 May	+0.3	8.9 May	+91.4 Q1	+9.0	-1.9	1.10	0.89	0.73
Spain	+2.6 Q1	+3.8	+2.7	+2.7 Apr	-0.2 May	-0.4	22.7 Apr	+13.7 Mar	+0.5	-4.4	2.18	0.89	0.73
Czech Republic	+4.2 Q1	+13.0	+3.1	+4.3 Apr	+0.7 May	+0.3	6.4 May§	+0.8 Q1	-0.4	-1.8	1.24	24.3	20.2
Denmark	+1.5 Q1	+1.6	+1.6	+4.4 Apr	+0.6 May	+0.6	4.8 Apr	+21.6 Apr	+5.9	-2.9	1.08	6.66	5.48
Norway	+1.5 Q1	+1.0	+0.8	-3.1 Apr	+2.1 May	+1.5	4.2 Apr‡‡	+39.3 Q1	+10.4	+6.5	1.82	7.85	6.11
Poland	+3.7 Q1	+4.1	+3.4	+2.8 May	-0.9 May	+0.2	10.8 May§	-2.7 Apr	-1.5	-1.5	3.21	3.72	3.05
Russia	-2.2 Q1	na	-3.6	-5.4 May	+15.8 May	+15.3	5.6 May§	+57.1 Q1	+4.3	-2.6	10.76	54.4	33.8
Sweden	+2.6 Q1	+1.5	+2.7	+1.5 Apr	+0.1 May	+0.2	8.0 May§	+38.1 Q1	+5.8	-1.3	1.07	8.24	6.73
Switzerland	+1.1 Q1	-0.8	+1.0	-0.5 Q1	-1.2 May	-0.9	3.3 May	+53.7 Q1	+8.0	+0.2	0.17	0.93	0.89
Turkey	+2.3 Q1	na	+3.0	+3.7 Apr	+8.1 May	+7.0	10.6 Mar§	-44.3 Apr	-4.6	-1.6	9.41	2.68	2.14
Australia	+2.3 Q1	+3.8	+2.5	+2.8 Q1	+1.3 Q1	+1.7	6.0 May	-41.9 Q1	-3.1	-2.3	3.05	1.30	1.07
Hong Kong	+2.1 Q1	+1.5	+2.4	-1.6 Q1	+3.1 May	+3.2	3.2 May‡‡	+6.1 Q1	+2.7	-0.1	1.89	7.75	7.75
India	+7.5 Q1	+11.0	+7.6	+4.1 Apr	+5.0 May	+5.4	4.9 2013	-27.5 Q1	-0.9	-4.1	7.80	63.5	60.2
Indonesia	+4.7 Q1	na	+5.0	+5.8 Apr	+7.1 May	+6.0	5.8 Q1§	-25.2 Q1	-3.0	-1.9	8.17	13,305	12,005
Malaysia	+5.6 Q1	na	+5.5	+4.1 Apr	+2.1 May	+2.6	3.0 Mar§	+11.3 Q1	+3.4	-4.2	4.02	3.77	3.21
Pakistan	+5.5 2015**	na	+5.7	+5.0 Apr	+3.2 May	+4.2	6.0 2014	-2.0 Q1	-0.6	-5.1	9.85†††	102	98.6
