The Economist

OCTOBER 10TH–16TH 2015

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Sisi's blind alley in Egypt

An end to corporate-tax dodges?

India: get greener by getting richer

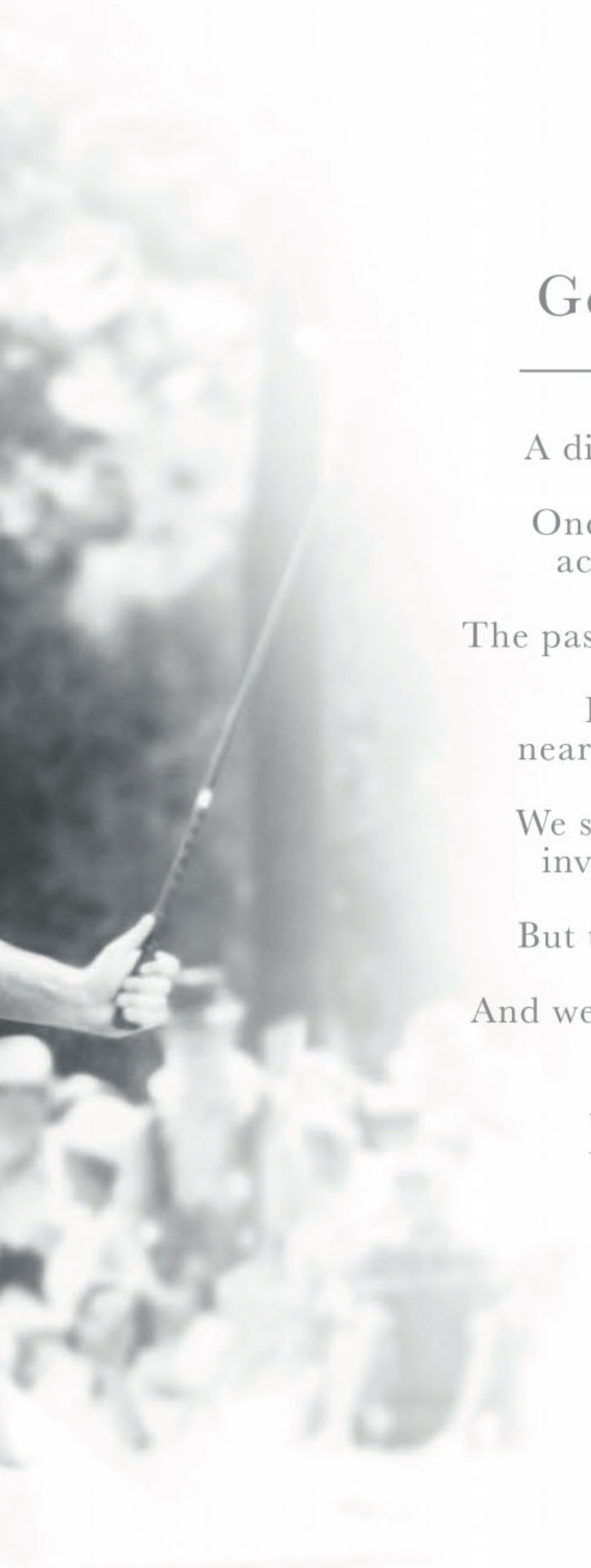
A kinder, gentler slaughterhouse

Women, men, work and family

Kill seven diseases, save 1.2m lives a year

Martin Kaymer


Gary Player

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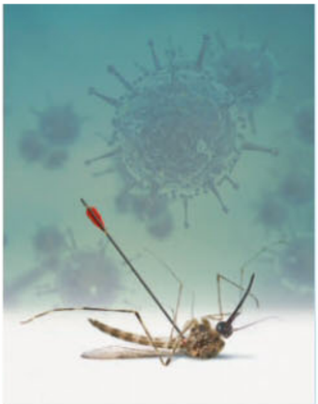

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Print edition: available online by 7pm London time each Thursday
Economist.com/print

Audio edition: available online to download each Friday
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The Economist

Volume 417 Number 8959

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

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

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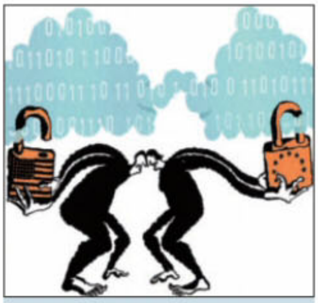

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Subscription for 1 year (51 issues)

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

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Politics

Médecins Sans Frontières (MSF) called for an independent commission to investigate strikes by American aircraft on a hospital in Kunduz in northern **Afghanistan** which killed 12 MSF medical staff and ten patients, three of them children. The attack took place as Afghan forces were attempting to retake the city from Taliban fighters. Barack Obama apologised, but the American and Afghan governments offered conflicting accounts of what happened. It remains uncertain whether Afghan troops have regained full control of Kunduz, as their government claims.

In an unusual move in **Malaysia**, nine sultans, state leaders with a largely ceremonial role, called upon the prime minister, Najib Razak, to step down. His failure to clear his name over allegations of corruption, they said, had created a "crisis of confidence" in the country.

Days after an Italian aid worker was shot dead in **Bangladesh**, a Japanese national was also killed. That led to fears that militant Islamists, who have killed Bangladeshi bloggers deemed un-Islamic in recent months, are now targeting foreigners. A Bangladeshi Baptist pastor was also knifed, but survived.

China's state-owned railways handled about 12.5m passengers on the first day of a week-long public holiday to mark the country's National Day—a record for a single day. The country's tourism regulator has proposed that local governments should be allowed to set their own public holidays to ease congestion.

Putin extends his reach

Russia continued to bomb rebel positions in **Syria**, and for the first time launched cruise-missile strikes against opponents of Bashar al-Assad's regime from warships in the Caspian Sea, a distance of almost 1,000 miles (1,600km) involving flights over Iran and Iraq. The tactic seemed calculated to underline the closeness of the alliance between Russia and Iran. Meanwhile, Turkey complained that Russian planes have repeatedly violated its airspace.

A spate of stabbings and shootings in **Israel** and the occupied West Bank led to worries that violence between Palestinians and Israelis could spin out of control. Binyamin Netanyahu, the prime minister, cancelled a trip to Germany.

Seven high court judges in **Ghana** were suspended over claims that they took bribes. The latest action comes after 22 magistrates and judges in lower courts were suspended in September over similar allegations.

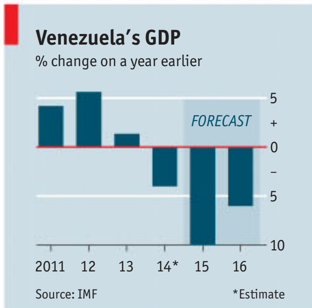
The government of **Congo-Brazzaville** called a referendum on changing the constitution to let its 71-year-old president, Denis Sassou Nguesso, run for a third term in office.

Guinea, Liberia and Sierra Leone noted their first week without registering any new cases of **Ebola** since an outbreak of the disease, which killed more than 11,000 people, began in March 2014. A huge international response, led by America, has contributed to a sharp reduction in new cases.

Buried alive

A mudslide caused by heavy rains killed scores of people in a town near Guatemala City. **Guatemala's** disaster-reduction agency had warned that the middle-class neighbourhood, which sits at the bottom of a steep hill, was in a dangerous place. Hundreds of people are still missing.

Brazil's Federal Accounts Court ruled that the government acted illegally in using money from state financial institutions to pay for spending on some social programmes last year. The decision provides possible grounds for the opposition to begin impeachment proceedings against the president, Dilma Rousseff. Earlier, the electoral court said it would reopen an investigation into whether Mrs Rousseff's re-election campaign in 2014 benefited from illegal funding.



Venezuela's economy will be one of the worst performers this year, according to the IMF. The fall in oil prices and macroeconomic imbalances will cause GDP to shrink by 10% in 2015. Inflation will be well above 100%. Price controls and a lack of foreign exchange have led to shortages of goods.

Dignity in death

Jerry Brown, the governor of California, signed a law that legalises **doctor-assisted dying**. The legislature passed the bill last month and there had been doubts that Mr Brown would sign it, but he reasoned that if he suffered a terminal illness, he would want to consider all options.

Republicans in the House of Representatives postponed their vote on choosing a new **Speaker** until October 29th. Kevin McCarthy remains the favourite, but Jason Chaffetz, a congressman from Utah, has mounted a challenge.

Another **mass shooting** in America sparked more debate about gun control. Nine people were shot dead at a community college in Roseburg, Oregon, by a fellow student. Police said the assailant killed himself during a gun battle with officers.

Migration numbers

EU officials met **Turkey's** president, Recep Tayyip Erdogan, in Brussels to discuss solutions to Europe's migrant crisis. Europe wants Turkey to crack down on people-smugglers who have been transporting thousands of migrants per day to Greek islands off the Turkish coast. Turkey wants Europe to step up aid to the 2m Syrian refugees in its country and to offer visa-free travel to Turkish citizens.

Pro-Russian rebels in eastern **Ukraine** called off their plans to hold elections outside the framework of Ukrainian law and without international monitors. The elections had been denounced by the Ukrainian government, which said they would be a step towards de facto independence and derail peace negotiations. Violence has diminished since the summer and the separatists now say they hope to be reconciled with the government in Kiev, which praised their change of heart.

Portugal re-elected the centre-right government that had led it through a gruelling bail-out programme, disappointing anti-austerity forces throughout Europe who had hoped to see the country swing to the left. Pedro Passos Coelho, the prime minister, and his PAF coalition took 37% of the vote. But with only a minority of seats in parliament he will be forced to co-operate with the Socialists. The far-left Left Bloc's share rose to over 10%.

Business

After five years of negotiations a deal was at last struck on the **Trans-Pacific Partnership**, the biggest trade accord in years. TPP covers 12 countries in Asia and the Americas that account for 40% of the world's economy. The deal was largely welcomed by political leaders; Japan's Shinzo Abe hopes it will boost exports. But TPP faces an uphill battle getting approved in some parliaments. Hillary Clinton made her opposition clear, saying it will do little to raise wages. That will appeal to Democratic voters in America's primaries, but it also undermines her policy credentials. She had been a firm supporter of TPP as recently as 2013.

A growing divide

"Tentative" recoveries in the economies of Japan and the euro area were factors that caused the IMF to lower its forecast for **world economic growth** this year to 3.1%, which would be the worst performance since 2009. The IMF's outlook for emerging markets was grim, especially for commodity-producing countries hurt by the fall in the price of raw materials. Russia's GDP is forecast to contract by 3.8% and Brazil's by 3%.

German exports fell by 5.2% in August, the most since early 2009, underlining the slowdown in China, Germany's fourth-largest export market. And America's **trade deficit** rose sharply as exports, hampered by a strong dollar, fell to their lowest level since mid-2012. But stockmarkets were buoyant as investors bet that the bad economic news, including poor figures on **jobs** in America, would delay impending increases to **interest rates** in America and Britain.

In a surprise announcement, **Deutsche Bank** said it expected to report a €6.2 billion ($7 billion) loss for the third quarter as it books various write-downs and accounting charges. As a result the German bank may not be able to pay a shareholder dividend, having contrived to disburse one even during the depths of the financial crisis.

America said it was "deeply disappointed" by the European Court of Justice's decision to overturn the 15-year-old "Safe Harbour" agreement that governs the **transfer of customer data** between Europe and America. The pact smoothed the European operations of Amazon, Google and the like by reducing red tape for storing data in the cloud. But the ECJ ruled that this jeopardises privacy, and leaves Europeans susceptible to surveillance by America's intelligence agencies.

Seven years after he was ousted from the job at the company he helped to found, Jack Dorsey was reappointed as **Twitter's** chief executive. He has been CEO on an interim basis since June, when Dick Costolo resigned after the social network posted another dismal set of quarterly earnings. Mr Dorsey has a busy time in store, as he is keeping his other job as the boss of Square, a mobile-payments startup he founded.

Flying low

Airbus confirmed that it had explored possible "business opportunities" with **Bombardier**, a Canadian aerospace company, but that the talks had ended. It was reported that Bombardier had wanted to sell a stake in its struggling C Series class of jet aircraft to the European group. Bombardier's share price has taken a nosedive since January, mostly because of worries about its mounting pile of debt.

Dell, a computer-maker, was reportedly talking to EMC, a giant in data storage, about a merger or some sort of combination of their businesses. If they do pair up it would mark a significant transition for Dell from hardware producer to IT provider.

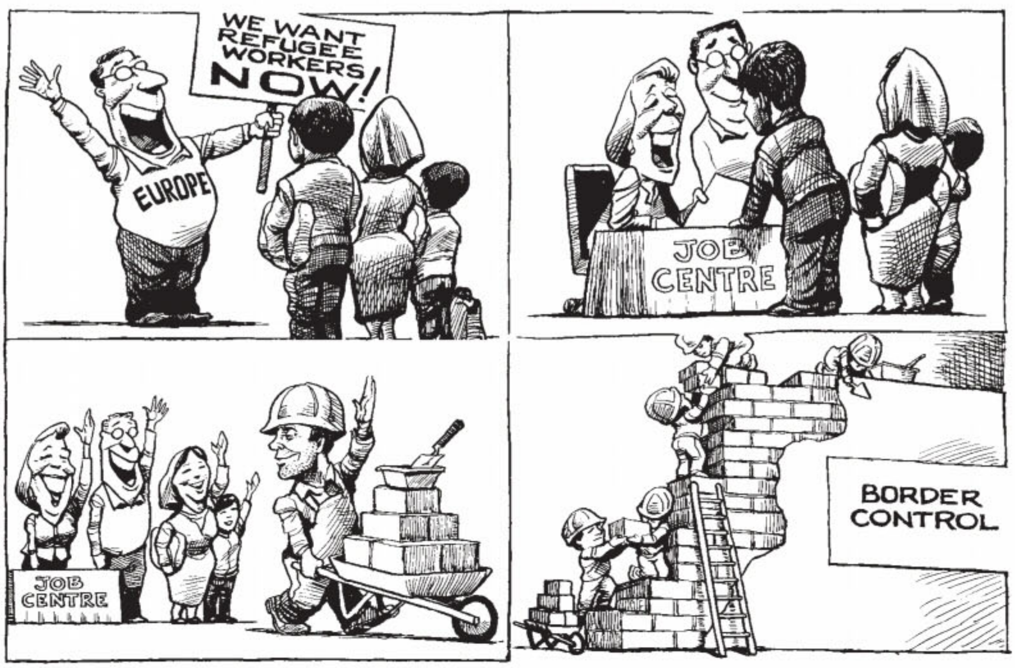
Anheuser-Busch InBev raised its offer again for **SABMiller**. Its third bid is worth £68 billion ($104 billion), but SAB again rejected AB InBev's advances, describing itself as the "crown jewel" in the beer industry and calling the latest bid "opportunistic". AB InBev wants a merger to tap into SAB's dominance in the fast-growing African market, among other things.

The final penalty that BP is paying to federal and state authorities in America to settle civil claims arising from the **Deepwater Horizon** oil spill rose to $20.8 billion. An announcement in July said the fine would be $18.7 billion, but this has been reassessed to include some fees and costs that BP had already incurred.

Suits you

American Apparel filed for bankruptcy protection. The clothing chain has long struggled with debt, and last year was thrown into turmoil when Dov Charney, its founder, was dismissed as chief executive. He has lodged a range of lawsuits against the company and former board members, claiming his sacking was unlawful. These prompted a countersuit from American Apparel accusing him of launching a "scorched-earth campaign" to retake control of the firm.

Other economic data and news can be found on pages 92-93



Eradicating disease

Viral and parasitic diseases are not only worth killing off, they are also increasingly vulnerable

TO EXTERMINATE a living species by accident is normally frowned on. To do so deliberately might thus seem an extraordinary sin. But if that species is *Plasmodium falciparum*, the sin may be excused. This parasitic organism causes the most deadly form of malaria. Together with four cousins, it is responsible for about 450,000 deaths a year, and the ruination of the lives of millions more people who survive the initial crisis of disease. Besides the direct suffering this causes, the lost human potential is enormous. The Gates Foundation, an American charity, reckons that eradicating malaria would bring the world $2 trillion of benefits by 2040.

Malaria is one of the worst examples of the damage that transmissible diseases can wreak. But it is not alone. AIDS carries off fit, young adults by the millions and tuberculosis by the hundreds of thousands. Measles, whooping cough and diarrhoea together kill over 1m children a year. Parasitic worms and mosquito-borne viruses like dengue, though they take relatively few lives, debilitate many.

Campaigns have brought the toll down heroically. As recently as 2000, malaria killed around 850,000 people a year; likewise, since 2000 deaths from measles have fallen by 75%, to around 150,000. These successes are to be celebrated, but an even greater prize exists: to go beyond controlling infections and infestations and instead to eradicate some of them completely, by exterminating the pathogens and parasites that cause them. That has been accomplished a couple of times in the past, for smallpox (a human disease) and rinderpest (a cattle disease similar to measles). The end is reckoned to be close for polio (a virus that once killed and crippled millions) and dracunculiasis (a parasitic worm). But more must follow.

Swat teams

Some diseases are not suitable for eradication because the organisms that cause them hang around in the environment, or have other animal hosts. Others, such as tuberculosis, can infect people "silently", without causing symptoms, so are invisible to doctors. But sometimes the culprit is a poverty of ambition. A list of five plausible targets—measles, mumps, rubella, filariasis and pork tapeworm—has hardly changed since the early 1990s, yet measles, mumps and rubella are all the subjects of intensive vaccination campaigns that could easily be converted into ones of eradication. And even though Swaziland is poised to become the first malaria-free country in sub-Saharan Africa (see pages 22-24), only a few dare to make explicit the goal of ridding the planet of the disease. Hepatitis C should be made a target, too. It kills half a million a year, and affects rich and poor countries alike, yet new drugs against it are almost 100% effective and there are no silent carriers. Eradicating these seven diseases—the five, plus malaria and hepatitis C—would save a yearly total of 1.2m lives. It would transform countless more.

People argue that the cost of chasing down the last few cases of a disease is not worth it. If the mass-vaccination campaigns under way can lower the incidence of measles, mumps, rubella and so on in poor countries to something close to rich-world levels, the argument goes, that is surely good enough.

Well, it isn't. A disease can bounce back. That is what malaria did in the 1960s, when political attention waned, and the parasites that cause it evolved resistance to drugs and the mosquitoes that spread it evolved resistance to insecticides.

Three big improvements underpin the argument for throwing eradication's net more widely. The first is better communications. The technology for locating and monitoring cases of disease in poor countries, even when few and far between, has improved immeasurably in the past two decades with the spread of mobile phones and the internet, and the expansion of road networks.

The second is better medical technology. The reason filariasis is on the "possibles" list, for example, is the invention of ivermectin, a drug that kills the worm which causes it. The inventors of this drug won half of this year's Nobel prize for medicine (see page 80). The other half was won by the woman who came up with an answer to drug resistance in malaria—a medicine called artemisinin, which has been crucial to the success of the recent push against the disease. (This time, alert to the risk of resistance, doctors have formulated it with other drugs to create combination therapies that natural selection finds hard to get around.)

Even better technology is in the pipeline. In the case of mosquito-borne illnesses such as malaria and dengue, genetic engineering promises ways of making the insects resistant to the pathogens that they pass on to people, of crashing the mosquito population, and even of attacking insects and pathogens with genetically modified fungi and bacteria. Genetic engineering also promises a wide range of new vaccines.

The third reason for seeking eradication is a change in political attitudes. The emergence of AIDS, in particular, made governments everywhere sit up and take notice. Last year's west African outbreak of Ebola only reinforced the message. Political attention leads to better medical infrastructure. To deal with AIDS, new networks of clinics were created and staffed with trained personnel. These can serve as the backbone of the campaigns that would be the starting-point for many extermination programmes.

The Dalek doctrine

The list of candidates for such programmes should be extended as and when circumstances change. The biggest prize might be AIDS itself. Smallpox, the first target for eradication, was picked in part because the virus that caused it had only humans as hosts and could not survive independently for more than a few hours. It had, in other words, no hiding place. Both of these are true of HIV, the AIDS-causing virus. What is missing is the third ingredient for smallpox: a reliable vaccine.

Throughout history, humans and disease have waged a deadly and never-ending war. Today the casualties are chiefly the world's poorest people. But victory against some of the worst killers is at last within grasp. Seize it. ■

The Trans-Pacific Partnership

Every silver lining has a cloud

The sealing of a Pacific trade deal is welcome. But spare the cheers

UNTIL this week, the world had not seen a big multilateral trade pact for over 20 years. The deal that has broken the drought—the Trans-Pacific Partnership (TPP), which comprises 12 countries in Asia and the Americas, including the United States and Japan—is welcome. But those who believe in free trade, and the benefits it brings, ought not to miss the bigger picture. The backdrop to this week's deal is a bleak one.

First, the pact itself. It has flaws—what compromise doesn't?—but the advantages are greater (see page 71). The negotiators who brokered the agreement in Atlanta did not just lower tariffs in coddled sectors such as agriculture, but also drew up shared rules on everything from visas for business travellers to competition policy. The deal limits veiled forms of protectionism, such as special treatment of state-owned firms and arbitrary import bans after safety scares. The benefits of such steps are hard to quantify, especially as the fine print of the deal has not yet been released, but the most comprehensive assessment thus far reckons they could boost the GDP of its members by 1% by 2025. The impact on emerging-market signatories to the deal is likely to be by far the biggest.

Away from the bright spot

Viewed from a different angle, however, the tale of TPP tells a different story. First, there is the fact that the agreement has been so hard to sell in America. It took months, and several legislative setbacks, before Barack Obama won the authority to fast-track a congressional vote on TPP. The deal may still be voted down, in America or elsewhere. Those who would succeed Mr Obama as president know that TPP holds few votes. This week Hillary Clinton, the Democratic front-runner and once a promoter of TPP, came out against it. The beneficiaries of TPP—consumers, as well as exporters—are numerous, but their potential gains diffuse. By contrast, inefficient firms and farms, about to be exposed to greater foreign competition, are obvious and vocal. Canada, for example, limited the threat to its dairy farmers and doled out a big new subsidy. The saga is a reminder of how hard free trade is to champion.

Second, the TPP deal underscores the shift away from global agreements. The World Trade Organisation, which is responsible for global deals, has been trying, and largely failing, to negotiate one since 2001. Reaching agreement among its 161 members, especially now that average tariffs around the world are relatively low and talks are focused on more contentious obstacles to trade, has proved almost impossible. Regional deals are the next best thing, but, by definition, they exclude some countries, and so may steer custom away from the most efficient producer. In the case of TPP, the glaring outcast is China, the linchpin of most global supply chains.

Third, good news on TPP stands in contrast to bad news elsewhere. Cross-border trade today is as much about the exchange of data as it is the flow of goods and services: this week saw the annulment by a European court of a deal that had enabled American firms to transfer customer data across the Atlantic (see page 61). Conventional trade faces even stronger headwinds. The volume of goods shipped in the first half of this year was just 1.9% higher than in the same period of 2014, far below its long-term average growth of 5%. This reflects not only China's soggy demand for imports—a threat to the developing economies that supply it—but also the accumulation of minor measures that silt up global trade.

Deals like TPP are the most effective way to reverse this sorry trend, by reducing tariffs and other obstacles to trade. Optimists hope it can now be expanded, to include China and others. Sadly, experience suggests that will be hard. ■

Egypt after the Arab spring

A dud return to democracy

President Abdel-Fattah al-Sisi is taking Egypt down a familiar dead end

MOST generals who seize power promise to return their country swiftly to the state of democratic civilian rule from which it lapsed owing to the misdemeanours of venal or incompetent politicians. Often, alas, no suitable civilian can be found. So the general swaps his uniform for a business suit, crushes the opposition and proceeds to establish a pliant parliament. Egypt's strongman, Abdel-Fattah al-Sisi, is treading this familiar path. But he will do nothing to resolve Egypt's many problems; he may lead his country into its next crisis.

As head of Egypt's armed forces, Mr Sisi removed the elected Islamist president, Muhammad Morsi, in a coup in 2013. Less than a year later, having passed a new constitution, he resigned from all his military roles and won the presidency with 97% of the vote in an election that none of the main opposition parties contested. Since then he has run the country by decree (the lower house was dissolved in 2012 and the upper one in 2013). Mr Sisi has stamped on the press as well as foreign and domestic NGOs. And he has banned Mr Morsi's Muslim Brotherhood, arrested thousands of its supporters, killed hundreds of its demonstrators and sentenced its leaders to death (the executions have not yet been carried out, and may never be).

Mr Sisi is now holding elections for a new unicameral par- ▸▸

liament. The first of two rounds of voting starts on October 18th. The Brothers, who won 47% of the seats in 2011, cannot contest the vote; the other main Islamist party, al-Nour, which won 24% of the seats, has become an ally of Mr Sisi's. Liberal parties have split and bickered and many of their leaders have gone into exile or been hounded out of politics. Weak election-monitoring means that only the rich and politically well-connected are likely to win seats.

Thus no one expects this legislature to be anything more than a figleaf (see page 47); among its first acts will be to endorse most of the emergency "anti-terrorist" powers the executive has awarded itself to deal with the Muslim Brothers and other graver threats, such as the jihadist insurgency in Sinai. There will doubtless be mild disagreement between the legislature and the president, but Mr Sisi will reign all but supreme.

Deal with the real problems

Many Egyptians will be content enough. As they witness chaos and bloodletting in Syria and Libya, Mr Sisi's rule may not seem too bad. There is certainly little appetite for a return to the shambolic administration of Mr Morsi: Mr Sisi is being bankrolled by oil-rich Gulf monarchies, relations with Israel have again become close and as Mr Sisi flirts with Russia, America and Europe are re-embracing him.

As the most populous Arab state, sitting astride the Suez Canal, Egypt matters greatly. The world has to deal with the flawed government it finds. But it should still be urging Mr Sisi to change. The simple fact, demonstrated time and again, is that generals are not very good at running governments. So far, Mr Sisi is no exception.

Politically he is far harsher than he needs to be, and harsher than the previous ex-military strongman, Hosni Mubarak. Mr Sisi risks radicalising hundreds of thousands, even millions, of people—for a start, consider the 13m who voted for Mr Morsi. A wiser man than Mr Sisi would be seeking an accommodation with at least parts of the Brotherhood, not making one impossible. Instead of encouraging greater moderation, America's resumption of military aid in March sent the wrong signal.

Economically, Mr Sisi favours a big state and dubious grand projects: a new city far out in the desert, say, or a new branch of the Suez Canal. He is also buying expensive weapons, including two French helicopter carriers, of little use in Sinai though handy for intervention in, say, Libya or Yemen. Egypt's official unemployment rate stands at 12.7% (it is more like 35% for the under-25s, who make up half the population). The country is running huge budget and current-account deficits. Investors find its courts stacked against them. The bureaucracy is unaccountable and sclerotic. With oil at $46 a barrel, Egypt's friends in the Gulf may struggle to bail Mr Sisi out for ever.

Mr Sisi needs to trust his people more, economically and politically. He should empower small firms and let society bloom, not run everything from the top. As Mr Mubarak discovered, the people will sooner or later revolt against the chain of command—even when the top man has put on a suit. ■

Europe's migrant crisis

Angela the beleaguered

The German chancellor faces a backlash on asylum-seekers. She should hold firm

WHEN Angela Merkel bravely decided to tackle Europe's migrant crisis head-on, she may have underestimated the challenge. By refusing to limit the number of refugees Germany would take in and insisting that the rest of the European Union accept some too, Mrs Merkel committed her country to two enormous projects. The first was to absorb a vast wave of immigrants very quickly. The second was to finish the job of creating the common EU external-border and immigration system which the union's open internal borders require.