Philippines	+5.2 Q1	+1.2	+6.6	+1.4 Apr	+1.6 May	+2.6	6.4 Q2§	+14.5 Mar	+3.9	-1.9	4.37	45.1	43.9
Singapore	+2.6 Q1	+3.2	+3.1	-8.7 Apr	-0.4 May	+0.4	1.8 Q1	+66.3 Q1	+21.5	-0.7	2.64	1.34	1.25
South Korea	+2.4 Q1	+3.3	+3.1	-2.7 Apr	+0.5 May	+1.1	3.8 May§	+98.5 Apr	+6.6	+0.5	2.48	1,110	1,018
Taiwan	+3.4 Q1	+2.7	+3.9	-3.2 May	-0.7 May	+0.6	3.8 May	+72.4 Q1	+12.6	-1.2	1.52	31.0	30.0
Thailand	+2.2 Q4	+7.1	+3.8	-5.3 Apr	-1.3 May	+1.1	0.9 Apr§	+15.9 Q1	+2.3	-2.0	2.70	33.8	32.5
Argentina	+0.4 Q4	+0.1	-0.6	-1.5 Apr	— ***	—	7.1 Q1§	-5.1 Q4	-1.5	-3.1	na	9.07	8.13
Brazil	-1.6 Q1	-0.6	-1.1	-7.6 Apr	+8.5 May	+7.9	6.4 Apr§	-95.7 May	-4.1	-5.5	12.55	3.10	2.23
Chile	+2.4 Q1	+4.2	+2.9	-0.6 Apr	+4.0 May	+3.7	6.1 Apr§‡‡	-1.3 Q1	-1.4	-2.0	4.69	633	552
Colombia	+2.8 Q1	+3.3	+3.4	-3.6 Apr	+4.4 May	+4.1	9.5 Apr§	-19.8 Q4	-6.5	-2.1	7.18	2,559	1,890
Mexico	+2.5 Q1	+1.6	+2.8	+1.1 Apr	+2.9 May	+3.1	4.3 Apr	-25.5 Q1	-2.3	-3.4	6.04	15.5	13.1
Venezuela	-2.3 Q3	+10.0	-4.2	na	+68.5 Dec	+76.4	7.9 Jan§	+10.3 Q3	-1.8	-16.5	11.00	6.30	6.35
Egypt	+4.3 Q4	na	+4.2	-0.2 Apr	+13.1 May	+9.8	12.8 Q1§	-10.2 Q1	-1.2	-10.9	na	7.63	7.15
Israel	+2.3 Q1	+2.1	+3.5	+3.9 Apr	-0.4 May	-0.3	5.0 May	+11.7 Q1	+4.9	-3.0	2.36	3.75	3.44
Saudi Arabia	+3.5 2014	na	+2.6	na	+2.1 May	+2.7	5.7 2014	+81.2 Q4	-2.3	-11.6	na	3.75	3.75
South Africa	+2.1 Q1	+1.3	+2.1	-2.6 Apr	+4.6 May	+4.8	26.4 Q1§	-18.7 Q1	-5.3	-3.8	8.23	12.2	10.6