Germans at first greeted Mrs Merkel's bold move by cheering in the streets and handing out sweets to refugees. But as the size of the immigration wave becomes apparent, the mood is shifting fast (see page 51). The numbers are straining towns' capacity to provide migrants with shelter and public services. Some 51% of Germans now say they are worried about the migrants, up from 38% a month ago. Mrs Merkel's popularity has dropped to its lowest level since the start of the euro crisis in 2011. Protesters' placards and even a television news show depict her wearing a Muslim *chador* (see picture). Her rivals, and some allies, are demanding that she slow down or reverse course. Some have called for closing the borders to refugees.

Mrs Merkel may have to make short-term compromises, but she should not surrender her principles. Those who accuse her of making policy on the fly with little notion of the consequences are correct: precisely because Europe faces a migrant crisis with unforeseeable consequences, its leaders need to act quickly. After leaders wasted the summer futilely shuffling migrants along or building fences to keep them out, Mrs Merkel forced the European Union to face reality. The only way EU states can handle the crisis properly is by acting together.

Ever since Mrs Merkel took the lead on the crisis, critics have begun speaking as though she created it. That is nonsense. By late August, hundreds of thousands of asylum-seekers were already making their way through Europe. It was no longer possible to pretend that the problem did not exist or belonged to someone else. Those who criticise Germany's decision to welcome them seldom explain what they would have done instead. Should the migrants have been fenced out and trapped in Serbia, as Viktor Orban, Hungary's prime minister, attempted, or dumped back on recession-stricken Italy and Greece? Should they have been rounded up and returned in locked trains to slums and refugee camps in the Middle East? What European voters would have stood for such a mass deportation? Not Germans—to their credit.

The world would be a better place if more of its people lived in safe, prosperous countries with the rule of law. Rich countries cannot be expected to welcome everyone who wants to move there, but today they take in only 14% of refugees worldwide. While wealthy Germany struggles to absorb hundreds of thousands of refugees, Syria's neighbours—Turkey, Leba- ▸▸

non, and Jordan—have sheltered nearly 4m of them for years. So it is hard for Europe to argue that it has done all it can to honour a legal obligation—to offer asylum to those who need it—that it freely acknowledges.

And the refugees it takes in will ultimately make Europe stronger and wealthier. Fears that immigrants will drain public finances and steal jobs have always proved to be wrong in the long run. In a tub-thumping speech on the evils of immigration this week, Theresa May, Britain's home secretary, wilfully disregarded the latest research (see page 58).

The risk that European societies fail to integrate Muslim newcomers is genuine. But the solution lies in governments' own hands: help them become Europeans, by mixing immigrant housing into native districts, as Stuttgart has; by compulsory language and integration lessons such as those in the Netherlands; and by granting asylum applicants work permits.

Just now, Germany faces a large surge in immigration. To regulate the flow, Germany and the EU are negotiating with Turkey to curb the people-smugglers and help Syrians settle there. For the plan to work, the EU must vastly increase aid and press Turkey to offer refugees the right to work; the EU will also have to grant Turks visa-free travel.

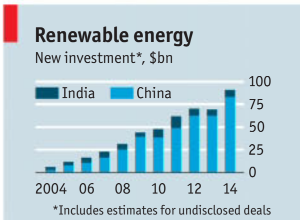
A job to do

Turkey is just part of the answer. The flow of refugees could last for years, and Europe urgently needs a common asylum system. EU-funded hotspots to process applicants quickly would help. Member states need to live up to their promises to beef up Frontex, the EU border agency. Agreements to distribute 160,000 asylum-seekers across the EU should be expanded. Mrs Merkel understood that it is in Europe's own interest to be more humane to asylum-seekers. The alternative is chaos. ■

India and the environment

Greenery by stealth

India shows that there are more ways of cutting carbon emissions than by having grand environmental targets



BEING green often seems to mean pledging to cut carbon dioxide emissions: that is, saying that your country would emit vast amounts of carbon dioxide in 2030 if it didn't do anything and then claiming how much less it will actually emit as a result of your wise and responsible policies. As part of negotiations for a global climate treaty due to be signed in Paris at the end of the year, almost every big country has set itself an emissions target—except one. India has promised only to limit the amount of carbon dioxide per unit of GDP: a relative target, not an absolute one. This might seem like a cop-out. India is the world's fourth-largest emitter. It will be the biggest single contributor to new greenhouse-gas emissions in the next 15 years. Although rarely treated as such, India is one of the big beasts of the climate arena. Over the next 15 years it will have as great an environmental impact (for good or ill) as America or China.

Despite that, India's unwillingness to set an absolute target is understandable. It is the fourth-largest polluter only because it is so populous. Each Indian emits merely one-tenth as much carbon dioxide as each American, because Indians are so much poorer. However, as they move to cities and get richer, they will drive more cars, use more air conditioners, build more houses and consume more electricity. To ask Indians for an ambitious cap on emissions risks them staying poor because of a problem mostly caused by other, richer people. That is a hard sell anywhere, let alone in a fractious democracy.

Nonetheless, there are plenty of other reasons why India should curb pollution. Smoky indoor air is one of the country's biggest killers, because hundreds of millions of villagers cook by burning wood and cow dung. Outdoors, Delhi's air is filthier than Beijing's. Hundreds of millions of Indians depend on the monsoon for their food, and the monsoon is likely to become less reliable as a result of global warming. Many millions more live on coastal plains or depend on rivers that flow down from the Himalayas, making them vulnerable to rising sea levels and the retreat of glaciers. Other countries suffer some of these problems. Few have them all.

So how does India get richer while minimising the pollution that often comes with growth? The answer is to adopt policies that are needed for other reasons but which have environmental benefits, too. Consider the railways, traditionally not an environmental matter. Almost uniquely, India transports heavy goods, such as steel, long distances by road because the rail-freight system is so lousy (passenger traffic gets priority). Shifting freight onto railways would be more efficient and less polluting. Also, India is providing millions of villages with solar- and wind-generated electricity (see page 39). The justification is not (as it would be elsewhere) that this replaces fossil fuels with low-carbon energy. Rather, it is that it eases poverty (by providing poor villages with power) and improves public health (by allowing villagers to stop burning dung). Oh yes, and the sun and the wind are lovely and green.

Pretend it's all about efficiency

Reform in India is hard: the country has been trying to improve its railways for years. But explicitly green policies (such as subsidising wind farms or cutting power-station emissions) are not easy either. And India has recently reformed or removed subsidies on diesel and liquefied natural gas, showing that it can save money and curb emissions at the same time.

Other countries could learn from its experience. Policies labelled "green" don't always win public support. Those which promise to make people richer or healthier more often do—and their incidental environmental benefits can be huge. According to a group of economists headed by a former Mexican president, Felipe Calderón, smarter urban policies could cut the cost of new city infrastructure in developing countries over the next 15 years by $3 trillion. As a pleasant side-effect, such policies (better public transport, energy-efficient buildings and such like) would reduce carbon dioxide emissions by 1.5 billion tonnes a year—worth having in its own right. India shows that you can be green by stealth. Finding more ways to do that would be better than any number of global targets. ■

What VW knew

Martin Winterkorn lost his job as Volkswagen's boss because the carmaker cheated emissions tests ("Dirty secrets", September 26th). Yet the heads of the environment agencies in America and Europe are still at their desks. This is despite the fact that the only way they wouldn't have known that engine software might be detecting test conditions and adjusting the engine was if they had spent the past two decades on another planet.

In 1998 America's Environmental Protection Agency reached a $1 billion settlement with heavy-duty diesel-engine manufacturers over their use of precisely the same software approach as VW. There were literally hundreds of articles discussing this use of engine-controller software in technical, popular and engineering-news journals. Media reports show that officials from the EPA were present at a meeting in 1994 at which an EPA staff member discussed control strategies based on the test cycle. This demonstrates that at the very least the EPA had notice that electronic engine-controllers were being programmed to detect tests as early as 1994. It is impossible for any competent regulator to have been unaware of what was going on with other diesel engines after 1998.

You called for criminal prosecutions of executives that engage in this sort of behaviour. When will you start to hold regulators to the same standard?

ANDREW MORRISS
Dean
Texas A&M School of Law
Fort Worth, Texas

The VW scandal raises questions about a 1970s-era regulatory regime that is based on a one-size-fits-all emissions standard set at a national level, when the reality is that air quality is largely an urban, regional and sometimes seasonal problem.

Indeed, preferring a reduction in NOx emissions at the expense of lower efficiency and therefore higher carbon emissions has a possibly negative environmental benefit for a car driving along a deserted interstate in Montana, compared with a stop-start commute through smog-choked and densely populated Los Angeles. But if VW's technically brilliant "defeat" software is able to discern the purpose of the car's operation and adjust its pollution output accordingly, then surely with GPS technology it should be able to detect its location and make the same adjustments. Feed real-time atmospheric condition data to the vehicle and it might dynamically adjust this trade-off in urban environments, preferring efficiency on clear, windy days, and lower NOx emissions on still, smoggy ones.

Put to a nefarious purpose, VW's algorithms could well lead to its demise. But combined with updated, technology-driven regulation, this same code could contain the seeds of a smarter, more efficient approach to reducing transportation emissions.

GLENN KENNEDY
George Town, Cayman Islands

Such unacceptable corporate behaviour will only cease when chief executives go to jail. Yet in Europe our regulators are asleep at the wheel. Football and diesel cars are small in America and big in Europe, but it is the American authorities who have taken action in those two scandals. How much longer will Europe allow non-compliance to be a competitive advantage?

GUY VILLAX
Chief executive
Hovione
Loures, Portugal

Muslims in the South

You ignore, wilfully or otherwise, relevant and important facts on Muslims in the southern United States ("Some stand with Ahmed", September 26th). You believe Americans have no basis in fact for their concern about the integration of Muslims into American culture. And you suggest Muslims have some special claim to Americanism based on a speculative relationship, touted by a tiny museum, between the Muslim call to prayer and Mississippi blues. All this diminishes the hard and necessary work being done by moderate Muslims seeking to bridge the gap between their religion and America's fundamental values.

By pretending the cancer of radical Islam does not exist, you permit it to spread.

JOSEPH BARTEL
Sarasota, Florida

Not as black and white

"Green and blacks" (September 26th) bemoaned the lack of black players in South Africa's rugby squad. Most countries simply pick the best players. There is no pressure in American sports to field a team that is 15% black, and which must include Hispanics, native Americans or Hawaiians. Nor must a Malaysian team be 54% Malay, 10% Indian and 26% Chinese.

The ANC is at least as obsessed by race as the apartheid regime it replaced. Everything from business to entertainment to sport has some government-dictated racial component or quota. Few South Africans, apart from the politicians, care about the racial mix of teams in rugby, cricket and football. It is particularly demeaning to players "of colour" who want to be included in a team for no other reason than being the best talent the country has available.

The ANC has ruled for 21 years. Its record regarding the lack of noticeable improvements in education, infrastructure or facilities surely plays some part in sporting disparities.

RAYMOND DICKINSON
Johannesburg

Rank hypocrisy

I was pleased to see the World Bank's annual Doing Business report coming in for a gentle rebuke ("Pulling rank", September 26th). During my seven years at the Spanish agency for foreign direct investment the report was the scourge of our political masters. You gave three examples of the ranking's flawed methodology and I offer a fourth: the much discredited practice of "mystery shopping", where a consultant, claiming to protect the confidentiality of a multinational client, demands a vast quantity of detailed information to be supplied within an unreasonably short time.

The bait is a succulent multimillion-dollar investment creating plenty of high-quality jobs and Invest in Spain, in its youth, fell into the trap of believing that "Project Apollo" really existed. When the scales fell from our eyes we developed a protocol for deflecting our resources—financed by the Spanish taxpayer—from fictitious projects. For this fiscal zeal, Spain scored a glorious zero in the report's category of "agency responsiveness".

CAMILLA SHARP
Vice-president
Conway Events
London

Getting the needle

So some parents in California don't want their children vaccinated against measles and other diseases, describing mandatory immunisation as a "theft of liberty" and government "tyranny" (Lexington, September 26th). If they succeed in their aims it would be an appalling triumph of ideology over public health. I guess one man's tyranny is another man's typhus.

GEORGE KOVAC
Miami ■

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EUROPEAN CENTRAL BANK

EUROSYSTEM

DEPUTY DIRECTORS GENERAL

(REF: 2015-209-EXT)

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Breaking the fever

MAGAGASI, SWAZILAND AND PAILIN, CAMBODIA

The end is in sight for one of humanity's deadliest plagues

IN A dusty yard in Magagasi, a small village in eastern Swaziland, a man in surgical gloves draws Gugu Dlamini's blood for the third time this year. The health worker lays a drop of it on a small plastic tray and adds a clear solution. The ritual is familiar. Every time a malaria case is reported in the country, surveillance officers sweep in and test everyone living within 500 metres of the sick person. In a few minutes a single line appears in the tray's indicator window: Ms Dlamini does not have malaria.

Such vigilance has brought Swaziland to the threshold of becoming the first malaria-free country in sub-Saharan Africa, the part of the world most blighted by the disease (see map). Swaziland's struggle is part of a wider battle that the world is waging—and winning. If it succeeds, Swaziland will join more than 100 countries that have eliminated malaria within their borders.

Since 2000, malaria deaths around the world have fallen by nearly half. The steepest drop has come in sub-Saharan Africa, where 90% of fatalities occur. Malaria still kills around 450,000 people each year (see chart 1 on the next page)—most of them children in Africa. But the World Health Organisation (WHO) estimates that better control prevented the deaths of 3.9m African children between 2001 and 2013.

Such progress breeds optimism. The WHO believes that malaria cases and deaths could both fall by another 90% in the next 15 years. At a summit in November, heads of state from East Asia will endorse a plan to make the region free of malaria by 2030. The Gates Foundation, an important source of funds for antimalarial research and control efforts, believes it can be eradicated completely by 2040.

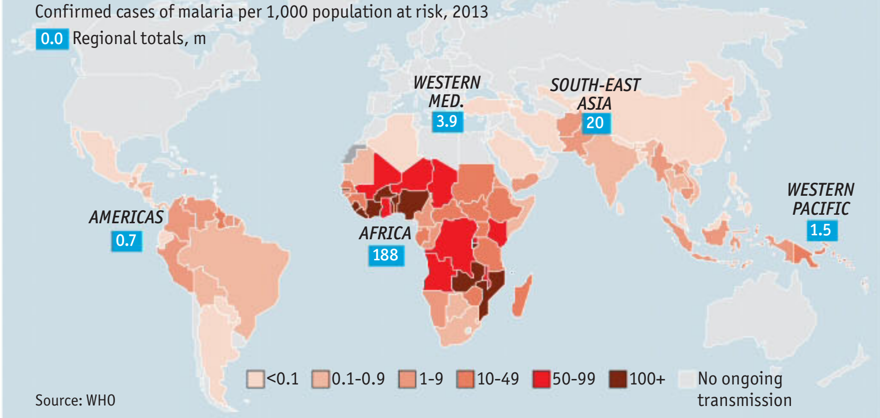
That would rank among humanity's greatest achievements. Malaria has killed people since the dawn of man. In 1900 it was endemic in almost every country on Earth and throughout the first half of the 20th century it killed 2m people a year. Bringing malaria to heel has required not just money but also imagination, persistence and political will. Elimination would save millions of lives and trillions of dollars in lost productivity and health costs, mostly in poor countries.

Optimism, however, should be tempered by the recollection that past endeavours have failed. A global eradication effort begun in 1955 dramatically decreased malaria deaths over the following decade. But because of flaws in the programme, such as overreliance on too few drugs and a lack of adequately trained doctors, and because funding dried up as malaria cases fell, the disease came flying back. Laying the scourge to rest for good requires yesterday's failures to inform today's plans.

The disease starts with a bite from an infected mosquito, which injects a small ▸▸

Malaria's front line

Confirmed cases of malaria per 1,000 population at risk, 2013



Source: WHO

number of parasites into its human victim's bloodstream. Roughly 40 species of *Anopheles* mosquito, found all over the world, act as hosts for the types of malaria that affect humans. The parasites travel to the liver, where they multiply rapidly. They then infect red blood cells and continue to proliferate. Flu-like symptoms begin when the parasites break out of the blood cells, one to four weeks after the bite. Other mosquitoes can then pick up the parasite when they bite an infected person and pass it on when they bite another one.

Five types of malaria cause illness in humans. *Plasmodium falciparum* is responsible for the vast majority of deaths, having killed virtually all of the 528,000 people who died from malaria in sub-Saharan Africa in 2013. *Plasmodium vivax* is the most geographically widespread variety, responsible for most cases of malaria outside sub-Saharan Africa; it is less lethal than *P. falciparum* but can remain dormant in the liver and cause illness to recur when it emerges into the blood; frequent relapses weaken its victims, making them more susceptible to other diseases.

Eradication efforts focus on these two more virulent species. The other three strains usually cause less serious symptoms. But finding the victims and then stamping out mosquitoes and their deadly cargo of parasites is difficult. Up to 85% of people infected with malaria do not show symptoms and the parasite can lay dormant for months or years after an initial infection before emerging. This makes it especially tricky to fight.

The field tests that detect the parasite in places like Magagasi are not sensitive enough to pick up low-grade infections. Laboratory equipment that can detect the parasites is not available in every country. In Swaziland surveillance officers collect samples for laboratory analysis alongside rapid testing, and track them using bar codes and GPS co-ordinates to help them return to the right house. But no other African country has such a well-run system. Even so, finding Magagasi's remaining carriers of the parasite has been a struggle. Laboratory tests take over a week to complete, which leaves plenty of time for mosquitoes to ferry the parasite to new victims.

Resistance is not futile

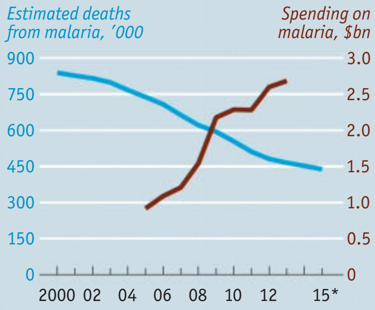
Taking on the malaria parasite and its insect hosts has proven equally hard. Both are frustratingly skilled at developing resistance to drugs or insecticides; and resistant strains tend to spread fast. In the early 20th century several countries reduced malaria by using DDT, a powerful insecticide, against *Anopheles* mosquitoes, until the insects developed resistance. Strains of *P. falciparum* resistant to chloroquine, once a common antimalarial drug, developed independently in several countries in the 1950s and 1960s; now they are everywhere.

Resistance works the other way, too. People who live in endemic areas become partially immune to the parasite as a result of repeated infections. Symptoms are most severe among children under five and become less serious as immunity builds over time, almost disappearing in some adults. Where malaria is eliminated, people lose immunity over time—so a recurrence of the disease can lead to an outbreak that affects everyone.

The front-line drug of choice, artemisinin-based combination therapies (ACTs), is used in most countries with *P. falciparum* and reduces malaria deaths in children by more than 96%. But artemisinin-resistant parasites have been found in five South-East Asian countries: Cambodia, Laos, Myanmar, Thailand and Vietnam. So far, most people with this type of parasite have recovered when treated with a combination of other drugs but some strains have proved resistant to almost all available antimalarial medications.

Fighting the biting 1

Global



Source: WHO *Forecast

In Africa mosquitoes are rapidly developing resistance to the four insecticides that are used to treat bed nets and spray houses. Bed nets treated with insecticide are among the more effective and widespread low-cost measures. Most countries distribute them free. The share of the at-risk population sleeping under one rose from 3% in 2004 to 44% in 2013. But everywhere in Africa there are mosquitoes that have become resistant to pyrethroids, the chemicals used in two-thirds of house sprayings and the only type used to treat bed nets.

Resistance to two or more insecticides has developed in nearly two-thirds of malarial countries worldwide. If the high levels of resistance already seen in parts of western and southern Africa spread, then the most effective interventions of the past decade—bed nets and domestic insecticide treatments—could become ineffective.

The tenacity of malaria means that much more money will be required to wipe it out. For many years the research budget came from the military purse—particularly of Western armies that had to fight in tropical climates. Charities and governments of rich countries now pay for the fight against malaria. In recent years their contribution has grown dramatically, accounting for 82% of the $2.7 billion spent on control and elimination in 2013.

The largest single source is the Global Fund to Fight AIDS, TB and Malaria, which pools cash from developed countries, the private sector and charities. Between 2002 and 2013 the Global Fund spent $8 billion battling malaria. America also spends lavishly, both through donations to the Global Fund ($1.35 billion this fiscal year) and through other aid programmes, including the President's Malaria Initiative, launched by George W. Bush in 2005 and now with an annual budget of $674m.

Even so, the Gates Foundation says that to remain on track to eradicate malaria, funding must double between now and 2025, when costs are expected to peak at $6 billion a year. The foundation puts the total cost of eradication at $90 billion-120 billion between now and 2040. Despite the steep price tag, the pay-off is far bigger: the Gates Foundation puts the total economic benefits of eradication from productivity gains and health savings in the same time period at more than $2 trillion.

As well as paying for current schemes, some of the cash goes to developing new weapons to ensure that malaria disappears for good. The armoury divides into three broad categories: new applications of existing treatments, novel treatments, and better diagnosis and surveillance.

In the first category, treating everyone in a village or region with antimalarial drugs can be effective. It tends to work best on settled populations, which may explain why its biggest success has been on a small island: Aneityum in Vanuatu. Nine rounds of mass drug treatment in 1991 helped eliminate malaria there. That lasted until 2002, when the disease was reintroduced, prompting another round of treatment that wiped it out again.

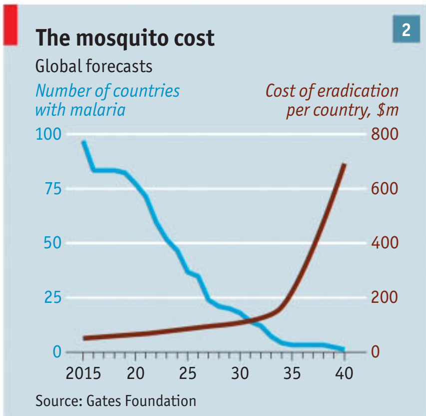
Myanmar has had some success, too—mass treatment of villages on the Thai-Myanmar border decreased the number of *P. falciparum* cases transmitted during the rainy seasons from 290 to 46 between 2011 and 2012—but without a better health system, mobile populations could well undo that success. More tests are under way in Asia and Africa on various drug combinations and on comparing their costs with other ways of eliminating malaria.

The second category of spending is on entirely new malaria treatments. Research-and-development spending on drugs, vaccines and basic research more than quadrupled between 1993 and 2013, reaching $550m annually.

Several candidates to supplement artemisinin are in the pipeline, but they will not be ready for release for many years. Nine additions to the array of insecticides

The mosquito cost

Global forecasts



Source: Gates Foundation

are in development but none will be on the market for at least three years.

After decades of near misses, a vaccine is almost available. RTS,S (sic), the first to pass all stages of clinical trials, awaits WHO approval; European regulators nodded it through in July. Developed by GlaxoSmithKline, a drugs firm, and the Malaria Vaccine Initiative, an American non-profit organisation, RTS,S works, but not terribly well. It cuts the number of malaria episodes among infants and toddlers, typically one to five a year, by 36% over four years. It is not known how it will perform over a longer period.

That is about half the effectiveness needed for such a vaccine to become a potent weapon of eradication by greatly diluting the human reservoir of the parasite, says James Beeson of the Burnet Institute, an Australian research outfit. An ideal vaccine, says Mr Beeson, would have two components: one would stop infections in humans or stop infected humans from becoming sick; and the other would target transmission by making mosquitoes unable to pass on the malaria parasite. Separate vaccines for each of these tasks are in the pipeline but none is yet undergoing large-scale clinical trials.

Other approaches may prove more useful. Rather than attacking the parasite, another method is to modify its hosts. Researchers at Johns Hopkins University (JHU) in Baltimore have developed a genetically modified *Anopheles* mosquito that is highly resistant to the malaria parasite. Mating in the wild would pass this trait on to offspring, though mass release remains at least five years away. A new gene-editing technology called CRISPR would help malaria-resistant genes spread much faster through mosquito populations. It can enable a gene on one of the two chromosomes inherited by a mosquito to copy itself to the other, thus ensuring that all offspring inherit it.

Researchers are trying another technique in JHU's giant greenhouse in Zambia: feeding mosquitoes sugar laced with a bacterium that blocks their ability to pass on malaria. A fungus with similar properties has also been discovered recently.

Better surveillance and diagnosis, the third front in the battle against malaria, have also helped bring down deaths. Diagnostic measures help with eradication for three reasons: people treated for malaria are less likely to develop the transmissible form of the parasite; correct diagnosis prevents overuse of antimalarials, thus slowing resistance; and better surveillance improves the aim of antimalarial activity by, say, giving priority to spraying and bed net distribution in areas with lots of confirmed cases of the disease.

In countries that have reached the elimination stage, defined by the WHO as those with less than one diagnosed case of malaria per 1,000 people at risk per year, strong surveillance systems are critical to prevent outbreaks. The WHO and the Cambodian government have trained a network of Village Malaria Workers—usually farmers or shop owners—to administer cheap, quick and reliable diagnostic tests to anyone suspected of having the disease. Such programmes reach people that national health systems cannot.

When someone with malaria shows up at a Swazi clinic, for instance, a nurse calls a national emergency number to report the case, which triggers an automatic text message to the phones of malaria-control programme managers. This helps them track the investigations of foot soldiers, who find out whether an infection occurred elsewhere and whether it has led to more cases.

Analysing information gathered on the ground in conjunction with other types of data can be used to direct interventions more accurately. Google and researchers at the University of California, San Francisco, have developed a prototype of a tool that uses weather, landscape and epidemiological-surveillance information to predict which villages are at high risk of malaria in certain months of the year—and should be first on the list for insecticide spraying and other preventive measures.

Better mapping could also help to track infections among mobile populations, who carry the malaria parasite across borders. Swaziland's eradicators are busiest straight after Christmas, when the Mozambicans who work on the country's sugar plantations return from visits across the border. Half Swaziland's malaria cases are now imported.

In South-East Asia malaria spreads through areas with high shares of migrant workers. Systems to track it across borders are not yet in place. Botswana, Namibia, Swaziland and South Africa, which aim to eliminate malaria by 2020, are now setting up a regional co-ordination system with their northern neighbours that will include a joint reporting system, routine sharing of information on patterns of transmission in border regions and screening at border crossings.

The biggest challenge to eradication, however, is not mobile populations, the slow progress of vaccines or stiffening resistance, but the eradicators themselves. In the late 1960s, malaria rates had been brought close to zero in India, Pakistan, Haiti, Myanmar and dozens of other poor countries. But donors, governments and health systems declared victory too soon: their attention wandered, funding dried up and, over the next two decades, malaria came back.

Finishing the job

Today's efforts are different. The drive of 50 years ago relied mainly on a single insecticide—DDT—and a single plan implemented across countries. Many therapies and interventions are now used and these are better integrated into national health systems. But as eradication efforts succeed, malaria risks dropping off the list of political priorities. As a growing number of countries eliminate malaria, eradication costs will fall overall but rise sharply in the remaining countries (see chart 2). These places, often war zones or failed states, tend to have a high prevalence of malaria and populations in remote and inaccessible areas, making eradication particularly costly. Funding needs to be maintained at sufficient levels and directed effectively to complete the task.

As it grows less prevalent, malaria moves from being a disease that can strike anyone to one that still afflicts the rural poor but that urban middle classes can ignore. Previous efforts to rid the world of malaria failed because the political will and funds dried up before the disease was conquered. This time it is vital that efforts to stamp out malaria do not become victims of their own success. ■

Net benefits

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The Democratic primary

Berning up

BOSTON

The socialist from Vermont is bedazzling the American left. It will not last

BERNIE SANDERS is due on stage. But a stream of Bostonians—mostly hip, twenty-something, often lightly bearded—is still flowing into the waterfront convention centre, pressing politely forwards and flustering the similarly youthful volunteers who are organising the Vermont senator's Democratic primary bid. When the doors are eventually closed, over 20,000 people are crammed inside, warming up to John Lennon and Hunter Hayes ("Baby, kids on the run/Gonna party like we just turned 21") as they await the 74-year-old socialist and grandfather of seven. Thousands more are shut out, watching on giant screens: it is said to be the biggest primary rally in Massachusetts ever.

The insiders are exultant. They chatter, chant slogans and wave banners in joshing, undergraduate-accented praise of their hero: "Bern baby Bern", "MIT feels the Bern", "Bern4president". When Mr Sanders stalks into view, all white hair, bony limbs and baggy suit, a glowering scarecrow-prophet, the roar is tremendous, the atmosphere hilarious. It is tempting to think the huge support he is drawing could be America's biggest-ever student prank.

It is unexpected, admits Tad Devine, a veteran Democrat strategist who is working for him. When Mr Sanders declared his intention to stand in April, he says, "many people were incredulous. There was a feeling that there was no way this guy could knock such a formidable front-runner off the top spot." Yet Hillary Clinton has been damaged by her peculiar use of a private e-mail server while secretary of state. And Mr Sanders, boosted by large, well-publicised rallies in student-heavy cities such as Portland, where he drew 28,000, and Seattle, where he drew 15,000, has soared.

Polls suggest he could win the first two Democratic ballots; he is running Mrs Clinton close in Iowa, which votes on February 1st, and has a handsome lead in New Hampshire. An average of national polls puts him on 25% and Mrs Clinton 42%. Joe Biden, the bereaved vice-president, who is still making up his mind whether to stand, is on 19%—a wedge of which, Mr Sanders's aides believe, is an anti-Hillary vote that could come their way.

Pennies in a stream

The Democrats have been here before. In 2004 another left-winger from Vermont, Howard Dean, dazzled in the early campaigning, then died in the polls. Mr Sanders looks a bit different, however—not least because he is much more left-wing. The only socialist in Congress, he believes capitalism is screwing over 99% of Americans and, moreover, that the resultant "grotesque levels of income and wealth inequality" are no accident, but a scheme of the boss class to beggar the rest. "Why is it that with all the improvements to productivity from technology, people are being forced to work for longer hours, with lower wages?" he snarls on the stump.

To peg back the plutocrats, he would abolish the corporate funding of elections that he himself disdains. "I don't represent the interests of the billionaire class and the corrupt men on Wall Street and I don't want their money," he says. He would nationalise health care, break up banks and swell the size of the state. He would provide free college education for all and convert outstanding student debt into soft loans, at an annual cost of $70 billion, paid for with a special tax on Wall Street. The crowd in Boston loved that.

No doubt, its members would have liked Mr Dean, too. Yet Mr Sanders's recent progress suggests he may be drawing broader support than his predecessor. In some polls, he is outgunning Mrs Clinton against the leading Republican contenders, which suggests many Democrats are at least thinking through the consequences of him winning. A survey last month put him ahead of Mr Trump by five points and level with Jeb Bush. Those kinds of numbers attract money. Mr Sanders raised $25.5m in the three months to October, mostly in small contributions; the average was around $25. By comparison, Mrs Clinton raised $28m, much less than she had managed in the previous quarter.

This puts Mr Sanders within reach of the $50m Mr Devine says he needs to be competitive through to Iowa and New Hampshire, where he already has nearly 100 paid staff. The southern states, where he is only starting to build his organisation, are a tougher prospect. Black Democrats in the South like Mrs Clinton and hardly ▸▸

know Mr Sanders. Yet his advisers trust that early success and the prevailing anti-establishment mood will awaken a storm of interest in him, obliterating these weaknesses.

They predict that black voters will be wooed by his background in the civil-rights movement and that his emphasis on economic issues—which Mr Dean gave less time to—will win over blue-collar whites, including many formerly minded to vote Republican. The result, says Mr Devine, could be "early success leading to quick, decisive success thereafter".

If that is not entirely laughable, it is because Mr Sanders's rise is being propelled by some novel factors. A combination of economic uncertainty and political polarisation has discredited the mainstream: the way Republicans are being bewitched by Donald Trump, another man selling simplistic solutions to complex problems, is further evidence of this. And Mrs Clinton's slide, from shoo-in to damaged goods, has left some Democrats casting about for a back-up in an almost-empty field. "I'm looking for someone that excites me more than Hillary," said Mara Klein Collins, a rare middle-aged attendee in Boston. Yet neither of these factors equates to a promise of electoral support.

The trouble with the millennials who dominate Mr Sanders's rallies is that less than half of them actually vote. And there is still no reason to believe the wider support he is drawing will prove stickier than it was for Mr Dean. "The problems with candidates like that—and like me," Mr Dean, who is backing Mrs Clinton, has said, "is that as you get closer to election time...you're going to tend to want to see somebody who you think looks presidential." That is, the joking stops there.

Those who argue that this time will be different perhaps misunderstand the role anti-establishment feeling is playing on the left. The anger Mr Trump is drawing on is primarily directed at the Republican establishment; by contrast, Democrats like their party leaders, and hate Republicans. That makes them likelier to revert to the primary candidate who looks most likely to win the presidential election—which, as even some of the enthusiasts in Boston ruefully conceded, will not be Mr Sanders.

His advisers understand this, which is why they are increasingly looking to turning blue-collar Republicans and the formerly apathetic—an effort in which Mr Sanders's strong support from trade unionists is considered crucial. Over 70,000 union members have signed up to a support group, Labour for Bernie. In Larry Cohen, former leader of America's largest communications union, Mr Sanders has also recruited a powerful ally. "The support we're finding for him in working towns is overwhelming" said Mr Cohen, recently returned from an eight-city campaign tour.

Yet the unions have never been weaker; only about one in ten American workers belongs to one. That is partly a consequence of the deindustrialisation Mr Cohen laments, but also of a dwindling of the class-based loyalties and faith in collective action he shares with Mr Sanders. They also share a strong protectionist urge; yet, while most Americans recognise that globalisation has made the jobs market harder, over two-thirds want more of it. This is why, as a political movement, able to mobilise large sums of money and get its candidates elected, the hard left in American politics that Mr Sanders represents is almost dead. He is not about to revive it. ■

America and Afghanistan

The unending war

WASHINGTON, DC

Fighting in Kunduz illustrates why America must remain in Afghanistan

THE attack on a hospital in Kunduz, in northern Afghanistan, by an American AC-130 gunship in the early hours of October 3rd was not a case of a bomb gone astray. The hospital, which may have been treating Taliban wounded in an ongoing battle for the city, was hit at 15-minute intervals for over an hour. At least 22 people were killed, including 12 medical staff working for Medécins Sans Frontières (MSF), a Nobel-prize-winning NGO. At first a military spokesman acknowledged that there might have been "collateral damage" to the hospital. Barack Obama later called the head of MSF to apologise; the organisation says the attack was a war crime and is calling for an independent investigation.

The incident is yet another illustration of the perils of matching first-world firepower with third-world decision-making. Since Mr Obama formally declared an end to America's 13-year war in Afghanistan last December, the 9,800 US troops there have been mainly restricted to training and supporting Afghan forces. It was they who called in the hospital attack, said General John Campbell, America's top general in Afghanistan, in testimony to the Senate on October 6th. He has promised an investigation, though it will not be carried out, as MSF wants, by an independent commission appointed under the Geneva Conventions, which neither America nor Afghanistan has fully ratified.

Yet mainly the tragedy underlines the extent to which America's longest war is not over, nor America's part in it. Over 5,000 Afghan troops have been killed this year in fighting across the country—including in Kunduz, one of Afghanistan's biggest cities. In remoter places, such as southern Helmand province, which nearly a thousand American and British soldiers died fighting to pacify, the militants hold terrain. The Taliban's new commander, Mullah Akhtar Mansour, has ended nascent peace talks with the Afghan government—which is now urging Mr Obama not to withdraw America's remaining troops by the end of next year, as he has pledged to do.

The withdrawal plan looks senseless, as General Campbell also suggested in his testimony. "Based on conditions on the ground, I do believe we have to provide our senior leadership options different than the current plan we are going with," he said, struggling not to trespass on politics. A decision to extend America's mission in Afghanistan, even if awkward for Mr Obama, should not be too controversial. America's presence in Afghanistan—down from over 100,000 in 2011—is already too reduced to get much notice, especially now that its foot-soldiers are rarely in the front line; just five have died fighting this year. Among the leading contenders for the Republican and Democratic primaries, only Bernie Sanders, a populist Democrat, wants an immediate end to the mission; his Republican counterpart, Donald Trump, suggests the troops should stay.

Even before the Kunduz attack, Mr Obama was considering various options to extend the 2016 deadline; a proposal to maintain up to 5,000 American troops in Afghanistan is thought likeliest to gain his approval. The idea would be for them to focus on counter-terrorism, which sounds sensible, since Islamic State is gaining influence among the Taliban. Yet it would contain little or no provision for training Afghanistan's security forces. That is odd, considering that America will continue to fund them at a cost of $4 billion a year; and given also the adequacies so painfully evident in Kunduz. ■

Assisted dying

Brownlighted

The number of terminally ill people allowed to choose death triples

WHEN California's lawmakers passed a bill in September that legalised doctor-assisted dying, there were doubts it would ever become law. Between success and the statute book stood a possible veto by the state governor, Jerry Brown. Mr Brown is a pious Catholic—and the strongest opposition to assisted dying has come from the Catholic church. But Mr Brown had also spoken to Brittany Maynard, a young Californian whose diagnosis of terminal brain cancer had turned her into an advocate for the cause. In 2014 she moved to Oregon, the first state to legalise assisted dying, and took her own life there. Ms Maynard's story, and a moving video she made asking California's lawmakers to pass something similar to Oregon's Death with Dignity law, transformed the debate in her home state and beyond.

Now the uncertainty is at an end. On October 5th Mr Brown signed the bill—a strong expression of his support, since it could have passed into law if he had merely declined to veto it. Next year California will join Oregon, Vermont, Washington state and Montana in allowing doctors, with appropriate safeguards, to prescribe drugs that terminally ill patients can use to end their own lives, if they choose. This will quadruple the number of Americans covered by such a law, to just over 50m.

In a plainly worded letter to the California State Assembly, Mr Brown explained his decision. Having read submissions from both supporters and opponents of the measure, and consulted with a Catholic bishop, two of his own doctors and various friends with differing opinions, he said that he was left to reflect on what he would want in the face of his own death. "I do not know what I would do if I were dying in prolonged and excruciating pain," he wrote, "I am certain, however, that it would be a comfort to be able to consider the options afforded by this bill. And I wouldn't deny that right to others."

The decision has been criticised by opponents, who say that rather than thinking about how the law would affect people like himself—well-off, white, well-educated—the governor ought to have thought about less privileged folk, who might find themselves under pressure from relatives or health-care providers to take a quick and cheap way out. Mr Brown rejected such paternalism; and there is no evidence from states with similar laws that people end up taking their lives under duress. ■

Tort law

Ralph's house

WINSTED, CONNECTICUT

Flaming rats and exploding cars are the stars at a new museum

WHEN Stella Liebeck, a 79-year-old grandmother, sued McDonald's after scalding herself with hot coffee in 1992, she became the butt of countless jokes. When a jury awarded her $2.7m in punitive damages, the case was held up as an example of frivolous lawsuits and of juries run amok.

In fact the case was less clear-cut. Mrs Liebeck, who needed skin grafts to treat third-degree burns, sued only when the fast-food chain declined to pay all her medical expenses. During the trial it emerged that McDonald's served its coffee far hotter than home-brewed java. The jury also heard there were 700 other instances of bad burns from McDonald's coffees served too hot. The jury's suggested punitive award of $2.7m was roughly the equivalent of two days' worth of coffee sales. The judge reduced the damages to $480,000. The case was later settled for an undisclosed amount.

Mrs Liebeck's case became a rallying cry for tort reform, or "tort de-reform" as Ralph Nader puts it. Tort law allows anyone with an injury to seek remedy in court with a trial by jury. It covers a wide range of issues, from product liability to pollution and from workplace safety to police brutality. Tort law became a battleground in the 1990s, when businesses became exasperated with eye-watering damages awarded by juries and moved to have laws changed and unfriendly judges removed. Mr Nader, a consumer-rights advocate and one-time presidential candidate, says the tort-reform lobby has now made it too difficult for people to get their day in court. His response is one of the strangest museums in the country: a shrine to the joy of tort law.

The American Museum of Tort Law uses cartoon graphics to explain complicated lawsuits over asbestos and tobacco. Interactive monitors running old news reports show precedent-setting cases, like Jackie Kennedy Onassis's lawsuit against a photographer, which placed limits on what paparazzi could do. A room of killer toys, featuring pointy lawn darts, is a reminder of how dangerous playthings used to be. An antique jukebox tells the tale of how a rat helped trigger a fire in 1949, which killed a worker cleaning a coin-operated machine with petrol.

The museum is in Mr Nader's hometown of Winsted, Connecticut, a struggling mill town with a population of 11,000. Its centrepiece is a shiny red 1963 Chevrolet Corvair, the focus of Mr Nader's 1965 book "Unsafe at Any Speed". The book led to congressional hearings and a string of car-safety laws. Mr Nader hopes the museum will become a resource for students as well as a tourist draw. Early visitors included a high-court judge from India and students from China. America's trial lawyers will hope that it also improves the reputation of tort law: in many states the number of tort cases has declined.

The joy of tort

Ending mass incarceration

Two cheers

IOWA CITY

The best way to reduce the prison population

IN 2013 Charles Hynes, Brooklyn's district attorney, was voted out of office after 24 years on the job. The ousting of an elected local prosecutor is rare in America. Incumbents who run for re-election win 95% of the time. Until Mr Hynes got the boot, no incumbent DA had lost a vote in Brooklyn since 1911. Mr Hynes's fate needs to be more common, however, if America is to cease to be the world's leading jailer. At present, it accounts for 5% of the world's population and nearly 25% of its prisoners. Elected public prosecutors, such as Brooklyn's Mr Hynes, are largely to blame.

The incarceration rate is like the water level in a bathtub. If the tap runs faster than the water drains, the level rises. The mandatory minimum sentences and truth-in-sentencing laws passed in the 1980s and 1990s blocked the outflow from America's prison system. Proposals for sentencing reform, such as the bipartisan bill introduced by Chuck Grassley, a Republican senator from Iowa who chairs the Senate Judiciary Committee, would clear it a bit, by returning some discretion to judges and parole boards. But it would be even better to turn down the gushing tap.

Although the crime rate began to decline in the 1990s, the rate of admissions to prisons continued to climb for two decades, until it peaked in 2006. The criminal-justice system managed to put more and more people behind bars for 15 years, even though fewer and fewer people were committing crimes. The admissions rate has now reverted to the level in the late-1990s, but remains three times greater than it was 30 years ago when the crime rate was higher than it is today.

In a study published in 2013, "Why are so many Americans in prison?", Steven Raphael at Berkeley and Michael Stoll at UCLA found the answer was mostly that prosecutors liked to send them there. Longer sentences, they say, played a smaller role. John Pfaff, a law professor at Fordham University, confirmed the finding: analysing the available data on how prosecutors behave, he found that the probability of a DA filing felony charges against an arrested person rose from about one in three in 1994 to about two in three by 2008.

DAs can decide whether charges will be filed against arrested persons and, if so, what they will be charged with. Less than 5% of criminal cases go to trial: most end in plea bargains. And it is DAs who decide which plea deals to offer and accept, in effect determining whether offenders will be sent to prison and, if so, for how long. By and large, they are not a merciful lot.

Orders from the DA

They are also usually elected at county level, whereas prisons are run at state level. Short sentences—less than a year in most jurisdictions—are often served in county jails, putting county taxpayers on the hook. Punitive DAs can take the fiscal burden off the people who elect them by foisting the cost of imprisonment onto states.

If legislators cannot rein in DAs, that job must fall to voters. Because unseating an incumbent is so unusual, and because there are more than 3,000 county and state district attorneys, this may seem an unpromising path to a lower incarceration rate. But more than half of state prisoners, who make up the vast majority of the incarcerated, are housed in just ten states. Within those states, most prisoners come from a few large metropolitan jurisdictions. Moreover, these areas tend to contain lots of rehabilitation-minded liberals as well as minority voters, who are more likely to have family members in prison. Prosecutors in California and New York have already changed tack, and incarceration rates in those states have fallen.

Kenneth Thompson, Brooklyn's first black DA, managed to knock Mr Hynes off his perch by highlighting a couple of dodgy murder convictions and speaking out against aggressive police tactics. And though sentencing reform is obviously needed too, the election of just a handful of "smart-on-crime" DAs in and around big cities like Houston, Chicago, Miami and Los Angeles could cut America's incarceration rate even more dramatically. ■

Slaughterhouses

A jungle no more

FORT MORGAN, COLORADO

How Temple Grandin's designs have reformed the meat industry

"THERE would be meat that had tumbled out on the floor, in the dirt and sawdust, where the workers had tramped and spit uncounted billions of consumption germs. There would be meat stored in great piles in rooms; and the water from leaky roofs would drip over it, and thousands of rats would race about on it." Thankfully, much has changed since Upton Sinclair published "The Jungle", a best-selling novel exposing the unsanitary conditions, labour practices and animal handling in the Chicago stockyards at the start of the last century. Sinclair's book helped bring into existence, in 1906, the Pure Food and Drug Act and the Federal Meat Inspection Act, the first in a series of sanitary and consumer-protection laws. Chicago continued to be America's slaughter capital until the 1950s, when slaughterhouses moved away because it was cheaper and more efficient to put them close to ranches and then to ship the meat around the country in refrigerated lorries.

As the industry evolved, animal welfare remained a secondary concern. As recently as the 1990s, conditions in beef slaughterhouses were pretty bad, says Temple Grandin of Colorado State University. In 1996 the United States Department of Agriculture found that only three in ten were able to stun 95% of their cattle with a ▸▸


WEARABLE TECHNOLOGY
NIMBLE MOVEMENT
BUILDING A NEW HOME

single shot. Things started to change in 1999 when, under pressure from activists and the general public, McDonald's, then the world's biggest restaurant chain, started to monitor the animal welfare at its meat suppliers. Wendy's and Burger King, two other fast-food chains, followed suit.

Ms Grandin has played a big part in the change. She is a star in two seemingly separate firmaments: animal welfare and the understanding of autism. Half the cattle in America and Canada today are slaughtered in equipment for restraining cattle designed by Ms Grandin, and around 35% of all cattle in America are handled in her curved chute and stockyard design. She has trained workers in more than 200 slaughterhouses all over the world. Meanwhile, she has become a sought-after speaker and writer on autism, a condition she has herself. "I was severely autistic as a child," says Ms Grandin, who credits her mother for pushing her to lead a life as normal as possible and make use of her talents, which include an unusual facility for reading drawings in three dimensions.

As autism has become diagnosed more frequently in the developed world, Ms Grandin is in more demand than ever at conferences and symposiums. "It would take over if I let it," she says. She tries to carve out as much time as possible for the welfare of animals, about which she cares deeply. Cargill's Fort Morgan plant, one of America's biggest slaughterhouses, uses equipment she designed. She took *The Economist* on a tour.

"I used to believe that there was an engineering solution to all of the animal-handling and stunning problems," she says. But she quickly learned that the best equipment in the world is useless unless it is operated correctly. A stunbolt gun, for instance, has to be handled "like the finest hunting rifle" and cleaned every day; otherwise its pressure can slip, and it may fail to kill an animal instantly.

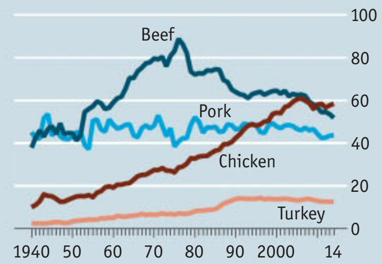
The Fort Morgan plant employs 2,100 people and slaughters 4,600 cows every day. It produces 2.5m pounds of finished beef daily, enough to feed one burger to everyone in New Jersey, says Allen Boelter, the manager of the plant. The tour starts backwards, where the beef is vacuum-sealed, put into boxes and loaded into enormous refrigerated lorries. Hygiene is a constant worry: the plant has two eight-hour shifts for slaughtering and one five-hour shift at the end of the day when the entire place is cleaned and disinfected.

Whereas sophisticated machinery takes care of many of the tasks in the packing and boxing part of the plant, workers in hard hats and overalls (with warm clothes underneath as the temperature is close to freezing) do most of the tasks in the slaughter area. They remove the animal's hide, take out its internal organs, and tie off its rectum and oesophagus. The removal of the stomach and intestines is an especially important job, as one wrong cut can result in the contents of the intestines spilling on the carcass, which spoils the meat. As a last step the entire carcass is cleaned and hung in the misleadingly named "hot box" (which is even colder than the slaughter hall), where it is chilled for three days before it is cut into bits and pieces. All this is hard and bloody physical work that involves the handling of knives which are continually sharpened. Some employees wear coats made of chain mail to protect themselves from the blades.

Nothing but a bird

Meat consumption per person, lb*

United States



Source: USDA Economic Research Service

*Boneless retail weight

After a tour of the "disassembly line" comes the part of the slaughterhouse that was improved by Ms Grandin's designs. A gently curving, high-walled ramp, where cattle walk in single-file, leads into the restraining box. When they emerge from the restrainer they are killed, instantly, as a bolt powered by compressed air shoots through the brain. They flop onto a conveyor belt, a chain is looped around one leg, and the huge animal is lifted to hang upside-down, still kicking reflexively.

The curved chute with the high walls, Ms Grandin explains, prevents animals from seeing what is around them or glimpsing what lies at the end of their walk. Moreover it plays to their natural tendency to circle and return where they came from. A light is installed in the restraining box because cattle don't like to walk into the dark. Non-slip flooring is provided inside and on the entrance ramp, as animals panic when they lose their footing. Most important, Ms Grandin says, is that there should be no distractions, in particular no high-pitched voices or shouting or unfamiliar items which could unsettle the cattle. Apart from causing unnecessary fear and anxiety in the animals, an increase in adrenalin just before slaughter will make their meat tough.

During the visit several of the cows are agitated and "vocalise", jargon for mooing or bellowing. One even tries to jump out of the box just before it is stunned. This bothers Ms Grandin. After visiting the pens, where cattle gather for several hours after they arrive by lorry to calm them before they are slaughtered, she stops to listen for a while in front of the building with the curved chute. No sound emerges.

Do cattle know they are walking to their deaths? Ms Grandin thinks they do not. They behave in exactly the same way when they walk up the curved chute to get vaccinated. Some get agitated, but most just trot through. In her view, properly performed slaughter is less cruel than a more natural death at the jaws of wolves.

The tour ends in the control room, an innovation also advocated by Ms Grandin, where an employee monitors a real-time video feed of what is going on at the plant. A company unconnected to Cargill watches the footage. The professor is pleased to see that the stunning of the cattle proceeds calmly on screen, seemingly without the animal feeling any fear or premonition—just as it should be. ■

Ms Grandin and her charges

Lexington | Owl meets bear

Ashton Carter, the defence secretary, thinks America's adversaries are a confused bunch

FOR allies worried that America is pulling back from the world, Morón air base in southern Spain is a reassuring spot. The base, which officials endearingly mispronounce *moroan* to make it sound less like a dim person, is home to a rapid-reaction force of marines, created after the deadly attacks in 2012 on the American consulate in Benghazi. Marines at Morón, backed by a smaller force in Sicily, can reach embattled American diplomats and envoys across north Africa in a few hours.

Their mission reflects a messy "post-Benghazi world", says the marines' commander, a laconic colonel. More cheeringly, it reflects a continued desire for America to engage with that world, for all its risks. On October 6th the defence secretary, Ashton Carter, visited the marines' Spanish and Sicilian bases. At both stops Mr Carter—a trained physicist and longtime Pentagon official who, in February, became Barack Obama's fourth defence secretary—invited troops to pose questions. Each time he was asked how America should respond to Russia's intervention in Syria.

Mr Carter signalled no radical change of plan. America will keep hitting Islamic State (IS) militants from the air while seeking local allies to help defeat IS on the ground, he said. Russia is making a serious mistake, he went on. Vladimir Putin is "pouring gasoline" on Syria's civil war, he told troops on a humid Spanish airfield. To soldiers gathered in a Sicilian hangar around a heavily guarded Predator drone, he said that Russia's moves in Syria look "illogical, maybe psychological".

Logic matters greatly to Mr Carter, who began his Pentagon career during the cold war, working on bleak calculations about how America might survive a nuclear conflict. Earlier this year Graham Allison of Harvard University, where Mr Carter spent long spells as a scholar, told the *Boston Globe* that the defence secretary is neither a hawk nor a dove, but a coolly analytical owl.

Logic appeals just as much to Mr Carter's boss, the president. In a press conference on October 2nd Mr Obama heaped scorn on those who see Mr Putin outmanoeuvring him in Syria—and who charge that the Russian leader was emboldened after invading eastern Ukraine without meeting a forceful American response. What are Mr Putin's "brilliant" moves, asked a sarcastic Mr Obama? Russia is isolated, its economy is shrinking and its actions in Ukraine have triggered tough sanctions. Now, he said, Mr Putin has sent his forces into a Syrian "quagmire".

Nor did Mr Obama spare allies, among them his former secretary of state Hillary Clinton, who have called for America to do more in Syria, perhaps by imposing no-fly zones to curb the Assad regime's bombing of civilians. When people suggest "half-baked" solutions they should have to explain how these would be carried out, funded and sustained, the president scoffed: "And typically, what you get is a bunch of mumbo jumbo."

Such lofty disdain enrages sceptics of Mr Obama's foreign policy. Critics are sure that Russia and other adversaries are testing America's strength and that a feckless Mr Obama is making the world a more dangerous place by failing to respond.

Yet those who frame Mr Obama as a weakly timid leader get him wrong. True, the president and his national security team spend much time weighing the possible costs of action. But at times, as when ordering the raid to kill Osama bin Laden, Mr Obama has embraced risk. Team Obama's guiding principle—at times their obsession—is being smart.

When rival powers pursue clear if unwelcome strategies, America stands ready to deter them, Mr Carter said in an interview in Spain. In Russia's case, strategic moves include the invasion of Ukraine, displays of aggression towards members of NATO and Russia's noisy reliance on nuclear weapons to buttress its geopolitical status. In response, Mr Carter noted, America has stepped up military drills and deployed equipment in eastern Europe, while keeping its own nuclear arsenal up to date.

Homo economicus, with guns

Mr Carter says it is equally important to mount a strong response to China's reclamation of land in disputed areas of the South China Sea, and to show that America is prepared to remain "the pivotal security partner" of allies in East Asia. Earlier this year Mr Carter warned that America did not accept the 12-mile territorial limits claimed by China round such reefs. Though no American ships have yet sailed close to those contested rocks, he says China should assume that he meant what he said, and should expect that: "We are going to sail, fly and operate wherever international law permits."