Source: Haver Analytics. *% change on previous quarter, annual rate. †*The Economist* poll or Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. ***Official number not yet proven to be reliable; The State Street PriceStats Inflation Index, Apr 26.8%; year ago 40.26% †††Dollar-denominated bonds.

Markets

	Index Jun 24th	% change on one week	% change on Dec 31st 2014 in local currency	% change on Dec 31st 2014 in $ terms
United States (DJIA)	17,966.1	+0.2	+0.8	+0.8
China (SSEA)	4,912.2	-5.6	+44.9	+44.9
Japan (Nikkei 225)	20,868.0	+3.2	+19.6	+15.3
Britain (FTSE 100)	6,844.8	+2.5	+4.2	+5.1
Canada (S&P TSX)	14,947.5	+1.5	+2.2	-4.6
Euro area (FTSE Euro 100)	1,196.7	+5.0	+15.4	+6.7
Euro area (EURO STOXX 50)	3,610.9	+5.3	+14.8	+6.1
Austria (ATX)	2,512.8	+3.5	+16.3	+7.5
Belgium (Bel 20)	3,719.9	+4.3	+13.2	+4.7
France (CAC 40)	5,045.4	+5.3	+18.1	+9.1
Germany (DAX)*	11,471.3	+4.5	+17.0	+8.1
Greece (Athex Comp)	780.9	+14.7	-5.5	-12.6
Italy (FTSE/MIB)	23,443.1	+5.5	+23.3	+14.0
Netherlands (AEX)	492.6	+4.5	+16.1	+7.3
Spain (Madrid SE)	1,149.2	+4.8	+10.2	+1.9
Czech Republic (PX)	982.5	+0.4	+3.8	-2.4
Denmark (OMXCB)	861.5	+2.8	+27.6	+17.7
Hungary (BUX)	21,844.7	+0.6	+31.3	+23.2
Norway (OSEAX)	694.5	+2.3	+12.1	+6.9
Poland (WIG)	54,114.4	+1.7	+5.2	+0.2
Russia (RTS, $ terms)	951.5	-1.6	+9.0	+20.3
Sweden (OMXS30)	1,611.5	+2.8	+10.0	+4.2
Switzerland (SMI)	9,081.8	+2.0	+1.1	+7.4
Turkey (BIST)	84,140.6	+4.2	-1.8	-14.4
Australia (All Ord.)	5,672.7	+1.5	+5.3	-0.7
Hong Kong (Hang Seng)	27,405.0	+2.4	+16.1	+16.1
India (BSE)	27,729.7	+3.3	+0.8	nil
Indonesia (JSX)	4,953.5	+0.2	-5.2	-11.8
Malaysia (KLSE)	1,731.7	+0.3	-1.7	-8.4
Pakistan (KSE)	34,331.9	-0.4	+6.8	+5.6
Singapore (STI)	3,351.3	+0.8	-0.4	-1.9
South Korea (KOSPI)	2,085.5	+2.5	+8.9	+8.0
Taiwan (TWI)	9,397.3	+2.3	+1.0	+3.2
Thailand (SET)	1,518.3	+0.2	+1.4	-1.3
Argentina (MERV)	11,553.4	+3.6	+34.7	+25.7
Brazil (BVSP)	53,842.5	+1.1	+7.7	-7.4
Chile (IGPA)	19,027.0	-1.1	+0.8	-3.3
Colombia (IGBC)	10,320.5	+0.8	-11.3	-17.9
Mexico (IPC)	45,424.9	+1.4	+5.3	+0.4
Venezuela (IBC)	12,457.0	-5.3	+223	na
Egypt (Case 30)	8,456.8	-1.2	-5.3	-11.2
Israel (TA-100)	1,445.2	-0.8	+12.1	+16.2
Saudi Arabia (Tadawul)	9,313.1	-2.0	+11.8	+11.8
South Africa (JSE AS)	52,783.9	+2.3	+6.1	+1.0

Foreign direct investment

Net inflows of foreign direct investment (FDI) fell by 16% globally in 2014, to $1.2 trillion, as a result of economic fragility, greater geopolitical risks and policy uncertainty. FDI flows to developed countries dropped by 28%, to $499 billion, their lowest level in a decade. Inflows to the United States fell by 60%, to $92 billion, mainly due to Vodafone's divestment of Verizon, while flows to Europe fell by 11%, to $289 billion. Owing largely to Asia, developing economies' share of FDI inflows is rising steadily: it accounted for 55% of the global total. Services continue to gobble up the bulk of investment, accounting for 63% of the global FDI stock, more than twice the share of manufacturing.

Source: UNCTAD

*Post-communist states, eastern and south-east Europe

Other markets

	Index Jun 24th	% change on one week	% change on Dec 31st 2014 in local currency	% change on Dec 31st 2014 in $ terms
United States (S&P 500)	2,108.6	+0.4	+2.4	+2.4
United States (NAScomp)	5,122.4	+1.1	+8.2	+8.2
China (SSEB, $ terms)	478.0	-4.9	+64.5	+64.4
Japan (Topix)	1,679.9	+2.8	+19.4	+15.1
Europe (FTSEurofirst 300)	1,577.2	+3.6	+15.2	+6.5
World, dev'd (MSCI)	1,785.7	+1.3	+4.4	+4.4
Emerging markets (MSCI)	993.3	+2.5	+3.9	+3.9
World, all (MSCI)	435.4	+1.5	+4.4	+4.4
World bonds (Citigroup)	862.9	-0.1	-4.4	-4.4
EMBI+ (JPMorgan)	703.3	+1.5	+1.7	+1.7
Hedge funds (HFRX)	1,252.1§	+0.6	+2.8	+2.8
Volatility, US (VIX)	13.3	+14.5	+19.2	(levels)
CDSs, Eur (iTRAXX)†	67.9	-7.8	+17.0	+8.1
CDSs, N Am (CDX)†	67.1	-2.6	+4.2	+4.2
Carbon trading (EU ETS) €	7.5	+0.1	+2.9	-4.9

Sources: Markit; Thomson Reuters. *Total return index. †Credit-default-swap spreads, basis points. §Jun 23rd.