In contrast, Mr Carter says that Mr Putin's actions in Syria appear motivated by attention-seeking or a mistaken reading of Russia's interests. Thus the traditional rules of deterrence do not apply. For instance, a no-fly zone would involve "dealing with" Syrian air defences, which would in turn require American military action against Bashar al-Assad's armed forces. To date, that has not been judged in America's national interest. And because Russia's actions in Syria have "no logic", that does not argue for America to make a counter-move that "it doesn't otherwise judge to be sensible". Put another way, the defence secretary says, it is hard to argue "that you can deter Vladimir Putin from being Vladimir Putin". His conclusion is that America has to be "ruthless" about its own interests. To the administration that means sometimes declining to use force when others urge it to do so.

Alas, there is a flaw in this doctrine. What happens when Team Obama is sure that a policy is smart, but the rest of the world reads it as weak? Correcting an impression of weakness can also be a national interest. Nobody is asking Mr Obama to embrace Richard Nixon's "Madman Theory", feigning craziness to keep foes off-balance. But not every foreign leader shares his definition of rationality. Ignoring that does America, and its allies, no favours. ■

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Let's get everyone in the picture.

Also in this section

Violence in El Salvador

Rivers of blood

SAN SALVADOR

A crackdown on gangs has so far made things worse

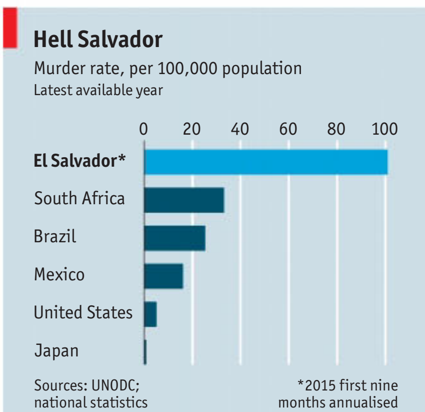
OUTSIDE the morgue in San Salvador, the family of 21-year-old Marcela Vargas waits patiently to collect her body. "I feel broken," says her brother, Jónathan. "She was dating a guy—he wasn't a gang member, but he had connections." Along with her 18-year-old friend Liset she had been tied up and stabbed repeatedly. Police discovered their bodies on the banks of a stream that runs through the city's centre on September 13th, nine days after they had disappeared.

Marcela and Liset are casualties of a ferocious clash of gangs which has plunged El Salvador into its bloodiest period since its civil war ended in 1992. Mara Salvatrucha and Barrio 18, two *maras* (gangs) with a combined membership of 72,000, fight each other for control of territory across the country. Two factions of Barrio 18, the *Revolucionarios* (Revolutionaries) and the *Sureños* (Southerners), are meanwhile at war with each other.

The death toll is horrific. In the first nine months of this year, 4,930 people were murdered in a country with a population of 6.5m; that murder rate is 20 times that of the United States (see chart). El Salvador has overtaken Honduras as the most violent country on earth bar those that are at war. Life in gang-controlled areas is miserable. The *maras* recruit children in primary school and extort protection money from businesses. Terrified parents do not let children leave the house unaccompanied; many businesses go bust. Nearly 300,000 Salvadoreans were forced to leave their homes last year, by one estimate.

The current mayhem erupted after the breakdown early last year of a truce between the gangs, which had been supported by El Salvador's left-wing government. Facing an election, the government reversed course and now backs a *mano dura* (iron fist) approach, which involves the police and army wresting control of neighbourhoods from the gangs. Its tough line is popular, but so far has made matters much worse.

The truce, negotiated in 2012 by local mediators, was effective. Gang leaders promised to curb the killing. In return, they were moved from maximum-security prisons to more comfortable quarters. The number of murders dropped by nearly two-thirds. Gangs and security forces scaled back their operations in 11 "peace zones". In one, Ilopango, the mayor opened a chicken farm and a bakery to provide jobs for former gang members.



But the truce did not reduce extortion, the gangs' main source of income, and it looked like a capitulation by the government to criminals. Although gang members killed each other less often, they did not stop killing ordinary people. Gangs used the lull to rearm and expand the territory under their control. They "took advantage of the situation to strengthen and extend their organisations", says an American diplomat.

With the approach of presidential elections in February 2014, the government dropped its support for the truce. That helped Salvador Sánchez Cerén, the candidate of the ruling FMLN, to win the election. Attempts by gang leaders and the Catholic church to resurrect the truce failed. The government put gang bosses back into high-security prisons in February this year. "Suddenly all bets were off," says Paolo Lüers, a businessman who helped negotiate the agreement. "The gang leaders who were still trying to calm the violence were suddenly taken out of play."

The gangs responded with a war on three fronts: against civilians, the state and each other. They killed 53 members of the security forces in the first six months of this year; those policing gang-controlled areas wear balaclavas to hide their identities. In July the *Revolucionarios* faction of Barrio 18, hoping to force the government to re-establish peace on its terms, forced buses in the capital to go on strike. Traffic nearly halted for four days; eight drivers who defied the strike were murdered. On August 23rd Barrio 18 conducted an internal purge, strangling and stabbing 14 inmates to death at a prison. A car packed with explosives blew up outside the finance ministry on September 11th; no one was hurt.

There is no sign that the government will relent. "We will not speak to or reach any kind of agreement with these criminals," Eugenio Chicas, the president's spokesman, told reporters. On August 24th ▸▸

the Supreme Court ruled that the gangs, and organisations that finance them, should be considered terrorist groups. "We have to cut the cord that connects kids to the gangs," says Rodrigo Ávila, a former director of the national police force.

But the government now seems to realise that the iron fist alone will not restore calm. In July it launched "Plan El Salvador Seguro" (Plan for a Safe El Salvador), which aims to boost the state's presence in the most violent towns, improve prisons, strengthen institutions and do more for victims of crime. Its authors have looked to other countries for lessons. In August a delegation visited Medellín in Colombia, where the government induced paramilitary groups to demobilise and improved policing. The city's murder rate dropped by more than 80% during the 2000s. That could provide a model for an agreement with El Salvador's gangs, says Mr Ávila. But gangsters must make the first move by renouncing their membership, he insists.

The plan faces big obstacles. Gang members who try to get out are often killed. Opportunities to make an honest living are few. Economic growth is a sluggish 2% and new jobs are being created at half that rate. The plan will cost $2.1 billion over five years but it is not clear where the money will be found. Part of it will come from a tax on telephone bills, the government hopes, but mobile-phone companies say they will fight it. The United States has said it will contribute, but not how much.

The strategy will begin to bring results at the end of next year, the government says. The families outside San Salvador's morgue are not hopeful. "I don't think it's possible for the government to control this violence," says Josué García Rivera, Marcela Vargas's stepfather. "Only God can do that." So far, El Salvador's leaders have done too little to prove him wrong. ■

Bello | The rainbow tide

Spreading gay rights show the clout of a secular middle class

WITH her eyes ablaze under a mop of boyish hair, Yoalli Lora sums up the lessons she has learned from years battling Mexican authority. "In Mexico the laws don't work unless you create a scandal." She says this forcefully enough to turn heads at the genteel Sanborns restaurant in Mexico City where she is tucking into *enchiladas*. Her mother flinches, but not because of the attention. "Oh my love," she says. "You are only 14, yet you already know this."

Yoalli may be young, but her defiance has the timbre of experience. At eight she realised that she was a lesbian, and at 13, grief-stricken over a forbidden love, she confided in her sympathetic parents. Yet her all-girls school in Mexico City tried to stamp it out of her. Yoalli was told to use a more feminine hairstyle, not to touch other girls "except on the shoulder", and to visit the lavatory only in the company of a member of staff.

This year she left the school, worn down by stress. But she got her own back. Supported by a lesbian pressure group, Metal Muses, she staged a protest outside the school gates that attracted national attention. After the intervention of Mexico's National Council for the Prevention of Discrimination (Conapred), a federal body, the school apologised to her on October 5th.

Yoalli's triumph reflects the success of a gay-rights movement that has swept Latin America in the past half-decade, hurdling religious and cultural obstacles. Mostly it has focused on same-sex marriage. Since Spain provided an example by legalising gay marriage in 2005, Argentina, Brazil and Uruguay have followed suit. In June Mexico's supreme court issued a ruling enabling homosexuals to bypass state laws preventing them from marrying, just weeks before its counterpart in the United States, with far more fanfare, legalised gay marriage. The Americas now rival Europe as the most gay-friendly region in the world.

The picture remains patchy, however. The Pew Research Centre, a think-tank, says that although around half the population in the biggest countries support same-sex marriages, in Andean countries such as Colombia, Peru and Venezuela about two-thirds are opposed. In Central America resistance is higher. And in 11 Caribbean countries homosexuality is illegal.

Both Catholic and evangelical churches resist change. Notwithstanding Pope Francis's rhetorical flourish on homosexuality—"Who am I to judge?"—as an Argentine bishop he tried to block the legalisation of same-sex marriages. In Mexico the Catholic church makes its objections graphically clear. In a recent editorial entitled "Why does the church oppose 'gay marriage'?", the archdiocese went into detail to explain why an anus is not "designed" for sexual intercourse, whereas a vagina is.

Yet the courts are giving gays the upper hand, even faster in some cases than in the United States. This is partly because marriage in Latin America is more a civil institution than a religious one. Also, democratisation across the region has produced a string of new constitutions that accentuate human—and hence gay—rights.

This enables left-wing governments to make support for homosexuality part of their social-justice agenda, whereas in their Marxist past it was considered a threat to revolutionary machismo. Cuba, for example, used to lock up homosexuals. Now gay parades are led by Mariela Castro, daughter of the president, Raúl, and sex changes are paid for by the state. Some diehards, such as Venezuela's president, Nicolás Maduro, refuse to budge. But laws around the region increasingly target discrimination. This summer a Mexican bishop was forced to apologise for equating gay marriage with bestiality.

From an economic perspective it is a bountiful tide. The "pink peso" is behind a string of new businesses, restaurants and bars. Gay tourism is on the rise. And tolerance has a tendency to grow. In some places, the LGBT community has spread its wings to call itself LGBTTTI: Lesbian, Gay, Bisexual, Transgender, Trans-sexual, Transvestite and Intersexual (having both male and female physical characteristics).

Backing for gay rights is still largely a middle-class phenomenon. In a deeply unequal region, its champions are mostly the urban and globalised types who equate it with modernity. The young also tend to be more tolerant than their parents, Yoalli's family notwithstanding.

As her case shows, homosexuals still meet powerful official resistance. In the poorer parts of Brazil, Mexico and elsewhere they sometimes face terrible violence. But their sexuality transcends social divisions. Middle-class though most activists are, the change in attitudes is sure to spread ever more widely.

Canada's election

Veiled attack

OTTAWA

Muslim-bashing is an effective campaign tactic

SINCE Canada enacted a rule in 2011 requiring veiled women to reveal their faces during public citizenship ceremonies, the country has sworn in 680,000 citizens. Just two have refused to comply. This seemingly marginal issue has come to the fore in campaigning for the national election to be held on October 19th. It could well affect the outcome.

When and where women wear a *niqab*, which covers all but the eyes, became an issue last month when the Conservative government said it would appeal to the Supreme Court a lower court's decision that the rule contravenes the Citizenship Act. This requires judges to allow the greatest possible religious freedom when administering the citizenship oath. The fuss is a godsend for Stephen Harper, who hopes voters will re-elect him for a fourth term as prime minister—despite their fatigue with his ten-year rule and a weak economy. "When you join the Canadian family in a public citizenship ceremony it is essential that that is a time when you reveal yourselves to Canadians," he declared.

Canada's 1m Muslims are dismayed. Although hate crimes in general are declining, those targeting Muslims are not. In the past week, a pregnant woman wearing a headscarf in Montreal was knocked down by two teenagers. Another wearing a *niqab* in Toronto said she was assaulted. Politicising the *niqab* is "unbelievably dangerous", said Calgary's mayor, Naheed Nenshi, who is a Muslim.

It also puts Mr Harper's rivals, the Liberal leader Justin Trudeau and Thomas Mulcair, leader of the left-leaning New Democratic Party (NDP), in an awkward spot. Both sympathise with people who find the *niqab* off-putting but think the unveiling rule infringes freedom of religion. It serves no practical purpose. Veiled applicants must reveal their faces to a citizenship official before taking the public oath. Police and intelligence services vet would-be citizens. The opposition accuses the government of stirring up anti-Muslim sentiment.

Public opinion is with the prime minister. Canadians are famously tolerant, but 80% think women should unveil at citizenship ceremonies. Conservatives are keeping the issue alive. Last week two ministers promised to set up a telephone tip line for people to report violations of the "Zero Tolerance for Barbaric Cultural Practices Act", which outlaws honour killings, polygamy and child marriage. On October 6th Mr Harper said he would consider barring civil servants from wearing the *niqab*. He wants the unveiling rule to become a law.

The controversy is especially damaging to the NDP, whose political base is in Quebec. The French-speaking province has had wrenching arguments about how far the state should go to accommodate religious minorities. Support for an unveiling law is even higher in Quebec than in Canada as a whole. The province is considering a law that would ban the *niqab* in government offices. The separatist Bloc Québécois, which only fields candidates in the province, has aired anti-*niqab* adverts.

This is costing the NDP votes. It now lags well behind the Conservatives and Liberals in the national race. On October 4th Mr Mulcair appeared on a popular Quebec talk show in a segment entitled "*tempête dans un niqab*" (tempest in a *niqab*) to defend his position. Even small storms can do a lot of damage. ■

Syrians in Brazil

Welcome, but not working

SÃO PAULO

The government is letting in refugees. The problems come later

BRAZILIANS pride themselves on their embrace—often literal, given their fondness for hugs—of strangers. Nearly all 204m of them are descendants of immigrants or of African slaves. Nativist sentiment is practically non-existent; foreigners easily blend into Brazil's multi-hued society. "Brazil is a land of welcome," President Dilma Rousseff wrote recently in an article on the global migration crisis.

It even extends to Syrian refugees, whose flight to Europe has caused a crisis there. On October 5th Brazil's government signed an agreement with the UN High Commissioner for Refugees strengthening a two-year-old scheme, recently extended for another two years, to fast-track their visa applications. These are filed in countries that border Syria. Brazil has issued visas to 8,000 Syrians so far and granted asylum to 2,100. That puts it ahead of Italy and Spain (though these are smaller countries). Brazil's tiny Muslim population of 35,000 is about to grow. In all, 18,000 asylum-seekers are awaiting decisions.

These numbers are a trickle beside the hundreds of thousands expected to reach Europe this year from Syria and other strife-ridden places. But they are a torrent compared with a few years ago. Asylum applications from all countries went from 566 in 2010 to 8,302 last year. They are unlikely ever to approach European levels, in part because asylum seekers have to pay for their passage to Brazil.

The country's bureaucrats, often unresponsive to their fellow citizens, have been uncharacteristically efficient in processing refugees' cases. Even more surprising is how fast refugees can start their new lives. Cheick Oumar arrived in São Paulo from Mali less than a fortnight ago but already proudly brandishes a temporary ID and work permit.

NGOs that deal with migrants praise such efforts but gripe that the government then loses interest, letting too many responsibilities—for Portuguese classes, legal aid, running shelters and so on—fall on them. Larissa Leite of Caritas, a charity, thinks the authorities should do more to harmonise procedures among different levels of government and inform refugees of their rights, including to benefits from a cash-transfer scheme.

Most refugees prefer work to handouts. But with the economy expected to shrink by 3% this year, jobs are increasingly hard to find. "Everything here is wonderful—except for jobs," says Mobkaf Altawil, a Syrian architect who fled to Brazil a year ago with his wife, who is a lawyer. He bakes pizzas for a living; many others aren't so lucky. Until the economy returns to growth, Brazil is unlikely to become a popular destination—no matter how warm the welcome. ■

The dress code is more relaxed in Brazil

The Economist Events

INNOVATION AWARDS & SUMMIT 2015

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For app-based ride-hailing

Travis Kalanick
Chief executive and co-founder
Uber

Garrett Camp
Chairman and co-founder
Uber

THE STORY

In 2008, while attending a conference in Paris, Garrett Camp and Travis Kalanick had trouble getting a taxi. Mr Camp wondered, "Why can't you just push a button and get a ride?" The result was Uber, a service that connects riders and drivers via a smartphone app, providing quick and easy access to transport on demand. Riders can summon a vehicle whenever they need one; Uber dispatches the nearest available driver, guiding them to the pickup point using satellite navigation. At the end of the journey, the app handles billing automatically, charging the rider's credit card. Riders and drivers rate each other to ensure everyone behaves themselves.

THE IMPACT

Uber has become a phenomenon in 61 countries and more than 330 cities around the world. It is particularly popular with business travellers: Certify, a company that tracks business travel expenses, says Uber accounted for 33% of taxi rides in January 2015, up from 11% in January 2014. Uber is often cheaper and more convenient than an ordinary taxi, which has prompted protests against the service by taxi drivers around the world. But a recent study found that Uber drivers – independent contractors who use the app on their own time to provide transport using their own vehicles – generally earn more than taxi drivers and chauffeurs, even though they must pay to maintain their own vehicles. Uber was valued in its most recent funding round at $50 billion.

NO BOUNDARIES AWARD WINNER

Satoshi Nakamoto, Founder, **Bitcoin**
For a digital currency for peer-to-peer transactions

THE STORY

In November 2008 Satoshi Nakamoto published a technical paper saying he was developing a peer-to-peer electronic payment system called Bitcoin, which used cryptography to control transactions and limit the money supply. Unlike most currencies, which are issued and overseen by a central authority or government, Bitcoins are issued collectively by the members of a volunteer, peer-to-peer network. (The identity of Mr Nakamoto has never been revealed, and he stopped participating in the development of Bitcoin in 2010.)

When users wish to transfer funds to each other, they submit the transaction to the network, which verifies it and records it in a public ledger called the blockchain. The verification process involves solving difficult mathematical problems, and for each batch (or "block") of transactions one of the verifying computers is randomly awarded 25 Bitcoins, which are said to have been "mined". The difficulty of the mining process is adjusted as the size of the network grows. Initially, a home computer was powerful enough to mine Bitcoins, but today most mining is done by specialist hardware dedicated to the task.

THE IMPACT

A single Bitcoin is worth around $250, but this figure has varied widely, reaching a peak of more than $1,100 in December 2013. Some users consider the digital currency to be a valuable asset in its own right, like gold. Others like its ability to transfer money across borders without the involvement of banks. A growing number of websites and retailers accept payments in Bitcoin, and a host of startups hope to turn it into a universal digital payment system, the financial equivalent of the protocols that underpin the internet. Even if it falls short of that goal, Bitcoin has demonstrated the potential of cryptography to create a decentralised, peer-to-peer currency.

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Also in this section

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India and the environment

Catching up with China

BANGALORE

The prime minister wants India to grow as fast over the next 20 years as China has over the past 20. Does that mean Chinese levels of pollution?

EVERY so often a country comes along whose economic transformation has a vast impact on the world's climate system. For the past generation that country has been China. Next it will be India.

Given India's size and population (1.3 billion), its emissions of carbon dioxide are in relative terms still tiny. At 1.6 tonnes of carbon per person each year, they are roughly the same as China's per-head emissions in 1980, when that country dived into economic reforms. Now India's prime minister, Narendra Modi, wants to emulate China's sizzling growth. He has set India a target of expanding GDP by 8% a year. If it comes close to meeting that target, emissions will soar, just as China's have done. Today, Chinese emissions per head are four times those in India.

Government planners think that, with economic growth of 8-9%, India's total emissions of carbon dioxide would more than triple by 2030, from 1.7 billion tonnes in 2010 to 5.3 billion tonnes. Per-head emissions would increase to 3.6 tonnes. And that assumes a fair amount of energy savings. If India were to use the same amount of energy per unit of GDP in 2030 as it does now, then emissions would top 6 billion tonnes by 2030. India is on the way to becoming the biggest contributor to increases in greenhouse gases within 15 years—a powerful reason for caring about its progress on environmental matters.

On October 1st Mr Modi's government filed its emissions plans in advance of a UN climate conference to take place in Paris in November. Unlike most other big countries, India refused to set a date at which the absolute amount of carbon it pumps out would peak and start to fall. Instead it promised that its carbon intensity—that is, carbon emissions per unit of GDP—would fall by a third before 2030.

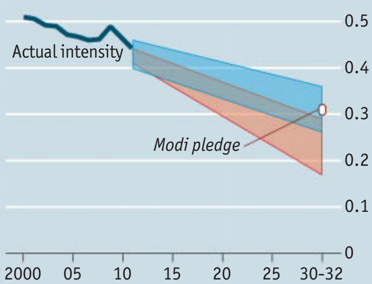
By setting a relative rather than an absolute target, India has come in for criticism.

Which glide path to take?

India's emissions intensity, kg of CO_2 per \$ of GDP*

Forecasts:

Business as usual† | Low carbon scenario‡



Sources: Centre for Policy Research; *The Economist*

*2007 at purchasing-power parity
†Assuming environmental policies already announced ‡Assuming new low-carbon policies

That is unfair, for to cap emissions would be to deny many Indians the chance to better their hard lives. The country has more poor people than anywhere else in the world: 230m living on \$1.90 a day or less—the World Bank's definition of extreme poverty. Almost half of rural households, or 250m-300m people, have no electricity. For the poor, growth is essential—and carbon comes with it.

Yet to accept that is not to give up on curbing emissions. India has huge potential to change its trajectory. To put this in context, consider that plans announced by Barack Obama's administration would cut American emissions by 26-28% by 2025, or just under 2 billion tonnes of carbon a year. By contrast, the difference between a good and a bad outcome in India over the same period, depending on whether good policies are adopted or not, would amount to almost 3 billion tonnes. In other words, India could do more good for the climate, as well as more harm, than most.

If there is reason to be optimistic, it is that the environment matters to Indians themselves. Thirteen of the world's 20 most-polluted cities are in the subcontinent. Smoke from cooking with wood or dung in Indian homes may be responsible for 500,000 early deaths a year, mostly of women and children. Climate change could do grave harm to India. Some two-thirds of its agriculture depends on the monsoon, which may become less reliable as a result of global warming. Some Himalayan glaciers are retreating, sending less water to rivers that feed hundreds of millions of people downstream. A quarter of Indians live near coasts that are vulnerable to sea-level rises. Many countries suffer one or more of these problems. Few have all of them. So while Indians need growth, ▸▸

they cannot ignore the consequences of it.

Given the environmental pressures, gloom is not hard to find. Jairam Ramesh, environment minister in the previous Congress-led government, shakes his head as he reflects on the near-total local opposition to a plan to protect the Western Ghats, a mountain range that is one of the world's most biologically diverse regions. "We are losing the battle of ideas," he says. Although tree plantations are growing in India, old-growth forests are still shrinking. Pressure to cut down more trees will increase because most of India's untapped coal reserves are underneath its forests. Coal accounts for more than half of India's power generation—and India plans to double coal output by 2020.

As for water, another crucial environmental resource, for the moment India is one of the lucky large developing countries with adequate supplies. But according to a study in 2013 by two UN agencies, it will go from having 1,800 cubic metres of water per person per year in 2001 to only 1,340 cubic metres in 2025—and little more than 1,000 cubic metres per head by 2050, which is the international definition of water scarcity.

As if all that were not enough, Mr Modi came to power in 2014 vowing to sweep aside regulatory obstacles to growth (including, by implication, environmental regulations). He vowed to expand a manufacturing sector which, at 17% of GDP, is half the relative size of China's. Factories pollute more than services do.

If India faces a trade-off between growth and greenery, then the only likely outcome is that growth wins. Yet it is not a simple swap. Rather, the government has multiple objectives, and this multiplicity makes pro-environment policies more likely to stick.

To see how, look at energy. The government has four main goals beyond increasing power to cities and industry. First, it wants to bring electricity to those without it. Total electricity production has risen sharply in recent years, but the number of people without power has fallen only slowly. Something needs to change.

Next, India wants to improve its energy security by buying less from abroad. At the moment, the country spends about half its foreign-exchange earnings on fuel imports, an unusually high share. Though the world's third-largest coal producer, India imports a fifth of its coal because domestic mines cannot keep pace. And it imports four-fifths of its oil. That leaves the country vulnerable to oil shocks, even if right now it is a beneficiary of cheaper supplies.

Third, with 10m-12m young Indians entering the labour market each year, the country needs jobs, and factories without power are no way to create them. And lastly India needs to reform the inefficient electricity-distribution system. Blackouts and brownouts are rife, and almost all the state utilities are bankrupt.

India needs to do all these things regardless of environmental considerations. But research by the Centre for the Study of Science, Technology and Policy (C-STEP), a think-tank in Bangalore, suggests that the energy mix you get if you try to improve access, security and so on is similar to what you get if you just concentrate on cutting carbon and preventing deforestation. In other words, the trade-off between doing the right thing for the economy and the right thing for the environment is not as stark as it looks.

Again, the energy sector shows why. Given the atrocious quality of the electricity grid, the quickest way to improve energy access is to supply power away from the grid through "distributed energy"—things

South Korea's hangul alphabet

Superscript

SEOUL

The country celebrates an ingenious writing system

"LIKE trying to fit a square handle into a round hole" is how Sejong the Great, a Korean king, viewed the practice of using *hanja*, classical Chinese characters, to transcribe Korean. *Hanja* recorded meaning alone, not sound, and only aristocrats knew it. So the king and his literary circle crafted an alphabet from scratch and started promoting it in 1446. Known as *hangul*, it consists of 24 elements that can be grouped into blocks of syllables. Some take the shape that lips and tongue form in speech. It is fantastically easy to learn. The 80,000 speakers of the Cia-Cia language are also being encouraged to use the script on the Indonesian island of Buton.

Hanja lingered for centuries after the introduction of *hangul*. Nobles scorned the newfangled alphabet as being for peasants, women and children. But after the end of over three decades of Japanese occupation in 1945, the governments in both South and North Korea promoted *hangul* fiercely, ordering that *hanja* be expunged from all texts and no longer taught in schools.

Today *hanja* pepper South Korean newspapers, while older South Koreans still use them to write their names. But *hangul* is a source of patriotic pride. As North Koreans were preparing this week to mark the 70th anniversary of the ruling Workers' Party with the usual display of bellicosity, the South had a day off to celebrate something indigenous, brilliant and pacific—their alphabet.

The annual October 9th holiday, scrapped in 1991 at employers' request, was reinstated in 2013. Woo Eun-kyung, a hotelier in Seoul, feels "pride and gratitude" when Hangul Day comes around. Kim Ki-beom, a young lawyer, frets that Korean is being "destroyed by alien words". A national day, he says, helps to keep the language intact; he laments a preference for English signs on streets.

Still, Mr Kim admits the holiday is firstly a welcome respite from long office hours. It is also a way to entice South Koreans to splurge. One alien word now doing the rounds is *beulfe*, a conflation of "Black Friday", America's huge autumn sale, transliterated into *hangul*. The government has prodded 27,000 shops to slash prices in the first half of October to pep up sluggish consumer spending; in four days Lotte, a department store, sold almost a quarter more than a year earlier. Electronics and clothes are much in demand—another way for South Koreans to express themselves.

like solar panels on houses or a micro-grid for a particular village linked, say, to a wind turbine. Distributed energy can use various sources of power, but renewable energy is particularly suited to it. Providing villages with reliable energy would allow families to switch from burning wood and dung to electric stoves, saving many of the lives now cut short by filthy air.

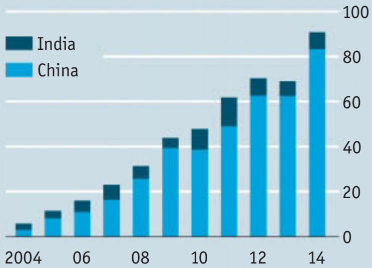
Solar and wind power are domestic energy supplies, so they help conserve foreign exchange. Import substitution is usually a bad idea, because it keeps prices high and makes producers lazy. But in many parts of the country solar and wind are competitive on price. Electricity from power stations that run on imported coal costs about 6 rupees (9 cents) per kilowatt-hour. In Karnataka state, in the south, new providers of solar power are selling it for 5.5 rupees per kilowatt-hour, while wind costs about 6 rupees per kilowatt-hour. The solar business also provides jobs, typically more than from generating power through burning fossil fuels. Arunabha Ghosh of the Council on Energy, Environment and Water, a think-tank in Delhi, the capital, reckons that building 100 gigawatts of solar capacity would produce 1m jobs, albeit most of them short-term.

Lastly, alternative forms of energy might even help solve those problems of the grid which have their roots in India's unwise decision to supply farmers with free electricity to pump water for irrigation. A huge lobby for subsidised power exists as a consequence, along with neglect of the electricity infrastructure, the beggaring of utility companies, which lost a staggering $300 billion in 2012, and a catastrophic overuse of water for farming. Because pumping water is in effect free, farmers are using groundwater faster than it can be replenished. In north-west India states are withdrawing up to nearly three times more water from aquifers than is being recharged by rains. The perversities of the power sector damage many parts of economy. So expanding solar and wind power could help with a range of things that have little to do with the environment but are essential for other reasons. That is the main justification for thinking greenery can take off even in a country that is trying to grow as fast as it can.

But the big questions are whether India's environmental policies are the right ones and whether they will be overwhelmed by the demands of growth. The government's signature policies are a huge expansion in solar and wind power, a sketchy "100 smart cities" plan to improve urban design and infrastructure, and a "clean-up India" campaign which includes everything from better waste management to building over 100m lavatories (about half of Indians defecate in the open—an environmental crisis in its own right, since it causes a panoply of diseases).

Turning the lights on

New investment in renewable energy*, $bn



Sources: UNEP; Bloomberg New Energy Finance

*Includes estimates for undisclosed deals

Soon after coming to office, Mr Modi promised to increase renewable energy more than fivefold by 2022. This would require doubling solar capacity every 18 months for the next seven years and cost about $100 billion. At a big conference on renewable energy earlier this year, investors said they would be happy to build all that and more, but they made financial commitments to less than a third of their proposals. Mr Modi's plan would save perhaps 170m tonnes of carbon a year compared with adding the same amount of power using the current energy mix. At about 3% of emissions forecast for 2030, that is something, but not a huge amount.

More important are a number of actions that usually get short shrift when talking about climate policies. A study by the Lawrence Berkeley National Laboratory at the University of California calculates that if India switched to using the most efficient air conditioners, with the least-polluting refrigerants, it would save over 300m tonnes of carbon a year compared with expanding sales of current air conditioners—twice as much as the savings from solar power. India's programme to subsidise the replacement of 400m cheap incandescent light bulbs with dearer LED ones would save 6,000 megawatts of installed capacity—equivalent to the entire electricity-generating capacity of Nigeria.

As for urbanisation, India has a "last mover" advantage. Perhaps seven-tenths of the urban infrastructure that it will need in 2030—such as roads, buildings and sewers—has yet to be built. In the meantime, India can learn from the lessons of others as they grow. Building compact cities with efficient transport systems and non-wasteful buildings would go a long way to slowing the rise of emissions.

Greenish India

So how much would all that achieve? Using varying assumptions about future policies and actions, five Indian forecasting groups predicted that emissions in 2030 could be between 3 billion tonnes and 5 billion tonnes a year, compared with a range of 4 billion tonnes to 5.5 billion tonnes on current trends. It is a significant difference, but not a huge one. According to C-STEP, the think-tank in Bangalore, it would be possible to cut emissions by a further 20-30% through more drastic actions, such as having four-fifths of lighting from LED bulbs by 2030 and sending half of all freight by rail instead of road rather than 39%, as is planned. That really might help India avoid the pattern of "grow first, clean up later".

India has shown that it can enact reforms that have a big environmental impact. In the past two years, for example, it has removed a subsidy on diesel consumption (which subsidised carbon), and replaced subsidised liquefied natural gas with a cash payment for the poor, encouraging people to use gas less wastefully.

India's emissions are still too modest for it to rival China anytime soon. Modest, too, are its manufacturing sector and middle class, both big polluters. As always, India will go its own sweet way. But it could do more to make that way greener. ■

And now they can do their homework, too

Banyan | Big motherland

China's principle of non-interference may not apply when ethnic Chinese are concerned

DEBATE still simmers about a remarkable intervention in the domestic politics of Malaysia late last month by China's ambassador in Kuala Lumpur, Huang Huikang. A few days after the police had resorted to water cannon to disperse ethnic-Malay protesters shouting anti-Chinese slogans in the city's Chinatown, he visited the area and made a statement calling for racial harmony. China "will not sit by idly", he said, if its citizens' rights are violated or Malaysian-Chinese relations damaged. The sentiments seem unexceptionable in themselves, if a bit puzzling, since the Chinese living there are almost all Malaysian citizens. But the public gesture seemed to flout the most hallowed tenet of Chinese foreign policy: not to interfere in other countries' internal affairs. In fact, that principle has always had limits and, where ethnic Chinese are concerned, sometimes seems not to apply at all.

That is most obviously true where China has sovereignty, or claims it. The Chinese Communist Party had a clandestine presence in Hong Kong and dabbled in politics there long before the formal handover from Britain in 1997. In a 1984 agreement with Britain, China promised Hong Kong autonomy in everything but foreign affairs and defence until 2047. But it has continued to meddle ever since. It ensures its placemen run the government and seeks to influence everything from the press to academic appointments (see page 46).

In Taiwan decades of fiercely anti-communist rule by the Nationalist Party, the Kuomintang (KMT), which was defeated in China's civil war, left the Communists with far fewer local resources. But since Taiwan embraced electoral democracy in the late 1980s, China has sought to influence its voters' choices. In 1996 it conducted threatening missile tests ahead of the first direct presidential election on the island, to deter voters from endorsing the KMT's Lee Teng-hui, who was seen as sympathetic to the idea of formal independence. That was counterproductive. China's clumsy bellicosity is believed to have helped Mr Lee to victory.

As it happens, in subsequent Taiwanese elections China has usually favoured the KMT, which for all its past sins is at least notionally committed to "reunification" with the mainland, unlike the Democratic Progressive Party (DPP), the main opposition. China has tried subtler means—such as offering Taiwan attractive economic links—to make reunification seem appealing. But that seems not to have worked either. Opinion polls suggest that in elections in January 2016 the KMT under Taiwan's current president, Ma Ying-jeou, may lose not just the presidency to the DPP but, for the first time, control of the legislature.

Yet China also takes an interest in the politics of truly foreign countries in its region. It will be glad to see the back of the Philippine president, Benigno Aquino, who stands down in May. He has incurred China's wrath because of his criticism of its reef-grabbing tactics in the South China Sea, at one point likening the international response to this to the appeasement of Nazi Germany in the 1930s. China is incensed that his administration has asked an international tribunal to rule on China's claims. Chinese diplomats have given almost open support to his vice-president, Jejomar Binay, who was elected separately and will be the main opposition candidate in the May presidential election.

It has also sought to win the support of the Philippine business community, tantalising it with the juicy economic prospects that better relations might yield. It probably helps that, as elsewhere in South-East Asia, ethnic Chinese dominate many businesses, despite making up little more than 1% of the Philippine population. Since its economic opening four decades ago, China has exploited ethnic and cultural links with ethnic-Chinese firms around the world to attract investment and build networks.

In the region commercial success has earned overseas Chinese communities envy and sometimes persecution. When King Rama VI of Thailand in 1914 published a short book on the overseas Chinese, he called it "Jews of the Orient". He imported European anti-Semitic prejudices to direct them at Asia's Chinese minorities. In fact, of the estimated 34m ethnic Chinese now living in South-East Asia, those in the Philippines and Thailand have seemed among the minorities most successfully assimilated. Mr Aquino himself is of Chinese descent, and Thailand's present, much-revered, king has Chinese forebears on his mother's side. Elsewhere, the Chinese have sometimes faced pogroms. Hundreds of thousands died in Indonesia in 1965-66, as part of the purge of suspected communists that accompanied the rise to power of Suharto, the late dictator. And many of the more than 800,000 who took to the sea to flee Vietnam after the end of the American war were Chinese (see page 45).

Citizens and sojourners

Malaysia, too, has a history of racial tension. Bloody riots in 1969 have shaped the polity ever since. Affirmative-action policies have aimed to reduce the share of national wealth held by the Chinese minority (currently about 24% of the population) in favour of "indigenous" races, mainly the Muslim Malay majority. That history helps explain Mr Huang's concern—but not his intervention. The anti-Chinese mobs had been telling their targets to "Go back to China!". For a senior Chinese official apparently to claim responsibility for them is worse than unhelpful. It fuels the old paranoid suspicion that the prime loyalties of people whose families have been in Malaysia for generations are to the country of their ancestors: that they are, in the phrase of Wang Gungwu, a Singapore-based historian, "unrepentant sojourners".

That is why Mr Huang's behaviour seemed so shocking. Some thought the episode was a clumsy mistake by a diplomat acting on his own initiative. But that seems unlikely. Instead, many view it as another sign of a more assertive Chinese foreign policy, and a deliberate signal that the government sees itself as a protector for Chinese everywhere, whatever passport they carry. ■

Hyundai Motor earns high marks in annual J.D. Power IQS

- Hyundai Tucson and Accent Receive J.D. Power Initial Quality Awards
- Company achieves fourth-place industry ranking for the second year in a row
- Elantra and Santa Fe finish in second place in their segments

Hyundai ranked fourth among all brands in the J.D. Power 2015 U.S. Initial Quality Study[SM] (IQS) and second among non-premium automakers. In addition, the 2015 Hyundai Tucson was awarded for the highest initial quality in the small SUV segment and the 2015 Hyundai Accent earned the highest honor in the small-car segment for the second year in a row.

"Hyundai is committed to delivering its owners exceptional quality vehicles," said Frank Ferrara, executive vice president, customer satisfaction, Hyundai Motor America. "Not only do we take the improvement of quality on our existing models seriously, but we must also launch new vehicles with the highest quality right out of the gate. It is important for our customers to be happy with their vehicles, and that starts with quality and educating them on how to use all the features of their vehicle. Results like these demonstrate how well we're succeeding in connecting with our customers on all levels."

HYUNDAI | NEW THINKING. NEW POSSIBILITIES.

More information about Hyundai Motor and its products can be found at: http://worldwide.hyundai.com or http://www.hyundaiglobalnews.com

"Small SUVs and small cars are some of the most popular vehicles on the road today and nearly every automaker has products that compete in these segments, giving consumers many options to choose from," said Mircea Gradu, executive director, engineering and quality, Hyundai Motor America. "Both the Accent and Tucson were ranked highest in their crowded segments for high quality, which provides owners peace of mind when it comes to an important financial purchase."

In total, Hyundai had four models ranking in the top two in their segments, including segment awards for Tucson and Accent, and second-place finishes for Elantra and Santa Fe.

About Hyundai Motor

Established in 1967, Hyundai Motor Company is committed to becoming a lifetime partner in automobiles and beyond. The company, which leads the Hyundai Motor Group, an innovative business structure capable of circulating resources from molten iron to finished cars, offers top-quality best-sellers such as Elantra, Sonata and Genesis. Hyundai Motor has eight manufacturing bases and seven design & technical centers worldwide and in 2013, sold 4.73 million vehicles globally. With almost 100,000 employees worldwide, Hyundai Motor continues to enhance its product line-up with localized models and strives to strengthen its leadership in clean technology, starting with the world's first mass-produced hydrogen-powered vehicle, ix35 Fuel Cell.

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Refugees

Almost home

QIAOGANG, GUANGXI PROVINCE

China has successfully absorbed many refugees from Vietnam. But it is ill-prepared for another influx

IN A restaurant in Qiaogang, a town in the southern province of Guangxi, a large poster of Mao Zedong—entitled "Red Sun"—hangs below one of a Vietnamese island where Wu Guangsui, the restaurant's owner, was born. He fled to China by boat with his family in 1978 when relations between the once-friendly neighbours soured—resulting, the following year, in a brief but bloody war. Mr Wu (pictured), like some 300,000 other Vietnamese who sought refuge in China at the time, feared persecution in his home country for being a member of China's ethnic majority.

These refugees are among the very few outsiders who have legally settled in China. Then impoverished, China is now the world's second-largest economy and aspires to be a global power. Its working-age population is shrinking, yet it remains stubbornly reluctant to accept new entrants; thousands fleeing persecution or conflict in North Korea or Myanmar in recent years have faced deportation by the Chinese authorities. Those sent back to North Korea have often been imprisoned and sometimes executed on their return.

It was different with the Vietnamese. At the height of the exodus, 100,000 people entered China through the border town of Dongxing in Guangxi—ten times the local population (see map). Government buildings, homes and schools were emptied to shelter them. They were later settled in six provinces. In 2006 António Guterres, the UN's High Commissioner for Refugees, described this as "one of the most successful integration programmes in the world".

The government gave the new arrivals housing and jobs, many of them in state-run farms or factories set up especially for the Vietnamese. Mr Wu was sent to fish in Qiaogang, which means "overseas Chinese port". It was built as a new village for immigrants. Within a decade many of the Vietnamese had been issued with identity cards and the household-registration documents that entitle holders to government-subsidised education and welfare. Some were given Chinese passports. Most now have full rights as Chinese citizens. The government, however, still classifies them as refugees. It may believe that this will discourage other would-be migrants who are thinking of fleeing to China from believing they will enjoy the same benefits as those who came from Vietnam.

Even the Vietnamese have had difficulties. Many are poorer than Chinese-born locals whose command of Mandarin and better contacts in southern China's factory boomtowns have given them a leg up. Qiaogang is scruffy and decaying compared with the nearby city of Beihai, which has a forest of shiny new buildings. Some 50km (30 miles) inland at Liguang, one of the many "overseas Chinese farms" where Vietnamese were sent to work, former refugees now make up around a third of the population, but virtually all local businesses are Chinese-run; most Vietnamese remain on the land.

That Mr Wu and most of his compatriots already spoke Cantonese, a language commonly spoken in Guangxi, helped their integration. They belonged to the same ethnic-Han group that makes up more than 90% of China's population. But they are often still treated as outsiders, even though they have lived in China far longer than they did in Vietnam, and consider themselves Chinese. People in Guangxi refer to them—and their China-born children—as *huaqiao*, or overseas Chinese. When there are conflicts, says Su Chungui, a Vietnamese farmer in Liguang, townsfolk call them "Vietnam ghosts". In 2013 Mr Su and some compatriots planted cassava on wasteland to supplement their tiny income. But Chinese villagers destroyed the whole crop before harvest-time, says Mr Su: "We are outsiders, so when we argue, we compromise." The immigrants did not retaliate.

The arrival of the Vietnamese was a turning point for a country that had long been shut off from most of the outside world, and that had experienced only outward flows since the Communists came to power: thousands of ethnic-Korean Chinese even fled to North Korea in the 1960s to escape famine. In 1979 the UN's refugee ▸▸

agency, UNHCR, set up an office in Beijing. Three years later China signed the UN's convention on handling refugees.

Yet China has not yet passed its own laws reflecting the requirements of this treaty. It has no legal definition of a refugee. Aside from the Vietnamese, China has only 583 refugees on its books—most of them from Somalia and Nigeria. This year about 60,000 Burmese poured across the border into China to escape fighting between rebels and government forces. The Chinese government denied UNHCR access to the camps where they were briefly housed. Refugees from North Korea never even get shelter. China calls them "criminals" or "illegal economic migrants"—partly because it remains an ally of North Korea, but also because it fears attracting a lot more of them.

This is less about immediate practicalities: the displacement of around 5m people by an earthquake in Sichuan province in 2008 proved that the government can provide emergency shelter and medical care for large numbers. China worries more about the impact on social stability of a large number of jobless immigrants of different ethnicity from the Han majority. It has little appetite (and cash-strapped local governments even less) for longer-term care. It may need to find one. Should North Korea sink into chaos, the exodus could dwarf the one from Vietnam (though if the regime collapses, many refugees would head to South Korea). China's only visible preparations so far have been to tighten security along the border. ■

Politics in Hong Kong

Troubled leaders

HONG KONG

A former chief executive of Hong Kong is arrested by anti-graft officials

CHINA's record of picking leaders in Hong Kong has hardly been glorious. The current chief executive—the third since China regained the territory in 1997—is hugely unpopular. The first one resigned after a public outcry over his plans for a new security bill. Now the second, Donald Tsang Yam-kuen, who was knighted by the British but whose once-widespread support had shrivelled by the time he left office three years ago, faces possible disgrace.

Mr Tsang was arrested on October 5th following a lengthy investigation by Hong Kong's Independent Commission Against Corruption (ICAC). At a magistrate's court, where he appeared wearing his trademark bow tie (see picture), two charges were read out to him. The first was that he had failed to declare his rental of a flat in the nearby Chinese city of Shenzhen from a businessman whose applications for broadcast licences were being considered by Hong Kong's policymakers. The other charge was that Mr Tsang had proposed an architect for a public honour without revealing that the nominee had been hired to work on the flat's interior design.

Mr Tsang told reporters after his release on bail that his conscience was "clear" and he was sure that the trial would "exonerate" him (he is next due to appear in court on November 13th). Mr Tsang has long been a target of criticism for his behaviour while in office. He has admitted using tycoons' yachts and jets for private trips, though he later said that he had paid commercial rates. In 2012, near the end of his term, he survived a vote of no-confidence in the legislature. This outcome was no surprise. He was helped by an electoral system that favours pro-establishment politicians, who form a majority. It was the first such vote since the end of British rule.

The ICAC, which was set up in 1974 to deal with widespread corruption then plaguing Hong Kong, is widely seen as a bellwether of the autonomy that China promised the territory. In December its work resulted in the sentencing of Mr Tsang's former deputy, Rafael Hui Si-yan, to more than seven years in prison for accepting bribes from a property developer while he was in office. Mr Hui is the highest-ranking Hong Kong official ever jailed. Some commentators have speculated about whether the more than three years it took to investigate Mr Tsang was a sign of political pressure. The ICAC says the process was lengthy because it involved other jurisdictions, presumably meaning China.

When he left office, Mr Tsang's support ratings were lower even than those of the first post-colonial chief executive, Tung Chee-hwa, at the same point in his career, and considerably lower than those of the last British governor, Chris Patten, when he set sail for home (see chart). But the current chief executive, Leung Chun-ying, was never popular to begin with—not even, particularly, with the central government.

His polls remain dismal. When researchers at the University of Hong Kong (HKU) asked people to rate him on a scale of 0 to 100 in September, Mr Leung's average score was 39.2. That survey's director, Robert Chung Ting-yiu, says a score of less than 45 can indicate a credibility crisis.

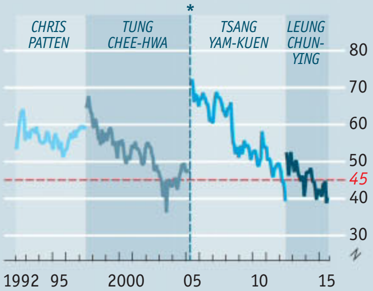
The poll was conducted a year after a student-led movement known as Occupy Central that paralysed parts of the city for more than 11 weeks. Mr Leung (and more importantly, the central authorities) rejected the demonstrators' demands for fully free elections when his position is next contested in 2017. If, as expected, Mr Leung stands again, his selection will again be up to a 1,200-strong committee of Hong Kong residents dominated by the Communist Party's supporters (last time he scraped in with 689 votes).

The mood on campuses remains bitter. On October 5th some 2,000 students and staff at HKU staged a silent protest against what they allege has been political interference in the choice of a senior manager at the university. But Mr Leung can draw some comfort from splits among the democrats. Next month they face their first test at the polls since the Occupy movement, in district elections. Better-funded and disciplined pro-Communist groups are expected to do well. ■

Who'd want this job?

Leaders of Hong Kong, average support rating

0=absolutely do not support, 100=absolutely support



*Acting chief executives between March and June 2005

Source: University of Hong Kong, Public Opinion Programme

Donald Tsang denies it all

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Egyptian politics

The sad state of Egypt's liberals

CAIRO

Who is left to fight for democracy?

IF YOU believe Abdel-Fattah al-Sisi, Egypt's president, his country will take a final step towards democracy later this month, when voters start the process of choosing a new parliament. The previous one, freely elected and dominated by Islamists, was dissolved by the supreme court in 2012. The intervening period has seen Mr Sisi, then a general, oust an elected president, win an election himself and crush his opponents with violence and draconian laws passed by decree.

Contrary to his rhetoric, Mr Sisi has set Egyptian democracy back. Yet the forces behind Egypt's revolution in 2011—when the previous strongman, Hosni Mubarak, was overthrown in a popular revolt—have shown scant ability and often little inclination to keep the country on a more democratic path. Most of Egypt's so-called liberals supported the overthrow of Muhammad Morsi, the former president, in 2013 on the grounds that his Muslim Brotherhood was itself undermining democracy. Many then stayed mum as Mr Sisi's troops slaughtered protesting Islamists. Tarnished by this history, riven by in-fighting and lacking broad appeal, the liberals now appear helpless to check Egypt's slide back to authoritarianism.

A common lament of liberals is that, having preserved democracy with his coup, Mr Sisi then stifled their voices. Indeed, liberal activists and politicians have been hounded by the security services, pilloried in the media and constrained by government restrictions on protests and NGOs. The regime often justifies the oppression on security grounds, while making the occasional cosmetic gesture, such as releasing 100 political prisoners last month. Thousands more languish in jail.

Most political inmates are members of the Brotherhood, which Mr Sisi banned. But that has not helped the liberals, who are expected to do poorly in the election, in part owing to the law governing the vote. Three-quarters of the seats will be elected in single-member constituencies, which favour wealthy and well-connected candidates—often regime loyalists who buy votes. Another 20% will come from party lists, which is how most of the previous parliament was chosen. Mr Sisi himself will select 5% of the members. A rubber-stamp chamber, similar to those under Mr Mubarak, is the expected outcome.

Not just Sisi's fault

But even under the more favourable rules of the previous parliamentary elections in 2011-12, secular pro-democracy parties won less than a third of the vote. Young and inexperienced, they were clobbered by the Brotherhood, which had a long history of providing services and mobilising voters. "This is a country that didn't have real political parties for 60 years, so we're still learning how to build them," says Khaled Dawoud of the liberal Constitution Party.

While good at opposition, Egypt's liberals have failed to unite behind a platform or leader. In the election that brought Mr Morsi to power, they split their vote between a clutch of candidates of varying political stripes, none of whom made it to the second round of voting. The result reflected larger divisions within the revolutionary movement.

Among those who went to the barricades to topple Mr Mubarak were students, union members and Islamists, all with their own agendas. The parties that sprang up afterwards differed not only in their religious fervour, but also in their economic outlook and enthusiasm for democracy. The word liberal is often used to describe the secular opposition, but the parties run the gamut from socialist to free-market. There has been little effort to bridge these gaps. Hopes that the revolutionary forces would unite under one electoral coalition for the coming poll have come to nothing.

Individual liberal parties are having enough trouble holding themselves together. Several are riven by internal quarrels. In August Hala Shukrallah, then head of the Constitution Party, resigned, citing a "vicious circle of differences and complexities". The party, founded by Mohamed ElBaradei in 2012, has argued over the timing and structure of internal elections, whether to participate in the coming poll (it will) and its stand on Mr Sisi.

More recently, Muhammad Abu al-Ghar tried to resign as head of the Socialist Democratic Party owing to "polarisation and a lot of other problems" (he was convinced to stay on), while leading members of the Wafd Party, Egypt's oldest party and the third-place finisher in the 2011-12 election, have accused its leader, El-Sayyid el- ▸▸

Badawi, of abusing his power. "The liberals have been bedevilled by their own egos," says David Ottaway of the Wilson Center, an American think-tank.

The parties have something else in common: financial trouble. A leader of the Constitution Party admits that it cannot balance its books. Mr Ghar hints at similar difficulties. While some businessmen swung their wealth behind the new parties after the revolution, they have lately kept their distance for fear of angering the regime. Two parties expected to win seats in the election were founded by tycoons.

But money alone does not explain why the liberal message has failed to resonate. Many of the liberal elite, who tend to be urban and educated, speak a different language, in terms of politics and economics, from most voters. The state has long dominated Egypt's economy, so those espousing free enterprise are often criticised. Politically, limited government is a foreign idea. The parties have made little effort to connect with rural voters or address the economic and social concerns that brought people into the streets in 2011.

Liberal appeals for democracy now feel stale, as most Egyptians seem comfortable with Mr Sisi, who has brought a sense of stability after years of upheaval. Having quashed dissent, he is now being urged by supporters to amend the constitution to reduce the powers of parliament. The liberals are in no position to stop him. "[We are] fighting for our survival," says Mr Dawoud. "If we manage to stay together, that would be an achievement in itself." ■

Syria's opposition

Down but not yet out

BEIRUT

What Russian intervention means for Syrian rebels

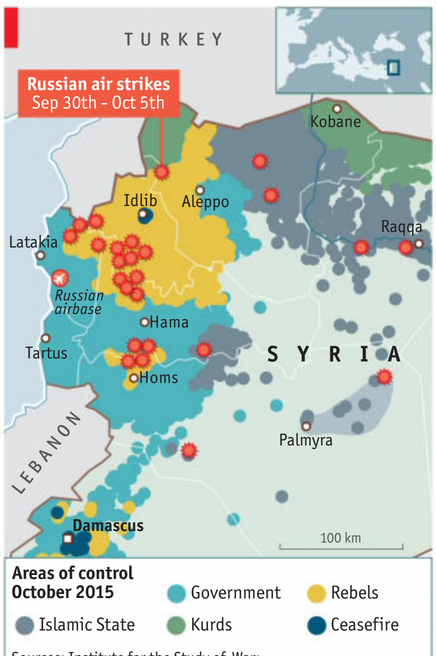
HAVING dramatically entered Syria's war on September 30th with a slew of air strikes against the forces battling Bashar al-Assad, Russia upped the stakes again a week later. On October 7th it hit the opposition with cruise missiles launched from hundreds of miles away in the Caspian Sea. The missiles and the strikes are said by Russia to be part of a campaign against "terrorism", but have almost exclusively been directed not against Islamic State (IS) but against opposition groups, including some supported by America, much closer to Mr Assad's remaining heartland.

Supporting ground attacks by the Assad regime, Russian planes have for the past week repeatedly bashed groups in the north-western rebel-held province of Idlib and pockets around the city of Homs, in some cases making indiscriminate use of cluster bombs.

The rebels consider Russia's intervention a second "occupation" in addition to the one by Iran, Mr Assad's other main ally, says Abu Amin of Thuwar al-Sham, a small rebel outfit. But whether this spells serious trouble for the armed opposition depends on two as yet unknown factors: what else Mr Assad's allies, Iran and Russia, have in store, and the reaction of the opposition's backers, chiefly America, Saudi Arabia, Qatar and Turkey.