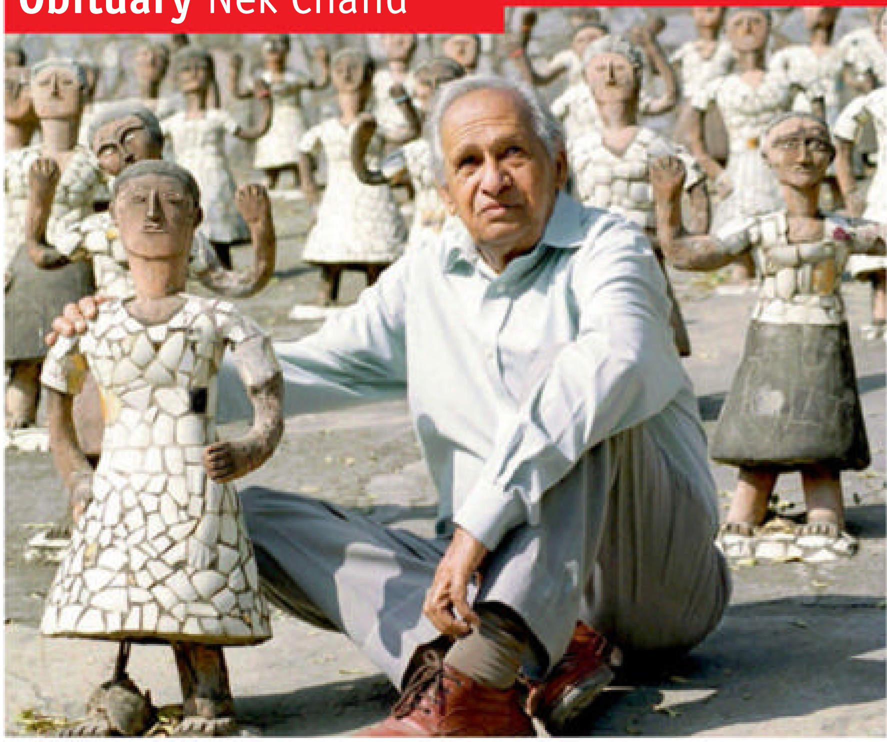
Indicators for more countries and additional series, go to: **Economist.com/indicators**

The Economist commodity-price index

2005=100

	Jun 16th	Jun 23rd*	% change on one month	% change on one year
Dollar Index				
All Items	140.0	142.1	+0.8	-16.6
Food	156.7	160.9	+3.9	-16.6
Industrials				
All	122.7	122.6	-3.1	-16.5
Nfa†	125.9	125.6	+0.6	-16.4
Metals	121.3	121.3	-4.6	-16.5
Sterling Index				
All items	163.0	164.4	-1.4	-10.0
Euro Index				
All items	155.0	158.0	-1.8	+1.5
Gold				
$ per oz	1,178.2	1,178.2	-0.9	-10.7
West Texas Intermediate				
$ per barrel	60.1	60.9	+4.8	-42.8

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.



From rubbish, beauty

Nek Chand Saini, creator of the Rock Garden of Chandigarh, died on June 12th, aged 90

AT PRECISELY 5pm each working day, from 1958 until 1975, Nek Chand, inspector of roads for the Public Works Department of the city of Chandigarh, would climb onto his bicycle. But he did not head for home. Instead he turned north, towards the Shivalik Hills and the damp, mosquito-prickling forest. The road, good at first, soon became a bumpy track and then disappeared completely. Dense brush tangled in his wheels. "There were no roads to come or go," he remembered. "Who would come here and what for?"