Air strikes alone cannot defeat the rebels, who are made up of an astonishing 7,000 different groups, according to the Carter Centre, a think-tank. Bombs will drive more Syrians out of the country, but they will not allow Mr Assad and his allies to recover and hold on to territory. Until the Russian move, Syria's opposition was in a better state than at any time since the war started in 2011.

In recent months non-IS rebel groups, who range from the non-ideological to al-Qaeda's Syrian arm Jabhat al-Nusra, have co-ordinated their fighting well despite their differences. In March Jaysh al-Fatah (the Army of Conquest), a coalition of northern rebel groups including Jabhat al-Nusra and Ahrar al-Sham, a Salafist outfit, took Idlib city. South of Damascus the Southern Front, backed by Jordan and America, is increasingly potent.



Sources: Institute for the Study of War; The Carter Centre using Palantir Technologies

The rebels will be in much more danger if Russia sends in ground troops. On October 5th the head of Russia's parliamentary defence committee said "volunteers" from Russia's war in eastern Ukraine may turn up in Syria; he and the Kremlin have since contradicted that. But even without them, there are reports that Iran, Mr Assad's other ally, is already funnelling more Shia militiamen into the country, under the direction of its own commanders. Hizbullah, Iran's client militia in Lebanon, has long been fighting for Mr Assad, as have other Shia militias. A full-scale ground assault with Russian air support seems increasingly likely and may already be under way.

Rebel groups are urging international backers to give them more and better weapons. "The fact that the Russians are sending a strong message that it wants the regime to win likely will force the other side to escalate," says Peter Harling of the International Crisis Group, a think-tank.

So far the opposition's backers have largely kept quiet about their plans. What happens next will depend largely on Saudi Arabia, Qatar and Turkey, since America has lost much of its influence in the war. Although the CIA has trained and equipped some rebels at a cost of $500m, this programme has failed badly. Only four or five men are currently in Syria fighting—barely enough to fill a pickup truck. Following Russia's intervention, Barack Obama is said to have authorised the Pentagon to distribute more ammunition and some weapons to 30,000 troops who he hopes will advance on Raqqa, IS's Syrian capital.

Yet America's allies are not holding their breath. They are already disheartened by Mr Obama's feeble response to the Russian bombings. That 25,000 of America's proposed ground force are Kurds and only 5,000 Arabs bodes badly for prospects of taking back Syria's Sunni heartland. The lack of credible Sunni representation is feeding instability in both Syria and Iraq and is pushing more Sunnis into IS's embrace. The Gulf states have long wanted to give anti-air missiles to the opposition, but have been held back by Mr Obama. But recently they have shown less subservience. The capture of Idlib came about largely because they gave more backing to their proxies despite American objections.

So Syria is probably in for another period of escalation. On October 5th Turkey complained that it had intercepted a second Russian plane in its airspace in as many days. Many Iraqi officials have said they would welcome Russian intervention against IS there too, raising the spectre of a widening Russian campaign. Syrians, not least the armed opposition, are once again subject to the whims of outsiders. ■

Aid in the Middle East

How the quality of mercy is strained

GAZIANTEP AND GAZA

Even if they have enough money, it is hard for aid agencies to be effective

IMPOVERISHED Jordanians in the northern city of Mafraq have learnt to curse the arrival of foreign aid agencies. Since they began dishing out cash to Syrian refugees to help them pay for housing, rents have soared, pricing some families out of their homes. "We have a way of going in gung-ho, giving things, and not looking at what the impact will be on other communities," says an adviser to a British charity.

Aid now plays a big part in the turbulent Middle East. Last year the area consumed almost 60% of the global budget for humanitarian relief, which reached almost $25 billion. Of the four largest recipients, all but one, South Sudan, was in the Middle East. Tales of heroic personal kindness still abound. But today's aid agencies sometimes seem more like flint-faced multinationals than Mother Teresa.

It is hard to measure how effective all that aid is. Aid agencies perform spot-checks on projects, but say their resources are too stretched to conduct full-scale assessments. It is often hard to know how many people benefit. It is easy to count the number of food parcels distributed, but a water tap might serve people in a whole district. "We're inflating the numbers," says a former aid worker, whose charity provides pumps in Gaza.

There is a bigger problem: the unplanned consequences of aid. Pushing up prices is one; acting as a magnet is another. The beheading and kidnapping of aid workers have made much of Syria too dangerous to operate in. Mercy Corps, an American-founded charity that is the largest operating in opposition-held territory, stopped sending in foreign aid workers two years ago. The big international relief agencies feel their best bet is to provide most of their help on the safe sides of borders—in Iraq, Jordan, Lebanon and Turkey.

People become refugees for many reasons, but a big one is to reach that aid. "If the food won't get to the people, they'll come to it," says Reinoud Leenders of Kings' College, London, who advises Western governments on aid. Four years into Syria's crisis, aid agencies are still spending almost twice as much ($5.5 billion) on the 4m or so registered Syrian refugees outside the country as they do on the 7.6m thought to be displaced inside it.

Let it flow

Despite two UN Security Council resolutions designed to force pathways for aid into Syria, access to the country remains tricky. The UN says food aid gets to just 12% of the 4.6m Syrians it defines as being in areas "hard to reach"; medical supplies get to less than 4%. Those not being reached are running out of whatever stores and supplies they may have. "For the first time in three years, our beneficiaries in Syria are saying if it wasn't for our food assistance, they wouldn't survive," says Rae McGrath, who runs the Mercy Corps programme for northern Syria from Turkey's capital, Ankara. "If we don't deliver, what seems like a crisis in Europe now will be a whole lot worse," he says, referring to the current westward rush of migrants.

Even outside Syria, many obstacles stand in the way of relief. Egypt, Iraq, Israel, Saudi Arabia and Syria all restrict the access aid workers have to their territory, often denying them visas. Foreign donors can complicate matters by changing their minds about priorities. Agencies depend on emergency appeals, an unreliable method that frustrates planning. Strapped for cash, the UN's World Food Programme recently cut rations to Lebanon's Syrian refugees to just $13 a month. The World Health Organisation has closed 184 centres that used to cater for Iraq's 3m displaced.

Since Western outfits find it so hard to get into Syria and its neighbours, local NGOs could be asked to do more. At many aid conferences it has been stressed that grassroots agencies understand local needs better and want to avoid the dangers of foreign dependency. But many Western aid organisations, enjoying cosy relations with their own governments, seem loth to hand over to the locals. Often their directors previously served in government aid departments. "We're shut out of the [international] gravy train," complains Alastair Kelly of Amar, an Iraqi-based agency.

The international agencies say that, unlike local NGOs, they are above the political fray and point to the scourge of local corruption. "We implement directly because you want to make sure that the NGOs aren't just for the Sunni Arabs or Shia Arabs or whatever," says Christina Corbett of Oxfam, a British-based charity with an annual turnover of $600m. But though they are less beholden to Middle Eastern politics, they are sometimes subject to pressure at home. "Often we end up doing the programme that donors want us to do, not what communities need," says an adviser to a big international charity.

Thus, the UN and the large aid agencies rushed in to Iraq behind America's tanks in 2003, almost as if they were its civilian arm. Now, some aid workers in Gaza say they feel they are propping up Israel's occupation. The UN runs schools and clinics there, and administers what reconstruction materials Israel allows to enter the enclave, down to each bag of cement.

Politicians in donor countries often decide which organisations should be co-operated with, and which not. No one can recall an aid agency being prosecuted for dealing with a designated terror group, but many err on the side of caution, fearful of losing funding. "It used to be that humanitarian workers dealt with all combatants," says Mark Malloch-Brown, a former UN deputy Secretary-General who once negotiated safe passage agreements with Cambodia's Khmer Rouge. In the aftermath of 9/11, he says, such pragmatism is impossible. Many, for instance, flinch at legitimising Islamic State by engaging with it over aid. But if vaccines fail to reach people under its sway, a polio epidemic could spread far beyond its caliphate. ■

South Sudan

That elusive peace

BENTIU

The two main combatants still seem loth to let bygones be bygones

HOLDING court beneath a neem tree in a walled compound next to a mud hut with a satellite dish, Stephen Taker Riak Dong, the acting governor of Unity State, cheerfully dismisses talk of economic collapse. Bentiu, his state's administrative capital, is a wreck after 21 months of war. It looks as if a cyclone has scattered its shack-like dwellings. Abandoned vehicles rust in the grass. Herds of looted cattle are guarded by men with AK-47s. Unity once accounted for much of the country's oil but now produces none. Yet Mr Taker is unperturbed. "We never depend on oilfields. If there are no dollars we don't mind." Peace, he says, will solve everything.

But it remains elusive. A deal signed in August by President Salva Kiir and his sacked deputy-turned-rebel leader, Riek Machar, looked like the best chance yet. But then Mr Kiir, to the annoyance of foreign mediators, announced he was redrawing state boundaries and increasing their number from ten to 28, undermining the power-sharing pact. Mr Machar reacted angrily, but so far neither party has dumped the deal, signed under pressure from regional governments and America.

For the breezy Mr Taker, an ally of the president, the greater number of states would be a boon, letting him hold on to power. Unity had been earmarked for the rebels, but Mr Kiir envisages splitting it in three, so Mr Taker would keep his patch. For ordinary folk, exhausted by war and fed up with their leaders, these political shenanigans seem irrelevant when set against their daily struggle for survival.

The year after South Sudan's independence in 2011, a border row between South Sudan and its larger neighbour, the rump state of Sudan, set off a months-long partial shutdown of the oil industry, severely depleting the new state's cash reserves.

And when the civil war in the new country began in December 2013, the oil virtually stopped flowing altogether. A trickle has resumed, but South Sudan's oil is of low quality. Falling prices and a fixed-payment plan for using the pipelines taking the oil north through Sudan means the government earns only $5 for each of the 150,000 or so barrels a day that are now produced.

The economy is dire. South Sudan's currency has fallen from an official rate of three pounds to the dollar to 16 on the black market. A schoolteacher who earned $115 a month at independence now gets the equivalent of $25. More worrying is the sullen mood of rank-and-file soldiers, whose monthly pay is now worth only $50.

Meanwhile tens of thousands of South Sudanese have been killed in the past two years and 2m people, a sixth of the population, uprooted; 4m are near starvation. "By any measure the humanitarian situation is as bad as anywhere else in the world—or worse," says Simon Mansfield of the European Commission in Juba, the capital. Foreign donors have given $1 billion this year. The UN's World Food Programme spends $1.1m a day on hungry South Sudanese.

But making peace is the *sine qua non*. Disagreement over how to demilitarise Juba, to allow Mr Machar and his entourage to return in confidence, is a further threat to the August deal. One suggestion is for UN peacekeepers to secure the city, but they are already stretched and widely seen as ineffective. Britain says it will send 300 soldiers to bolster them, but they are to provide only technical support. The ring needs to be held by peacekeepers who are capable of using force—once the two sides have genuinely agreed to make peace. That still seems a distant prospect. ■

Nigeria's government

Baba go slow

LAGOS

The long wait for a new cabinet continues

MUHAMMADU BUHARI has earned the nickname "Baba Go Slow" from fellow Nigerians, for he has taken his time out of the blocks. The former military ruler, who won elections in March after promising to root out corruption, has governed alone ever since taking office in May. He said he would appoint a cabinet by the end of September. Yet as the deadline passed he had named only one minister, for oil. And he did not have to look far to find the candidate—he picked himself. This week, at last, Nigerians were given his nominees, but not their positions in his cabinet.

Finding a clean team in one of the most corrupt nations on earth is not easy, but Mr Buhari has tried. His choices are practical, energetic and of (mostly) good reputation. They include Babatunde Fashola, an ex-lawyer known for sprucing up Lagos, one of Africa's most unruly cities, and Kayode Fayemi, the radical former head of Ekiti state. Few of the other candidates are household names, but given the track record of the politicians who ruled for the past 16 years that is no bad thing.

Nigerians do not mind having waited. In the time they have been twiddling their thumbs, they have noted a "Buhari effect" whereby the nation has been terrified into better order. Power supplies have improved, leaving them in darkness less often. Oil refineries are working better too. Frayed diplomatic relations are being restored and stolen money is being hunted down.

Days before the nominees were announced, the former oil minister, Diezani Alison-Madueke, was arrested in London with £27,000 in cash. She denies charges of money laundering, yet oil theft increased under her watch. For many Nigerians, her extravagant displays of jewellery and chartering of private jets epitomised all that was wrong with the old cadre of politicians.

After four months alone at the helm, Mr Buhari is yet to spell out policies for the economy and oil industry. The Senate must screen the president's selections and further choices must be made. Mr Buhari named only 21 candidates of a total of 36. He promises the rest soon. True to form, he is in no rush.

Patience is a virtue

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Germany's refugee crisis

Merkel at her limit

BERLIN

After a historic embrace of refugees, German public opinion is turning

WHAT a difference a month makes. On the night of September 4th Angela Merkel made the most dramatic decision of her decade as German chancellor: to suspend European asylum rules and allow tens of thousands of refugees stranded in Hungary to enter Germany via Austria. It was a moral gesture that fitted the mood of the moment. As *The Economist* went to press, Mrs Merkel was considered a favourite to win the Nobel Peace Prize.

In Germany, however, that altruistic embrace has caused a backlash that could weaken a chancellor so far considered all but invincible. Using uncharacteristically missionary language, Mrs Merkel said repeatedly that the right to asylum has "no upper limit". But Joachim Gauck, who as president is expected to keep out of workaday politics, responded that "our reception capacity is limited even when it has not yet been worked out where these limits lie." As though on cue, the political tone turned against Mrs Merkel.

The numbers are dramatic. More than 200,000 migrants are believed to have arrived in Germany in September alone. For the year, official forecasts had already risen in August from 450,000 to 800,000. This week *Bild*, Germany's largest tabloid, cited estimates that the number could reach 1.5m—equivalent to the population of Munich. New refugees keep pouring in, and those granted asylum have the right to bring family later. No end is in sight.

Processing centres exceeded capacity weeks ago. Local authorities are struggling to find housing, since temporary tent cities will not suffice in winter. The government of Hamburg has begun seizing empty office buildings to house refugees, raising constitutional questions. Berlin and Bremen are considering similar measures. Schools are struggling to integrate refugee children who speak no German.

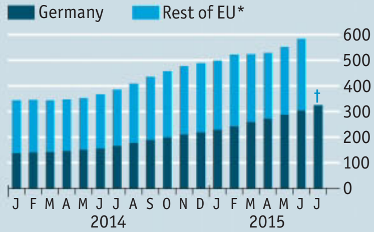
Fights have broken out inside overcrowded asylum centres, often between young men of different ethnic or religious groups. There have been more arson attacks on migrant centres. In Dresden, a xenophobic movement called Pegida is growing again: about 9,000 protested this Monday against refugees.

Mainstream society is tolerant but edgy. In a survey by German public television 51% of Germans say that they fear the refugee influx, 13 points more than in September. Approval of Mrs Merkel dropped by 9 points to her lowest level since 2011 (though it is still a respectable 54%). In two other polls Mrs Merkel slid from Germany's most popular politician to fourth.

Waiting at the door

Pending asylum applications, '000

Germany | Rest of EU*



Source: Eurostat

*Except Austria and the Netherlands

†Data not yet available

The fiercest criticism of Mrs Merkel comes from within her own conservative bloc—the Christian Democratic Union (CDU), which she leads, and the Christian Social Union (CSU), which exists only in Bavaria and usually supports her. Horst Seehofer, the CSU's boss and premier of Bavaria, called Mrs Merkel's decision "a mistake that will keep us occupied for a long time". In one meeting he threatened half-seriously to drop off busloads of refugees at the federal parliament in Berlin.

Gerda Hasselfeldt, a CSU parliamentary leader, wants to erect transit zones along Germany's borders like those in airports. Markus Söder, Bavaria's finance minister, has called for a fence. A group of Christian Democrats calling itself the "security club" debated closing Germany's borders to refugees entirely. Another group has written a letter to Mrs Merkel charging that her refugee policy breaks the law.

In response Mrs Merkel's government is scrambling to make changes. It has passed legislation that cuts pocket money to refugees, currently €143 ($160) a month, and replaces it with vouchers. More police and administrators are being hired. All Balkan countries have been declared "safe" so that their asylum applicants can be rejected and deported faster. On October 6th Mrs Merkel took charge of co-ordinating refugee policy, in effect demoting the interior minister, Thomas de Maizière.

None of this, however, will reduce the numbers of Syrians, Iraqis and Afghans who are fleeing war. Nor will last month's agreement by the European Union to allocate 120,000 refugees among member states. Mrs Merkel had lobbied fiercely for it, but the compromise will barely dent ▸▸

Germany's refugee numbers.

She is now concentrating her effort on getting Turkey, whence most refugees cross into the EU, to intercept and keep more migrants. But Turkey already hosts more than 2m. It will demand concessions such as easing visa restrictions for Turks entering the EU. It will also expect Germany to tone down criticism of Turkish crackdowns on the press and on Kurdish separatists. It may ask for German help to create a buffer zone in Syria.

Meanwhile, Germans have begun to feel that the refugee crisis could change Germany even more than reunification did 25 years ago. Back then the task was to let that which belongs together grow together, as Willy Brandt, a former chancellor, famously said. Speaking on October 3rd, the anniversary of unification, Mr Gauck—like Mrs Merkel a former East German—said that today's challenge is greater because "what should now grow together has so far not belonged together." Germans worry whether Muslim refugees will accept German norms of sexual equality, secularism and Germany's special responsibility towards Israel and Jews.

The backlash does not yet threaten Mrs Merkel's hold on power. While extremist parties have become serious contenders for power in some other European countries, they remain marginal in Germany, and voters have faith that their government will restore order, says Timo Lochocki of the German Marshall Fund, a think-tank. The chancellor faces no Christian Democratic challenger. The centre-left Social Democrats are internally torn. And the leftist opposition cannot attack her for a refugee policy they themselves support.

Mrs Merkel is under pressure as never before. Yet the crisis has brought out a new style of leadership in her. For years she has been accused of following public opinion rather than guiding it. Now she has found her moral calling. "If we start having to apologise for showing a friendly face in emergencies," she says defiantly, "then this is not my country." ■

Russia's Syrian war

An odd way to make friends

Intervention in Syria was supposed to rebuild relations with the West. Unsurprisingly, it is not working

RUSSIA'S behaviour in Syria resembles the fable of the scorpion who promises not to sting the frog that carries him across the river, but does so anyway—because it is his nature. The list of foreign powers stung by Russia continues to grow. This week Turkey protested after Russian fighters intruded into its airspace, drawing a rare admission of error from the Kremlin. The two countries' relations are deteriorating as the Russian presence frustrates Turkey's goal of toppling the regime of Bashar al-Assad. One might surmise that Vladimir Putin's deployment of Russian forces in Syria is simply the latest in a series of provocations designed to irritate every Western-aligned country possible.

Curiously, Russian observers say the real goal is the opposite: not to alienate the West but to force America to recognise Russia as an equal partner, thereby overcoming the isolation caused by the war in Ukraine. The fight against Islamic State (IS) is intended to forge common ground between Russia and America. "This is an attempt to turn the page and achieve reconciliation with the West not by crawling to it on its knees, but by presenting Russia as an influential and indispensable power," argues Alexander Baunov of the Carnegie Moscow Centre, a think-tank.

The Russian audience can be forgiven for feeling confused. For the past year it has been told that America is an enemy sponsoring fascists in Ukraine, bent on undermining Russia's sovereignty. Now it is being told that Russia and America are on the same side in the battle with Islamic terror.

While most Russians enjoy watching the televised drama of their country standing up to America, they are in no mood for real isolation and economic sanctions. Mr Putin's brinkmanship in Syria is meant to reaffirm that he still commands attention and respect in the world. Syria also serves as cover for scaling down Russia's activity in eastern Ukraine: this week the Russian-backed rebels in Donbas called off their earlier plans to hold elections in defiance of Kiev, and the conflict has been frozen (at least for now).

The new war is being presented on Russian television like a blockbuster film. News programmes savour dramatic shots of Russian military jets roaring past the camera. Even Russian weather forecasts have become part of the show. Weathermen report the favourable bombing conditions in Syrian skies—followed immediately by footage of explosions recorded by cockpit cameras.

The show is certainly proving popular. Two weeks ago only 18% of Russians supported the idea of military intervention in Syria. Now the figure has risen to 46%, according to the Levada Centre, an independent pollster. Lev Gudkov, the centre's director, says the figures show the effectiveness of war as television spectacle. But the prospect of war also causes apprehension and fear, laden with memories of the Soviet defeat in Afghanistan.

As with the conflict in Ukraine, Russian television has created a virtual reality that excludes any suffering by Russian soldiers. But unlike in Ukraine, where the fictitious enemy ("Ukrainian fascists") was invented by the media, in Syria Russia faces a real enemy that cannot be switched off. A Russian airbase is vulnerable to insurgent attack. Alexander Khramchikhin, a Russian military expert, argues that if Russia really wants to defeat IS, it will have to commit far greater resources. Meanwhile, in the face of Russia's economic difficulties, the domestic political effectiveness of virtual-reality warfare has limits. "They feed us propaganda," says Tamara Vasileva, a pensioner from a small town in the north of Russia, "but you can't spread propaganda on a piece of bread." ■

Jolly bombing weather

Belarus

Europe's last dictator

MINSK

In a nail-biting election, the incumbent looks like scraping home

THE crisis in Ukraine has been painful for nearly everyone involved. Russia finds itself under sanctions and at loggerheads abroad. NATO faces as grave a challenge as any since the cold war ended. And Ukraine itself, dismembered and drained by war, struggles to recover even as the fighting in the east of the country grinds to a halt. Yet one clear winner has emerged from the mess: Alexander Lukashenko, the mustachioed strongman of Belarus, to Ukraine's north.

Mr Lukashenko is a former collective-farm boss who has ruled Belarus for 21 years. He stands for his fifth consecutive presidential term on October 11th. To no one's surprise, he will win. Known as "Europe's last dictator", he travels everywhere with his 11-year-old son, who packs a golden pistol and expects to be saluted by Belarusian generals.

Elections in 2010 ended with a violent crackdown on protesters and the jailing of Mr Lukashenko's rivals. The European Union imposed sanctions and travel bans for top officials, including Mr Lukashenko. Yet he approaches the vote feeling secure at home and enjoying a renaissance abroad. He has Ukraine to thank.

When compared with the chaos that followed revolution in Kiev, the Ukrainian capital, Belarusians are inclined to see the virtues of Mr Lukashenko's hardline emphasis on stability, says Valery Karbalevich, a political analyst—even though living standards are falling. Meanwhile, the Belarusian opposition is in disarray, with the old guard calling for a boycott of the election while others support a little-known candidate, Tatiana Korotkevich. No one is calling for demonstrations this time.

The wily president is also using the conflict in Ukraine to pose as a statesman. In a war involving its two biggest trading partners, Belarus adopted a largely neutral stance. Strikingly, Mr Lukashenko did not recognise Russia's annexation of Crimea. He offered his capital, Minsk, as a platform for peace talks.

European politicians who long considered Mr Lukashenko to be beyond the pale now turn up at his palace. Western diplomats say they find Mr Lukashenko less objectionable than Russia's president Vladimir Putin—hardly a fulsome compliment, but still a compliment.

In late August Mr Lukashenko released six political prisoners, including Mikola Statkevich, a former presidential candidate

imprisoned since 2010. The EU hints that if the elections pass peacefully, it will lift some sanctions. Opponents of the regime are outraged. Standing up for democracy cost opponents of Mr Lukashenko their freedom and sometimes their lives, says Mr Statkevich; Europe's advocacy of democratic values has been revealed as "just empty words". European diplomats retort that they have little choice but to work with the government Belarus is lumbered with.

For Mr Lukashenko, the West serves as a counterweight to Belarus's dependence on Russia. The Russian annexation of Crimea last year frightened the authorities, whose power depends on Belarusian independence. Though extremely close, the relationship with Russia is not without its tensions. The latest is Mr Putin's demand that Belarus build a Russian air base outside Babruysk, south-east of Minsk. Mr Lukashenko opposes the idea, in part because the precedent of Russia's naval base in Crimea rings alarm bells.

Belarus relies on Russian aid, which Mr Putin's government cut this year. Thanks also to falling exports, Belarus's GDP may shrink by 3.5% this year. For the first time, state-run firms are not raising salaries as a sop ahead of elections. This summer a big dairy factory started paying employees in condensed milk rather than cash. Desperate for money, Mr Lukashenko met the head of the IMF, Christine Lagarde, with a bouquet of flowers this month while in New York for the UN General Assembly.

It would, however, be naive to think that Mr Lukashenko wants to reorient Belarus towards the West. If anything, Belarusians' preference for integration with Russia rather than with the EU has strengthened over the past couple of years, says Oleg Manaev of Minsk's Independent Institute of Socioeconomic and Political Studies. Belarus is an active member of Russia's Eurasian Economic Union. And under a long-standing treaty it shares open borders and mutual defence commitments with Russia (when flying from Moscow to Minsk, flights leave from the domestic side). Mr Lukashenko, says an influential businessman, is appearing to cosy up to the West "so that the golden rain will fall from Russia". The president stands ready to reap the harvest. ■

Labour rules in France

Bosses lose their shirts

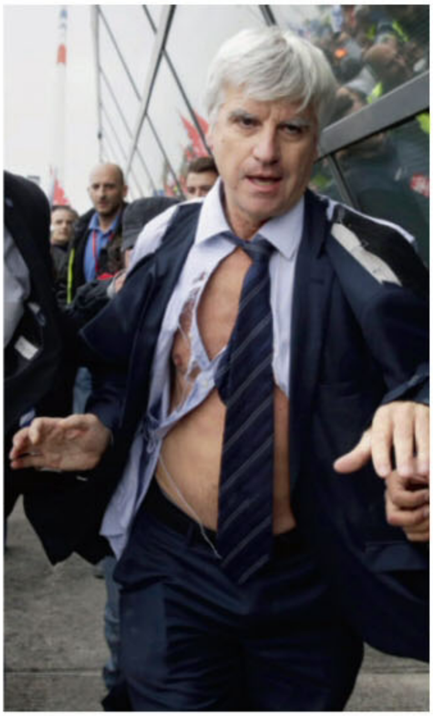
PARIS

Why French unionists forcibly strip managers

HE ARRIVED at the office in a suit and tie but left it topless, his shirt torn off his back, fleeing over a high fence. Xavier Broseta, head of human resources at Air France, escaped a mob of irate unionists on October 5th after they disrupted a works-council meeting about planned job cuts. His colleague Pierre Plissonnier, in charge of long-haul flights, got away at the same time, his shirt and suit jacket ripped to shreds. Their dramatic getaway, which went viral on social media, seemed to mark a new low point in France's antagonistic labour relations.

It is unclear exactly who the provocateurs behind the mob attack were. Reports suggested that Air France had identified 20 suspects, half of them unionists—many from the Communist-linked Confédération Générale du Travail (CGT)—and possibly only three company employees. They managed to turn an already tense works-council meeting, called to discuss a plan to cut 2,900 jobs and five long-haul flights, into what looked like an attempted lynching. Manuel Valls, the prime minister, said he was "scandalised".

Most French labour disputes merely disrupt other people's lives, rather than endangering them: tyres are burned, motorways blocked or sheep unloaded into Parisian parks. But an undercurrent of theatrical violence has nonetheless long marked labour relations. In 2009 there was an outburst of "bossnapping", the sequestration of bosses by unionists, originally a favourite tactic of the 1968 workers' revolts. Last year two executives at Goodyear, a tyre-maker, were held hostage by unionists for over 24 hours in a meeting room at the ▸▸



Apart from that, how was the meeting?

factory. They were freed after riot police surrounded the premises.

The paradox is that Mr Valls's Socialist government has just launched an effort to modernise union negotiations. He wants to make it easier for employers to negotiate directly with unions at firm level. Currently employees are covered by the French labour code, which runs to 3,809 pages—nearly twice as long as the Bible—and by branch-level agreements for 750-odd industries, from metalworking to the patisserie business, which govern over 95% of French employees. And this is despite the fact that only 8% of French workers actually belong to unions.

The primacy of labour law also means that disputes often end up before a judge, stirring uncertainty and conflict. "Our country does not have a culture of negotiation and compromise," noted Jean-Denis Combrexelle, author of an official report on reforming labour law last month. Mr Valls was more blunt. The French labour code, he said, has "become too complicated, sometimes unreadable".

A new reform bill is now promised by the end of the year, to go to parliament in 2016. For the French left, raised to cherish the rights enshrined in the labour code, the idea is radical. It means giving firms the ability to renegotiate hours or pay not just in an economic downturn, as is currently the case, but also as part of a pre-emptive effort to maintain competitiveness—and in a way that prevails over labour law. Such flexibility would be welcome. But it depends crucially on a less shirty union culture of the sort that, for now, seems to have eluded Air France. ■

Spanish identity politics

The mosque in the cathedral

CORDOBA

The Catholic church is accused of a land-grab

WITH its Moorish arches and golden mihrab, the mosque-cathedral of Córdoba is one of the top tourist destinations in Spain. Built in the eighth century, when Muslim Spain was part of a caliphate stretching from Gibraltar to Persia, it served as a mosque for over 400 years before the Christian kingdom of Castile conquered the city and converted it into a cathedral. It has been called the most important Muslim monument in the Western world. This does not entirely please Spain's Catholic hierarchy, which in 2010 dropped "mosque" from the building's name and changed it to simply "cathedral". That has led to a row with activists who claim the church is trying to erase Spain's Muslim heritage—as well as exploiting a legal loophole to take over public property all over the country.

Miguel Santiago, the leader of the Córdoba Mosque-Cathedral Platform, accuses the church of revising pamphlets and audio guides to play down Spain's Muslim period. Ruins in the building's foundation are presented as a prior Visigoth church on the site, a claim some archaeologists dispute. All of the revenues from admission tickets now go to the Vatican. The Christian emphasis is at odds with the city's image strategy, the "spirit of Córdoba", which recalls the medieval period when Muslims, Christians and Jews lived together in striking harmony. Barack Obama invoked Córdoba in his 2009 speech in Cairo as an example of Muslim tolerance.

The church denies any attempt to water down the monument's Muslim past. Its Muslim history is detailed on the website and in the brochures, a church official points out. The church claims its ownership of the building dates back to the Christian conquest of the city in 1236.

But the story is not so cut-and-dried. Until 2006 the building's ownership was unclear, and many of its expenses were paid by the state. The church gained control via a legal loophole introduced in 1998 which allows the Catholic church to register title to land as though it were a government body, without having to produce documents proving ownership. Anyone else with a claim has 10 years to file a complaint before the registration becomes permanent.

The cathedral is far from being the only prime property the church has claimed. Antonio Manuel Rodríguez, a law professor at the University of Córdoba, has discovered more than 800 formerly public parcels in Córdoba that are now registered to the church—including two public plazas, several streets and a press kiosk. In Navarra, a province in the north of Spain, a local civic heritage organisation has discovered over 1,000 more. Carlos Armendáriz, its director, calls this "the largest real-estate scandal that Spain has ever seen". The Catholic church declined to comment.

The only party that could challenge the Vatican's claim to exclusive ownership is the government, currently led by the centre-right Popular Party (PP). The PP has sided with the church. But Spanish politics is shifting leftwards. The new mayor of Córdoba, Isabel Ambrosio, has vowed to return the title of the mosque-cathedral to the public domain. The battle over cross, crescent and conservation rages on.

Pay no attention to the mihrab in the corner

Charlemagne | Best served cold

BRUSSELS

Turkey's president once visited Brussels begging for favours. The tables have turned

WHEN Recep Tayyip Erdogan visits a European city, it stays visited. Parts of Brussels ground to a halt this week when Turkey's president dropped in for a two-day state trip. Roads were closed, barricades erected and dozens of armed police deployed to ensure a smooth path for the sultan. His wife was given the run of a luxury-goods shop while traffic was blocked outside. When thwarted, Mr Erdogan improvised: blocked by Brussels' mean-minded mayor from using an 18,000-seat stadium for a rally, he repaired to an open-top double-decker bus to address thousands of adoring fans outside his hotel. Vladimir Putin had nothing on this the last time he came to town, says an amused official.

Officially, Mr Erdogan was in Belgium to open an art exhibition celebrating Turkey's cultural heritage. The theme dovetails with his desire to portray himself as the heir to Turkey's Ottoman glories rather than its more recent secular rulers. But with over 400,000 migrants having left Turkey's shores for Europe this year, the European Union's leaders were keen to have a word, too. That presented the president with a second chance to shine.

At a press conference Mr Erdogan, standing next to Donald Tusk, the stony-faced president of the European Council, delivered a righteous lecture to his European audience. He reminded them that Turkey had taken in 2m refugees without heed to nationality or religion (take note, Hungary). He linked Western forces' battle against Islamic State to his own fight with Kurdish rebels, denouncing the "black propaganda" from some Europeans that says the PKK are not terrorists. He urged the creation of a "safe zone" in northern Syria. He took no questions.

Much of this was theatre designed for home: Mr Erdogan's AK party is scrapping to secure a majority in an election on November 1st, having failed to do so in June. But still, this is not the Turkey Europe is used to. For years its leaders would visit European capitals as supplicants, hoping to revive dormant EU membership talks and grimacing through rebukes on human rights. Today, with European jihadists streaming across Turkey's porous border with Syria and no end in sight to the flow of migrants, Mr Erdogan is suddenly the indispensable partner. And Europe's inept handling of the refugee crisis has left him with plenty to crow about.

This has given rise to much talk about *realpolitik*—perhaps an EU concession on visa-free travel for Turks in exchange for increased Turkish naval patrols. There is much to discuss: besides an easing of visa rules, Mr Erdogan wants Europe's money and its co-operation on energy, and the Europeans are desperate for Turkey to do more to keep refugees from their shores. But the rules governing matters like visa liberalisation cannot easily be dodged, and anyway the EU does not do grand strategy well. A draft "action plan" released by the European Commission after Mr Erdogan's visit contains high-minded aspirations on matters like refugee resettlement and border co-operation, but details are scarce.

Turkey, and Mr Erdogan in particular, can be maddening partners. Yet the Europeans must share the blame for the bind they find themselves in. In bygone years anti-Turkish animosity from some Europeans deprived the EU of much of its leverage, notes Marc Pierini, a former EU ambassador to Turkey who is now at Carnegie Europe, a think-tank. More recently, as François Hollande, France's president, acknowledged this week, the EU has dozed through the refugee problem: Syrians have been pouring into Turkey for four years. This year's rush of migrants into Europe was "perfectly foreseeable", sighs a senior EU official. "We simply pretended not to see it."

None of this should obscure the pressure Mr Erdogan is under. Russian bombers on Syrian raids wandered "accidentally" into Turkish airspace this week, spooking officials. The Turkish economy is wobbling. And the number of migrants now leaving for Europe points to trouble ahead. A new survey from the German Marshall Fund, a think-tank, finds that 81% of Turks believe immigrants are failing to integrate, and that 68% want a tougher approach towards refugees. Just like the European countries that lie on the migratory route to Germany, Turkey has little incentive to keep refugees in place who do not want to be there.

A club that would have me as a member

Mr Erdogan's visit to Brussels was the first by a Turkish leader in living memory not to be dominated by Turkey's EU membership bid. Those talks stalled almost as soon as they began, ten years ago this week, dogged at first by a Turkish embargo on Cypriot ships and more recently by Mr Erdogan's tilt towards autocracy, including attacks on the press. (The editor-in-chief of *Zaman*, Turkey's best-selling daily, resigned this week, citing "unlawful pressure".) Today, Turkish ministers like to boast that the EU needs Turkey more than the other way around.

Paradoxically, this presents Europeans with an opening. For years the membership talks have bred little but fatigue and distrust. Today's shared problems offer a chance to rebuild relations on different foundations. Few migration crises end without deals between sending and receiving countries. If Europe's national leaders and Mr Erdogan can find the will to strike a grand bargain, involving large-scale refugee resettlement and financial support from Europe in exchange for tighter Turkish border controls, the two sides may achieve more together than they did during a decade of accession talks.

Unfortunately this carries the risk that the EU begins dealing with Turkey rather as NATO does: a strategic ally with shared interests, rather than a potential member in whose domestic affairs it has a legitimate interest. Turkey's democracy is backsliding, the peace process with the Kurds is crumbling and next month's election could cement Mr Erdogan's dream of an executive presidency. This is hardly the ideal time for the EU to close its eyes to Turkey's creeping authoritarianism. But it must seem awfully tempting. ■

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The Conservative Party

Unchallenged yet unstable

MANCHESTER

The prime minister plays the part of triumphant Tory. But he faces problems inside his party, especially over Europe

DAVID CAMERON deserved his ovations during his speech to the Conservative Party conference on October 7th. This was the first conference since he unexpectedly won an outright majority in May's election. The economy is growing at the fastest rate in the G7 group of rich countries. And the Labour opposition has lurched to the extremes by choosing as its leader the far-left Jeremy Corbyn, whom many in his own party see as unelectable, while the Liberal Democrats have sunk into insignificance.

No wonder Mr Cameron looked happy as he delivered a speech that was, for a Tory conference, remarkably centrist, full of concern to reduce inequality and remedy social disadvantage. Yet beyond the hall, Mr Cameron has party-management problems, aggravated because he faces a weak opposition with a parliamentary majority of just 12 seats, a situation that will embolden Tory rebels.

Among the tasks for him and his chancellor, George Osborne, will be deciding how far to ease unpopular plans to reduce tax credits for the working poor. In his speech on October 5th, Mr Osborne also set out ambitious plans to devolve power to local councils and upgrade the country's infrastructure. Mr Cameron reaffirmed the Tory commitment to homeownership, promising to scrap planning restrictions to build more affordable houses. Yet opposition persists in Tory heartlands to housebuilding on greenfield sites, as well as to such projects as the HS2 high-speed rail line and a new airport runway.

The most serious troubles for Mr Cameron will come over Europe, one of the two big subtexts to the conference. The EU referendum will be the biggest single event of this parliament. Mr Cameron remained coy about what he wanted from his renegotiation of the terms of Britain's EU membership, and insisted all options were open, including the possibility of campaigning to leave. In his speech he passed briskly over the topic, making no reference to the referendum, but declaring that he had "no romantic attachment to the European Union and its institutions".

Shake it all about

In reality the Out and the In campaigns are preparing for blast-off. Two heavyweight Tory former chancellors, Nigel Lawson and Norman Lamont, are joining Conservatives for Britain, a parliamentary group all but committed to campaigning for withdrawal. The In campaign will soon trumpet its own launch. The battle could quickly become bloody. The Tories have repeatedly split over Europe during the past three decades. Steve Baker, the Eurosceptic co-chairman of Conservatives for Britain, claims that his group includes 115 MPs, over one-third of the parliamentary party. He insists that "there is a good chance that a majority of Tory MPs will campaign to leave." Open Europe, a Eurosceptic think-tank, concludes that 69 Conservative MPs are clearly for Out and 58 for In, leaving 203 swing voters.

Yet there was no missing the Eurosceptic mood among the grassroots. Many delegates pointed to Britain's better economic performance than the euro zone, and to the drawbacks of being "shackled to a corpse", as one put it. And plenty drew a link between the EU and excessive immigration. In her belligerently right-wing speech, Theresa May, the home secretary, argued that "the rules have to change" on migration from the rest of the EU. Boris Johnson, the mayor of London, trumped Ms May in a more amusing address, but he too insisted that it was for Britain and its parliament, not Jean-Claude Juncker (president of the European Commission), to decide if too many people were coming in.

As immigration fears rise up the agenda, the polls have shifted from a large to a narrow In majority, or even to a majority for Out. The expectation before the party conference was that the referendum would be held before the next conference in October 2016. But the date could slip if the polls are unfavourable, the negotiations prove trickier than expected or Europe's migration crisis continues.

It is hard to see Mr Cameron campaigning for anything other than to stay in. Most businesses and the City of London want to remain. Mr Cameron knows that the uncertainties from an Out vote would deter foreign investment. And it would also surely lead the Scottish National Party (SNP) to demand and probably win a second referendum on independence. A vote to leave the EU could thus be a precursor to the break-up of the United Kingdom itself.

The EU referendum will also be crucial for the conference's second big subtext: the party leadership. Mr Cameron confirmed that he was not going to fight the next election, in 2020, as leader. That fuelled speculation over his successor and jockeying among the candidates. Mr Osborne remains the favourite but, as Mr Cameron was careful to point out, favourites often ▸▸

stumble. Mr Osborne's chances will depend on the success of the economy, but he, too, will want the referendum to be in favour of staying in.

Were the Outs to win, Mr Cameron would surely have to resign (as Alex Salmond, the SNP leader, did after the 2014 Scottish referendum). The leadership could then go to a more Eurosceptic candidate such as the business secretary, Sajid Javid, or the justice secretary, Michael Gove. Ms May and Mr Johnson openly touted their leadership (and Eurosceptic) credentials this week—though only Mr Johnson won a standing ovation following a mention in Mr Cameron's speech. The sad irony for Mr Cameron is that just at his greatest moment of triumph the Conservatives should stop listening to him and instead take note of those who would replace him. ■

English cities

All politics is local

The chancellor announces a grand devolution of power

GEORGE OSBORNE called it "the biggest transfer of power to local government in living memory". In a speech on October 5th the chancellor of the exchequer announced the next stage of his plan to boost the English regions and create a "Northern Powerhouse" of cities from Liverpool to Newcastle. He pledged that local councils would be allowed to retain all the money they raise from business rates, a total of £26 billion ($40 billion) a year. Half of that is currently sent to Whitehall. Mr Osborne called it a "devolution revolution".

Britain's central government raises 95% of taxes, making it the most centralised country in Europe. Seven of the eight biggest cities outside London perform below the national average in terms of GDP per person. Mr Osborne believes the two facts are linked: by devolving power, he hopes to foster growth.

Under his plan, cities will be allowed to lower their business rates (a property tax based on rental value). Those cities that agree to have an elected mayor—something the chancellor is keen on, though most city councillors are not—will also be allowed to raise their rates, to pay for infrastructure. In London, which already has such a power, this has helped to fund Crossrail, a train link under construction.

The moves are "an important first step" towards allowing local areas to collect, raise and spend their own revenues, says Ed Cox of IPPR North, a think-tank. But some cities worry that they will be worse off under the new system which, in return for devolving business-rate collection, will do away with a grant currently dished out by the central government. The *Local Government Chronicle*, a trade paper, found that more than half of England's large councils would struggle to raise the amount they now receive in grant form. A redistributive mechanism must be retained, says Mr Cox.

Mr Osborne also hailed a deal struck on October 2nd to make Sheffield the second northern city, after Manchester, to secure more control of its spending in return for accepting a mayor. "Greater Sheffield" is one of 38 cities and regions that submitted bids last month for such powers. The deal means it will control its transport budget and strategic planning, and receive an extra £30m ($46m) a year for 30 years, to be invested in manufacturing and innovation. Others are expected to follow.

The deal is further evidence of Mr Osborne's ability to work with Labour-run northern councils despite hostility from national Labour figures, some of whom say the deals simply devolve responsibility for Treasury cuts. Funding to local councils fell by 40% in 2010-15 and most government departments are planning additional cuts of up to 40% by 2020.

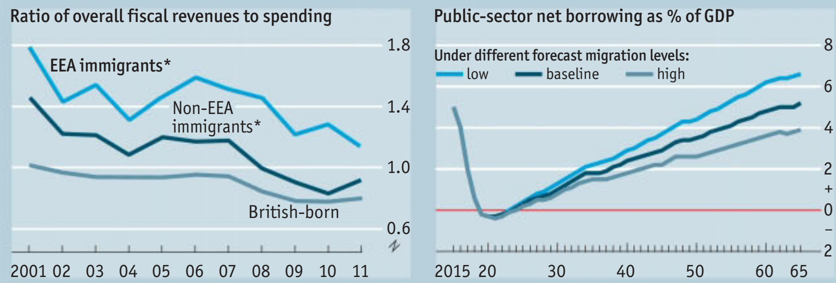
Some would like the chancellor to go further with his localism. "Devolution is the only way to mend a broken state but it must be linked with the integration and reform of the public sector," says Phillip Blond of ResPublica, a think-tank. Big savings could be made by devolving health care and combining it with locally run social care, he says. Manchester's deal includes health; Sheffield's does not yet.

One puzzle is working out how big the entities applying for devolved powers should be. One of the bids came from a proposed region that would cover all of Yorkshire except Sheffield. Mr Cox thinks this might actually have been better able to work with other northern regions; he suspects the chancellor plumped for the smaller Sheffield pitch because it would be better at providing quick cuts and rapid growth. And there are questions about accountability. "Combined authorities" such as Greater Sheffield are made up of the heads of adjoining councils. The new mayors will not be answerable to elected assemblies, as the mayor of London is, but only to their cabinet, composed of the other council leaders.

As for the public, most care about the outcome—more jobs, better transport and so on—but have little interest in the process. Plans for big regional assemblies have been rejected in referendums before. Of 2.2m people eligible to give feedback on devolution in Leeds, 104 replied. The chancellor thinks results in places like Manchester and Sheffield will speak for themselves. But there was a hint of uncertainty in his speech: "I don't know if it will work," he said, but "I'm damn well going to try." ■

The snarling dud of May

Theresa May, the home secretary and would-be successor to David Cameron, this week declared that "there is no case, in the national interest, for immigration of the scale we have experienced". Wrong. In 2001-11 new immigrants from the European Economic Area (EEA) contributed one-third more in revenues than they drew in public spending, subsidising native Britons. This boost to the public purse will be handy. The independent Office for Budget Responsibility (OBR) expects the greying British public to push up borrowing requirements with its growing reliance on state health care and pensions. More young migrants would ease the pressure; under the OBR's high-migration scenario, less borrowing would mean that by 2035 public debt would be lower than under the low-migration scenario to the tune of 7% of GDP. As well as reinforcing the Tories' "nasty party" image, Ms May could undermine their reputation for fiscal prudence, too.



Sources: Dustmann & Frattini; Office for Budget Responsibility

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To understand the prime minister's success, consider that of another great British favourite

"A GREAT British take-off that leaves no one behind," proclaimed David Cameron in the peroration of his speech to the Conservative Party conference on October 7th. This was his nod to "The Great British Bake Off", an improbably popular televised baking contest whose final would be broadcast that evening. The slogan concluded a strikingly centrist address in which the prime minister encouraged his right-wing activists—the usual mix of prematurely balding young men and white-haired pensioners—to applaud international aid, gay marriage and Britain's membership of the EU. They did not mind: this was the man whose popularity (as the only major leader to outpoll his party) had in May produced the first Tory majority for 23 years.

His success breaks several of the golden rules of politics. Mr Cameron's five years as prime minister have been defined by deep cuts to the state, none of which clouded the sky when he became leader in 2005. New cuts to tax credits will leave low earners poorer, in spite of a higher minimum wage. The prime minister is haughtily upper-class—a distant cousin of the queen, no less—in a country where everyone used to hail the "classless society". A new biography, "Call Me Dave", alleges that as a member of a posh dining club at Oxford University Mr Cameron got up to some strange antics with a dead pig (a claim he denies). His popularity baffles foreigners: in a memo to Hillary Clinton in 2010 an adviser pooh-poohed the "aristocratic, narrowly Etonian" clique that would henceforth run Britain.

How, then, does Mr Cameron do it? Luck is one explanation. Rivals in his own party have variously bided their time, proven insubstantial or remained scrupulously loyal. Each Labour leader that he has faced—Tony Blair, Gordon Brown, Ed Miliband, Jeremy Corbyn—has been less formidable than the previous one. Even UKIP, the right-populist party that once traumatised the prime minister, is now a mess. But something deeper is at work; something to do with the English soul. It helps to look at the Bake Off. Every week for the past two months millions of Britons have tuned in to watch a well-heeled octogenarian pull apart amateur chefs' abilities while a couple of middle-aged women make smutty jokes about floury baps, soggy bottoms and sponge fingers. Matters like the ideal temperature at which to set a bavarois and the appropriate ratio of raisins to cherries in a fruit cake have gripped the nation.

To understand the success of the Bake Off is to understand that of Mr Cameron. The programme evokes an England of croquet pitches, high tea, rolling hills and squirely good manners. It takes place in a marquee outside a stately home in Berkshire, Welford Park, one village away from Peasemore, where the prime minister grew up. Union Jack bunting flutters in the breeze. Mary Berry, the programme's matriarch, presides over proceedings just as the prime minister's mother, a magistrate and pillar of the community, presided over Peasemore in his youth. Nonetheless, the setting also accommodates the Britain of 2015: of the three contestants to reach the final, two were non-white and one was gay; the winner wore a hijab as well as an apron. That this formula appeals to so many illustrates the strange mix of nostalgia, liberalism and tolerance of the old class system that defines today's Britain. "Cameron's privileged background only really counted against him among those already least inclined to vote Conservative," note the authors of "Call Me Dave". Uncomplicatedly proud of their past and relatively fond of their upper crust, Britons embrace continuity in a way that is hard to grasp when viewed from Washington, Berlin or Paris.

The Bake Off also reassures and soothes. It glazes a harsh world with its sweet blend of the silly, the inconsequential and the sturdily dull. Mr Cameron achieves the same effect through his unexotic demeanour. In his speech the prime minister portrayed Britain as "a beacon in an uncertain world"; a haven from violence and economic instability whose guarantor he claimed to be in the face of a "security-threatening, terrorist-sympathising" Labour leader. The contrast rings true to British voters. Throughout the last parliament, Mr Cameron was consistently deemed the party leader best qualified to be prime minister. Voters may doubt that he understands their lives, but they do think him capable of leadership. He is, according to the authors of "Cameron at 10", another recently published biography, "the steadying presence".

To each his just deserts

Thus the prime minister, like the Bake Off, belongs amid a great reversion in British culture to the twee and the gentle. Cath Kidston, a designer who revives 1950s patterns, now has 68 shops in Britain and Ireland (and about as many elsewhere). No middle-class British home is complete without a mug, fridge magnet or tea-towel proclaiming "Keep Calm And Carry On", a slogan first revived from the war years by a Northumberland bookshop owner in 2000. Simple hobbies like knitting, pottery and dry-stone walling have all experienced resurgences; pastimes offering purity in an age of tumult and uncertainty.

This is relevant to the big debate that convulsed the conference in Manchester. Some in the Conservative Party consider their election victory a chance to veer off to the right. Mr Cameron opposed that in his speech—perhaps the best of his career—by seizing swathes of the moderate centre-ground. His rhetoric was superb: ranging across Britain's responsibilities in the world, migrants' contribution to the economy, the benefits of EU membership and the scourge of poverty. But it was no less than what the prime minister owed his voters, who had backed him not because they sought an ideological revolution, but because they preferred his mixture of stability, modernity and moderation over the alternatives. Britain's reassuring prime minister has come up with a centrist policy mixture. Now he must bake it. ■

Data and privacy (1)

Get off of my cloud

A European court ruling presages a transatlantic battle over data protection and privacy

EVEN before the European Court of Justice (ECJ) struck down the "safe-harbour" privacy pact between the European Union and America on October 6th, data-protection lawyers were in high demand. American clients asked if their firms' data-flows across the Atlantic would become illegal—and if so, how to cope? The fears were justified. Though the ruling does not "break the internet", as doom-mongers have it, businesses may have to find awkward and costly workarounds for data transfers, or shift to European data centres. More broadly, it marks a worrying escalation of a transatlantic row over privacy and data protection.

The safe-harbour pact, signed in 2000, was an attempt to bridge cultural and political differences regarding online privacy. The EU sees protection of personal data as a human right; America considers it mainly in terms of consumer protection, which leaves room for trade-offs. The pact allows firms to transfer data from the EU to America if they provide safeguards equivalent to those required by the EU's data-protection directive (hence "safe harbour"). When it was negotiated, the internet was in its infancy and transatlantic data flows were small. The European Commission therefore accepted an agreement based on self-certification: firms could write a privacy policy and declare themselves compliant.

As the trickle of data crossing the Atlantic built into a tsunami, worries in Europe grew. But it took leaks by Edward Snowden, a contractor for America's National Security Agency (NSA), showing widespread snooping to nudge the commission into a serious attempt at renegotiation. In late 2013 it published a list of the pact's "deficiencies", which included weak enforcement, baffling privacy policies and poor handling of complaints. Talks about an update started soon afterwards.

They might have progressed without publicity, had it not been for Max Schrems, an Austrian activist. Arguing that the NSA's surveillance meant that Facebook could not protect his privacy, he filed a complaint against the social-networking site in Ireland, its European base. The Irish data-protection authority said it could not second-guess the European Commission, which, by signing the safe-harbour pact, had declared America's data-protection rules adequate. So Mr Schrems took his complaint to the Irish High Court, which referred it to the ECJ. On September 23rd its advocate general, Yves Bot, published a strongly worded opinion siding with Mr Schrems.

The court's decision this week has broadly followed that opinion. It struck down the safe-harbour agreement, saying that "legislation permitting [American] public authorities to have access on a generalised basis to the content of electronic communications must be regarded as compromising the essence of the fundamental right to respect for private life." And it gave national data-protection authorities the power to decide individually whether Europe-wide deals have sufficient safeguards, and to take cases to national courts if they conclude that such safeguards are lacking. Courts can then refer the matter to the ECJ, which has the final say.

The result is that any reworking of the safe-harbour agreement—and individual firms' privacy policies—will be under constant scrutiny. The uncertainty created by the decision goes further: even firms that did not rely on safe-harbour provisions for their transatlantic data transfers, but on alternatives such as "model contracts" developed by the commission for cloud-computing services, may have to re-examine their legal position. Some in Brussels think that firms may now have to guarantee that data are adequately encrypted (ie, not accessible by the NSA).

You can't always get what you want

The ECJ's decision "puts at risk the thriving transatlantic digital economy", said Penny Pritzker, America's commerce secretary. Its sweeping nature will make it harder for America and the EU to conclude the renegotiations of the safe-harbour pact. Although agreement had already been reached on most of the commission's concerns, those relating to access to data by American authorities remain. Resolving these would surely mean America accepting more of a check on the NSA than provided by the USA Freedom Act, which prohibits some large-scale collection of personal data (people abroad, for instance, are still fair game).

Separate plans to update the EU's 20-year-old data-protection directive will further widen the privacy gap between Europe and America. The draft envisages the new rules covering organisations outside the EU that process personal data from EU ▸▸

citizens, meaning that an American website could fall under European law simply because it has visitors from, say, Germany. It would also hamper the exploitation of "big data": sifting through heaps of digital information to find patterns and invent new services. Firms would have to get "explicit consent" for each new use.

Mr Snowden's revelations had already accelerated a trend towards the balkanisation of the internet. To protect data related to their citizens and firms from American snooping, some countries are insisting that these are stored locally. This makes censorship and spying by national spooks easier, and means consumers and firms will have to use costlier local cloud services. As with trade, barriers to the free flow of data can cause serious economic harm: a study by the European Centre for International Political Economy found that localisation requirements in China and Vietnam reduced GDP by 1.1% and 1.7% respectively.