What he went for was to add one more rock, or a few more stones, to the secret world he was building there. The best specimens lay by the Ghaggar river, with strange man-or-woman shapes, and seemed to call out to be rescued. He brought these "individual souls", at weekends or under cover of darkness, to the space he had cleared with his bare hands in the jungle, and laid them out in patterns in the landscape. A small mud hut, its walls inlaid with perfect fist-sized stones, became his centre of operations.

To the south the great Swiss-French architect Le Corbusier was building a new Chandigarh, a "city beautiful" based on right angles and reinforced concrete. It was the first planned city in independent India. As a dutiful official, Nek Chand subscribed to these principles: he saw to it that the new highways ran straight rather than crooked, and when they cut through the old, poor, cluttered parts of Chandigarh, he accepted it as progress. In the rubble of these demolished houses, dumped not far from the forest, he found more treasure. Shards of crockery, electrical fittings, old tyres, bottle tops, sanitary ware, coal-tar drums, glass beads, discarded saris, were all carried to his secret site. These "beautiful" things he mixed with cement and sand to make hundreds of decorated figures of men, women, children and animals, standing, sitting or strolling in his city.

Among gods and goddesses

Le Corbusier's project was an immense public work. Nek Chand's was private, and at first just a hobby. He had never been taught art, sculpture or architecture. Though he had received a little general schooling in Lahore, he presumed that the family farm would be his life. He had always liked building with stones, creating little forts on the banks of the stream that flowed through his village of Berian Kalan in Punjab. One day he had found some broken glass bangles in the market; these had become decorations for tiny figures of clay, based on the stories of gods and goddesses he had heard from his mother.

All that was before Partition uprooted him from what became Pakistan. He fled first to Delhi, where his parents died, and then in 1951 to Chandigarh. The new life he made never eclipsed the old one. The earliest constructions in his garden in the forestwere modelled on both the village life he remembered and the divine haunts he imagined: winding paths, walls and rivers, terraces and waterfalls, temples and alleyways and fairground formations of dancers, musicians, water-carriers, snake-charmers, revellers, horses, buffaloes and birds. He worked fast. The intricate "kingdom of gods and goddesses" grew and grew, until by 1975 it covered 13 acres. And then the authorities came to clear the forest.

He risked losing everything at that point. The land was the government's, and his presence there illegal. At the least, he could have been fired. But city officials were so enchanted by what they found, and disarmed by the modesty of the builder, that they decided instead to encourage him. He was appointed sub-divisional engineer (Rock Garden), with a salary and 50 labourers to help him, and despite the usual administrative ups and downs—rows, money trouble, vandalism—his project flourished. Collection points for rubbish for him were set up round the city; hotels, hospitals and restaurants proved especially fruitful. The garden acquired monumental buildings in the Mughal style, and immense aqueducts hung with giant swings. Eventually it drew 5,000 visitors a day, second in India only to the Taj Mahal.

At its centre, still in his mud-hut office, Nek Chand worked on. He had no formal plans, but just noticed how stones, trees and water spoke to him. Honours poured in, both at home and abroad: his statues were exhibited in Lausanne, London and New York, his work was ponderously analysed by critics, and he was given the keys of the city of Baltimore. None of it went to his head. He kept his shy smile and quietly muttered Punjabi, his elaborate courtesy and his insistence that he was neither an artist nor a craftsman, but "completely insignificant".

Accordingly, he avoided interviews. His art he hoped, explained itself: it was about happiness, the cycle of life and the omnipresence of the gods. The chattering crowds who pressed through had to stoop as they entered buildings and courtyards, doing unconscious reverence to the spirits of the place. The peacefully staring figures—cowrie-eyed queens with hair swept from barbers' floors and bodies sheathed in shattered bangles, saints made of broken white crockery, dancers of pieced-together plastic and tile—imposed their calm authority in their land of rescued stones. For Le Corbusier might have built a city; but Nek Chand the roads inspector, out of rubbish, had created a magic world. ■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