If America and the EU cannot agree, more countries will conclude that they, too, can impose their own standards. "Despite all their differences, the US and the EU have many things in common," says Christopher Kuner of the Brussels Privacy Hub, a research centre. "If they can't agree on privacy, how can the rest of the world?" ■

Data and privacy (2)

Under my thumb

Governments grapple with law enforcement in the virtual world

IF FBI agents equipped with an American search warrant broke into a safety-deposit box owned by an American firm in Dublin to seize letters that might help catch a drug-dealer, it would provoke uproar. But that is essentially what the FBI wants to be able to do in the virtual realm. It has asked a court to order Microsoft, in its capacity as an e-mail provider, to hand over messages from a suspect in a drugs case that are stored in an Irish data centre. After two lower courts sided with the government, an appeals court in New York will rule soon on whether the firm must comply.

Other governments are watching keenly, not only because they see their sovereignty threatened, but because America itself denies them what it now seeks. The Electronic Communications Privacy Act (ECPA), under which its government claims the right to demand the data held by Microsoft, also limits what American cloud providers can hand over without a warrant from an American judge. The sender or recipient of an e-mail can be disclosed, but not the text itself. "We would go crazy if China did it to us," said Joshua Rosenkranz, Microsoft's representative at a court hearing in New York last month.

Several big American technology and telecoms firms have filed a brief on Microsoft's side. Cisco and Verizon, for instance, argue that if the American government can force data stored elsewhere to be handed over, their reputation with foreign clients, already damaged by revelations of widespread spying by the National Security Agency, would suffer further. Notably absent from the list, though, is Google. Unlike Microsoft, which hopes to make a lot of money from cloud-computing services that allow data to be stored in a local data centre, Google manages its global cloud as one big computer. It therefore matters less to the firm where data reside and it considers itself an American company bound by American law.

Google or Microsoft?

The judges' decision will depend on which of two interpretations it chooses. Microsoft argues that since the e-mails are stored abroad it should not have to hand them over; the government's position is that Microsoft is an American company, and therefore can be forced to do so. ECPA was written in 1986, a decade before the internet took off and two decades before anyone had heard of cloud computing. They will have to guess what might have been written if web-based e-mail and online storage had been around, in particular whether the focus of ECPA is on the data stored or the provider that controls them.

At the hearing in September the judges seemed to lean towards the government. But whatever the decision, the case will probably proceed to the Supreme Court, and thus last at least two more years. And the eventual ruling is unlikely to say much about the broader question: how to enforce criminal laws, which are national, when evidence is stored in data centres around the world?

The issue has already started a lively academic debate which mirrors the Google-Microsoft split. Cloud computing "challenges territoriality at its core", argues Jennifer Daskal of American University in a forthcoming paper for the *Yale Law Journal*. Digital evidence, she explains, is not only often stored outside a jurisdiction that might seek it, but highly mobile and split between several locations. It may be owned or operated from still others. But in a forthcoming paper in the *Stanford Law Review* Andrew Woods of the University of Kentucky takes issue with this "data exceptionalism". Digital information is similar to other intangible goods such as intellectual property, he argues, and governments have managed to resolve questions of jurisdiction with those.

Developments so far seem to support Mr Woods's view. Governments have filed more requests for mutual legal assistance (MLA): if Indian police, for instance, want e-mails stored in America, they ask the American government to get a local judge to issue a warrant. But they are increasingly seeking to get hold of digital evidence in more invasive ways. In Britain newish rules allow the authorities to tap the networks of local internet providers which carry foreign data. Other countries, most recently Russia, have started to require firms to store data locally for easier access.

But muddling through is sure to create a mess. If one country requires a firm to release data stored outside its borders, but privacy statutes where it is stored forbid disclosure, what should the firm do? So pressure has been growing to improve international co-operation. A first step would be to make the MLA system less cumbersome and slow. Requests are often sent on paper in diplomatic pouches; it takes America on average ten months to supply evidence to other countries. Something broader is also needed, argues Viktor Mayer-Schönberger, a professor of internet governance and regulation at Oxford University. He would like to see a global clearing-house deal with law-enforcement requests according to common rules.

Setting up such a supranational body would take years of tedious negotiations, and might fail. Brad Smith, Microsoft's chief legal officer, suggests starting small, perhaps with America, Britain and a few other European countries, in the hope that others would join later. In the meantime Mr Smith, who has done more than anybody to publicise the issue, will have achieved two other goals. Whatever the final ruling, the case has improved the chance that Congress will pass pending legislation that would limit the direct reach of American warrants abroad to American citizens. And Microsoft has demonstrated its willingness to stand up for its customers—even against its own government. ■

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Corporate taxation

New rules, same old paradigm

A plan to curb multinationals' tax avoidance is an opportunity missed

IN 2013 investigators from America's Senate shone a harsh light on a highly profitable unit of Apple that was registered in Ireland, controlled from America—and not paying tax in either country. That this "stateless-income" structure was perfectly legal highlighted a big loophole in the global system for taxing multinationals.

There are many such gaps, and the reason is that the patchwork of national rules and bilateral treaties governing how much tax companies owe, and to whom, is horribly dated. It was designed for the manufacturing age. Business today is increasingly digital, services-based and driven by intangible assets, including rights to exploit intellectual property (IP), from patents to logos. These are easier than physical assets to shuffle from subsidiaries in high-tax countries to those in low-tax ones. In short, they make the old rules easier to game.

Hence the relentless rise of tax planning as a core part of multinationals' business plans. The OECD reckons that the resulting revenue losses to national exchequers have grown to as much as $240 billion a year, or 10% of global corporate income-tax receipts—an estimate it considers very conservative. The share of American firms' profits that they book in low-tax havens has more than doubled since the 1980s; this has helped reduce the actual tax rates they pay, relative to their home country's headline rate (see charts, next page). America's 500 largest firms hold more than $2 trillion in profits offshore. Its tax laws encourage this, because profits its companies make abroad are taxable in America only when repatriated.

Two years ago the Group of Twenty (G20), a forum for big economies, asked the OECD to produce reforms aimed at curbing these corporate-tax gymnastics and ensuring that multinationals were taxed "where economic activities take place and where value is created". The request was motivated in part by growing public anger over firms not paying their "fair share", and partly by hunger for more tax revenue in an era of austerity.

The resulting "Base Erosion and Profit Shifting" (BEPS) proposals were released this week. They are the biggest shake-up of multinational taxation since the basics of the current framework were put in place in the 1920s. G20 governments are expected to approve them at a summit in November.

OECD officials were predictably upbeat as they unveiled the plan. Angel Gurría, the organisation's secretary-general, declared that it will "put an end to double non-taxation". Pascal Saint-Amans, the OECD's tax chief, said it marked a "change of paradigm" that should help to make tax planning "marginal" rather than "a core part of business models" (though he accepted there was still much work to do; two years is but a blink of an eye in global tax diplomacy). The reality is less cheering: the project was flawed from the start because it was impossible to achieve consensus in favour of the radical overhaul that was needed. The result is a patch-up job that offers improvements in certain areas but fails to deal with the core problems.

Start with the good bits. Companies will be required to do more country-by-country reporting of where they really earn their revenues, hold their assets and employ people, and where they book their profits—information that is often lacking in their published accounts. This will give tax authorities (though not the public) a clearer picture of how much profit is being shuffled around for tax purposes. National tax authorities will also get more information on "comfort letters" that other countries' taxmen have provided to companies, blessing their tax arrangements. The European Commission, the EU's executive arm, is investigating what it suspects are unfair sweetheart deals that the Netherlands, Ireland and Luxembourg have struck with companies ranging from Starbucks to Fiat Chrysler. This week the EU countries got a head start in implementing the OECD's reform proposals by agreeing on the automatic exchange of information on their cross-border tax rulings.

Double Irish on the rocks

Anticipating new regulations requiring greater transparency, some firms are backing away from tax practices once deemed uncontroversial. Amazon, for instance, has opened taxable branches in European countries where it has lots of customers; no longer are all its profits diverted to low-tax Luxembourg. Some companies are pre-emptively paying more tax: the Luxembourg arm of a large international bank waived a favourable tax ruling in order to raise its effective tax rate, because it feared that paying only 15% might attract negative headlines, admits one of its directors. And low-tax countries are dismantling their most invidious tax-minimisation structures, such as the notorious "Double Irish" ▸▸

(see next story).

However, in some of the most important areas, such as grappling with how to tax cross-border online sales, cans have been kicked down the road. Several proposals were diluted at the insistence of powerful countries (not least America, whose IP-rich multinationals are the main target of the reforms). A case in point is the weak proposals on controlled foreign corporations, subsidiaries used to defer tax by parking it offshore. The OECD's "action plan" on this issue—one of 15 in its report—is merely a discussion of alternative approaches, none of which is intended to serve as a minimum standard.

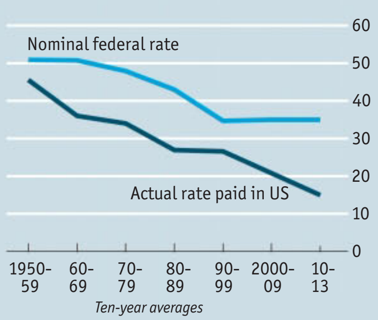
In the haggling among governments as the reforms were being drawn up, early progress was reversed in areas such as interest deductibility (a big cause of lost tax revenue, because firms can claim excessive deductions on debts owed to corporate cousins) and the treatment of hybrid instruments (which companies treat as debt in one country and equity in another, to claim two lots of tax deductions). Lee Sheppard, a tax lawyer who followed the talks closely, especially blames American negotiators for weakening proposals or making them unnecessarily complex: "It's as if BEPS was being killed off from the inside by letting Americans loose on it."

The biggest disappointment is that, in opting to renovate the existing system, the OECD has stuck with its most deeply flawed pillar: the "independent entity" principle. This rests on the fictitious assumption that the various parent and subsidiary companies in a corporate group act like separate legal persons that transact with each other at arm's length.

They often do not, because transacting at non-market prices, to shift profits to tax havens, was precisely why some subsidiaries were set up. Such antics are supposed to be kept in check by tax authorities' rules on "transfer pricing". But these are complex and often ineffective, in part because it is so hard to be sure if royalties for patents, copyrights and the like have been set at fair prices. The BEPS reforms seek to toughen the rules, but in doing so they add yet more complexity.

A step ahead of the IRS

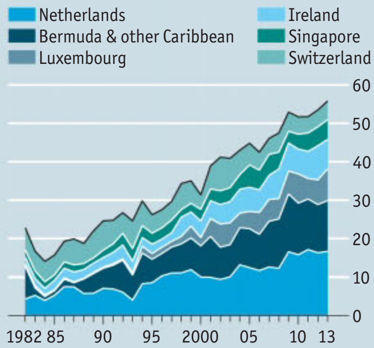
Taxes on US companies' profits, %



Source: "The Hidden Wealth of Nations", by Gabriel Zucman, Chicago University Press, 2015

The big shift

Tax havens' share of US overseas corporate profits, %



Source: "The Hidden Wealth of Nations", by Gabriel Zucman, University of Chicago Press, 2015

Some economists argue that it would be better to do away with corporate income tax altogether, replacing it with higher levies on distributed income, such as dividends. But there are other ways of taxing profits that better reflect economic reality. These involve treating companies as single entities, rather than clusters of supposedly independent parties, and then carving up countries' taxing rights over the firms' global profits according to an internationally agreed formula based on sales, assets and other measures.

Under such a system, if it could be agreed on, what would matter most is where the ultimate purchaser of a product is based, something that is harder to manipulate for tax purposes. The approach already works fairly well within some federal countries, for instance in divvying up state taxation of firms that operate across America. "Nobody would ever think of abandoning that system in favour of the international transfer-pricing model, a lesson the OECD would do well to reflect upon," says Gabriel Zucman, author of "The Hidden Wealth of Nations", a book about tax avoidance. However, OECD officials say they could not muster enough support for dismantling the old system. America was keen to retain transfer pricing for international commerce.

The next phase could be just as messy. The OECD does not pass laws or sign tax treaties; it merely issues guidelines. Governments are the ones who will have to implement BEPS. Or not. "There is bound to be a significant variation in the timing of implementation and interpretation of how the rules are applied," says Francesca Lagerberg of Grant Thornton, an accounting firm. Some of the proposals would have to be approved by national parliaments, raising the bar higher still. America's Congress so far seems unlikely to scrap its vast array of deductions and other benefits, for example.

Some countries, including Britain, with its new "diverted-profits tax", have pushed through anti-avoidance laws that may be hard to make fit with BEPS principles. That is probably because they have little faith that other countries will implement them in a way that produces a coherent international framework, says Bartjan Zoetmulder of the Dutch tax advisers' association. If co-ordination is weak, unilateral measures like Britain's could accelerate as other countries rush to protect their tax bases.

Multinationals' fear is that growing friction between countries over who gets to tax the lion's share of their profits leads to the return of double taxation—something that, thanks to the global network of tax treaties, they have been spared from for decades. "There will definitely be more disputes," says a tax adviser to multinationals. "BEPS is an excuse for all to seek a bigger slice of pie." The OECD's reforms include a strengthening of existing procedures that ensure there is no double taxation. But these have yet to be tested. The head of tax at a global software firm fears that country-by-country reporting, as proposed by the OECD, will only encourage countries to dispute their cut of the taxes a given firm is paying.

Drowned out

The developing countries that do not belong to the OECD also view BEPS with mixed feelings. Their gains from curbing tax avoidance could be huge: the IMF estimates that lost tax revenues in poor countries are equivalent to 1.75% of their GDP, three times the level in advanced economies. But their voices were often drowned out in the talks, despite OECD officials' efforts to ensure they were heard. Some issues that African countries care about, such as the misreporting of customs paperwork, were left out of the talks, says Logan Wort of the African Tax Administration Forum, a group for national tax agencies.

Poor countries may find they lack the institutional capacity to take part in the proposed exchanges between tax authorities of firms' country-by-country data. So they may still struggle to get data on multinationals operating on their territory—and thus remain ill-equipped to challenge cheeky tax planning.

Unimpressed with the sidelining of developing countries, and with the retention of transfer pricing, campaigners against corporate-tax avoidance have declared BEPS at best a partial success, a first step towards something more substantial. But if, instead of agreeing on how to proceed, governments end up fighting for their cut of multinationals' profits, a return of double taxation could be in prospect. That might make campaigners happy—some may conclude that multinationals are getting their just deserts for all that tax planning. But it would not be fairer. ■

Corporate tax avoidance

Still slipping the net

AMSTERDAM AND LUXEMBOURG

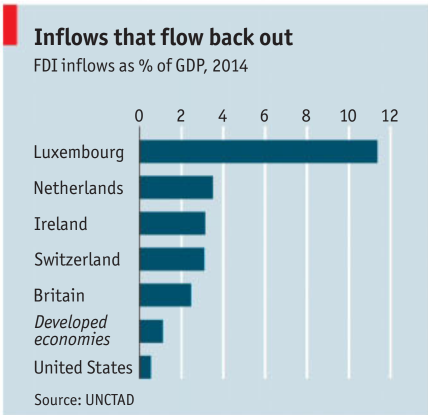
Europe's corporate-tax havens say they are reforming. Up to a point

ON a roundabout near one of the main roads into Amsterdam sits a drab office block which is home to hundreds of multinationals—on paper. Intertrust, the firm whose flag flutters outside, provides registration for local subsidiaries of the big companies, and other ancillary services. But many of those multinationals have a minimal physical presence there. Of the Netherlands' more than 10,000 "letterbox" firms, such as these, many are empty.

Often, one of the main reasons for such subsidiaries is to cut the tax bills of their parent companies. The Netherlands, and other low-tax havens such as Ireland and Luxembourg, have attracted much criticism from other countries for the legal loopholes they leave open to encourage such tax avoidance by big corporations. The three countries attract a huge amount of foreign direct investment (see chart), but much of it flows back out again, with the money ultimately financing factory-building and the like in another part of the world. By routing such investments via tax havens, multinationals can save on a variety of taxes, perfectly legally. The havens say that all they are doing is providing a business-friendly climate. But critics, including the United States Senate and the European Commission, say they are undermining the global tax base and helping big firms to avoid paying their fair share.

Such accounting gimmicks are not new, but the pressure on governments to close loopholes and curb avoidance by big companies has grown, in Europe especially, as austerity has taken hold. Besides lending its support to the OECD's reform proposals, the European Commission is investigating whether sweetheart deals in which Ireland's authorities blessed the local tax arrangements of Apple, Luxembourg did the same for Fiat Chrysler and Amazon, and the Netherlands did so for Starbucks, amounted to illegal state aid. Such deals are controversial because of their secrecy and the suspicion that governments are giving handouts to favoured firms.

The likes of Luxembourg and the Netherlands are also accused of helping firms abuse tax treaties designed to protect them from double taxation when trading across borders. As money is shuffled across a series of national frontiers, firms make the most of any loopholes in the relevant tax treaty at each stage. Eliminating such "treaty-shopping" is one of the aims of the OECD's reform proposals.



Perhaps the most notorious tax-reducing ruse is the "Double Irish with a Dutch sandwich". A multinational (often American) pays itself "royalties" on its intellectual property, routing the payments through an Irish-registered subsidiary, then a Dutch one, and finally another Irish subsidiary that is domiciled for tax purposes in somewhere like Bermuda. Ireland is tightening its rules on corporate residency, to curb this particular form of financial prestidigitation. Later this month its government is expected to propose stricter reporting rules for foreign companies.

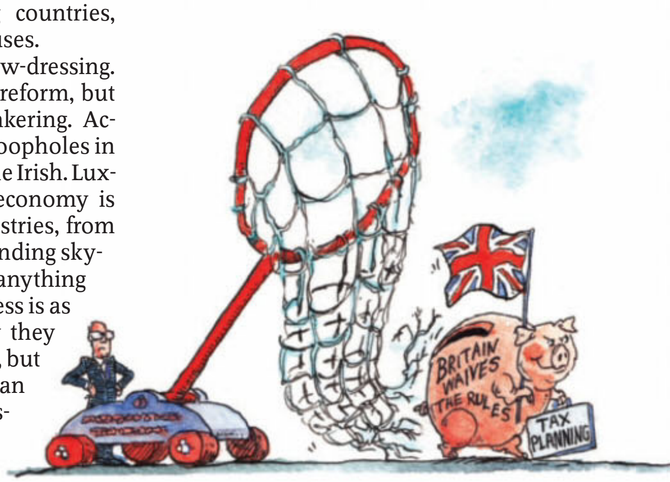
The Luxembourgers are also promising reform, and will sweep away many tax deductions and allowances by 2017, in return for a lower headline rate of corporation tax. The Netherlands has toughened its requirements for a business to maintain a physical presence on its territory. If these are not met, its tax authorities will automatically inform that company's home country. The Dutch are also renegotiating tax treaties with developing countries, aiming to insert anti-abuse clauses.

But there is a lot of window-dressing. The Irish may be vocal about reform, but their measures amount to tinkering. Accountants are already finding loopholes in the new rules to curb the Double Irish. Luxembourg may insist that its economy is built on all sorts of other industries, from steel to satellites, but if its expanding skyline of accountants' offices is anything to go by, its tax-planning business is as strong as ever. The Dutch say they are keen on more transparency, but Francis Weyzig of Oxfam, an NGO that campaigns on the issue, argues that their "physical presence" requirements are still too easy to fulfil by hiring local firms to provide the required substance.

Nor are these countries by any means the only culprits. Nowhere is mentioned more by accountants and lawyers—with a mix of admiration and frustration—than Britain. A growing array of tax benefits have made London the city of choice for big firms to put everything from "letterbox" subsidiaries to full-blown headquarters. A loose regime for "controlled foreign corporations" makes it easy for British-registered businesses to park profits offshore. Tax breaks on income from patents are more generous than almost anywhere else. Britain has more tax treaties than any of the three countries currently on the naughty step—and an ever-falling corporate-tax rate. In many ways, Britain is leading the race to the bottom.

The real reason for luring firms with little substance, claim policymakers, is the hope that mailboxes will evolve into real headquarters, with real jobs. Britain is indeed winning the battle for multinationals' HQs: last year it attracted 57 to Ireland's 16 and the Netherlands' 15, reckons EY, an accounting firm. In 2013 it was 29, 24 and 25 respectively. Although tax is not the whole picture, "the UK's improved performance reflects the incremental impact of an increasingly competitive corporate-tax offer," says Mark Gregory of EY.

Though Britain may feel its loose regime is boosting the economy, the intense pressure from corporate-tax campaigners and from other governments may prompt some tax-haven countries to reconsider whether the benefits outweigh the reputational costs. The economic contribution of tax-driven letterbox firms to the Netherlands may be little more than a couple of billion dollars a year. Jesse Klaver, the leader of the Dutch Greens, recently spoke about this to a packed-out crowd of youngsters in an Amsterdam nightclub. Their cheers boosted his confidence that public opinion is shifting, from an acceptance that there is no alternative to the current way of taxing companies to "the realisation that it's not worth keeping." ■



Oil companies in America

Debt and alive

CUERO, TEXAS

A shakeout is finally hitting debt-strapped shale producers

IT WAS not the noise of shale being blasted that heralded the fracking boom in Cuero, Texas, six years ago. It was the rumble of 18-wheel oil tankers. After a local company struck one of the first wells in the Eagle Ford shale belt near Cuero in 2009, the number of lorries passing through quintupled to about 40,000 a year, says Sara Meyer, the mayor. Now there's barely a tanker to be seen. A heap of discarded oil rigs nearby is on sale.

Most of the oil workers have "vamoosed", she says. At a local caravan park, most of the mobile homes that until recently were packed with drillers and pipe-layers are empty. Josh Barrett, its manager, says that in August he pulled in a healthy $42,000, but in September his income crashed. A plunging oil price has caused a slump in fracking (see chart 1). "The juice is no longer worth the squeeze," he says.

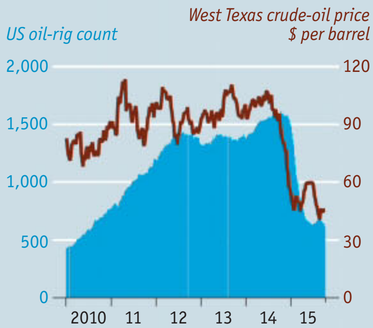
Cuero and other towns on the Eagle Ford are at the sharp end of a crunch hitting America's shale industry. It is also being felt 150 miles away in Houston, America's oil capital. Hundreds of firms, big and small, will this month undergo reviews—semiannual affairs known as "redeterminations"—of their borrowing limits by their banks. Since the last one in April, banks have been pressed by their regulators not to be too lenient. "There is palpable fear," an industry lawyer says.

The squeeze will not derail the fracking industry. Its largest firms still have access to capital, albeit at a higher cost than before the oil-price fall. But in an industry that is as much about finding money as prospecting for oil and gas, the smaller firms will have it tough. By some estimates, banks lent almost $250 billion last year, much of it to small borrowers. They will be far less generous this time.

Of late, much of the debt has been going on wells that cost more than the cash-flow they generate. Firms mostly secure their credit against their reserves. But the value of this as collateral has shrivelled as the oil price has fallen, making the redeterminations more than a mere formality. A survey last month by Haynes and Boone, a Texas law firm, predicted that borrowing limits would need to be cut by an average of 39% this month, leading to potentially drastic results such as bankruptcies (see chart 2). Most participants thought that the banks will avoid being too hard-nosed, so as not to drive their borrowers to the wall. In Houston, oil men are proud that over decades, the practice of borrowing against reserves has never caused a crisis.

For public companies, capital markets have helped reduce dependency on bank loans (see chart 3, next page). But if low prices persevere, this will not continue. In the early part of this year, hopes were raised that the worst might be over, but then the local benchmark price, West Texas Intermediate, dipped below $40 a barrel over the summer. Share prices of small oil firms have halved since the start of 2014 (see chart 4, next page) and their junk bonds are trading below par. What's more, ▸▸

Rigged market 1

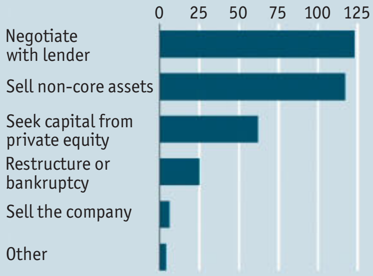


Sources: Baker Hughes; Thomson Reuters

Tight oil, tighter money 2

Likely outcome at oil firms that breach debt covenants*

Number of responses



Source: Haynes and Boone

*Poll with 182 respondents among oil firms, financial firms and professional advisers. Two options could be chosen

Chinese internet firms

Clubbing together

SHANGHAI

The merger of Meituan and Dianping could herald a bigger consolidation

GROUP buying—in which discounts are offered on goods and services once a certain number of consumers have signed up—may be falling out of fashion in many countries, with even America's pioneer, Groupon, slashing over 1,000 jobs last month, but it is still doing well in China. According to Analysys International, a research firm, bargain hunters there rang up 77 billion yuan ($12.1 billion) in sales through group-buying websites in the first half of this year. That is a rise of 168% on a year earlier. Even more striking is news this week of a merger between the two biggest Chinese firms in the business, which may herald a broader consolidation in China's internet sector.

Groupon has flopped in China, just as many other Western internet firms have done. This has left the field clear for local businesses. On October 8th two Chinese companies which between them have about four-fifths of the local group-buying market said that they would combine: Meituan, with about half of the market, will join forces with Dianping, which has about 30%. The combined business will be worth perhaps $15 billion.

It will quash competition on one front of a costly proxy war now being fought by China's big three internet firms—Alibaba, Baidu and Tencent. Alibaba has a stake in Meituan, while Tencent backs Dianping. The merged entity would dwarf Nuomi, which has a mere 14% share of China's group-buying industry. It is fully owned by Baidu, which said in June that it would invest $3.2 billion over the next three years in this sort of e-commerce business.

The deal marks an escalation in what seems to be an effort by Alibaba and Tencent to squeeze out Baidu and turn the Chinese internet's big three into a big two. They have already joined up to try to create a dominant company in the online taxi-hailing business. At first each had backed a different startup in this area, but when Baidu gave financial backing to Uber, an American taxi-app giant, to expand its presence in China, Alibaba and Tencent merged their proxies into a firm now called Didi Kuaidi. The combination is valued at $15 billion.

All of the big three firms have invested heavily over the past two years in everything from online-video services to travel portals. On one estimate, there have been nearly $60 billion in internet deals involving Chinese firms so far this year. Some consolidation is needed: in many corners of the industry there are too many competitors, most of which are unprofitable. But China's antitrust authorities, which have been soft on local internet firms, ought nonetheless to be vigilant. Otherwise there will surely be more mergers like this one, as the industry's giants seek to create monopolies.

firms have been unable to sell assets pledged as collateral, making it harder to raise money, says Ron Hulme of Parallel Resource Partners, a private-equity firm. "They are the walking dead. They can't issue equity. They can't issue debt. And they can't sell assets."

They could sell themselves but mergers are still rare. Most interest is in the oil-rich Permian Basin, in West Texas, rather than more developed fields like Eagle Ford. Last month Exxon Mobil, the world's biggest oil company, acquired new acreage in the Permian, via its XTO Energy subsidiary. John Walker, boss of EnerVest, a Houston-based oil firm, says he would like to buy wells from struggling firms even at today's low oil price. ("It's the old philosophy of buying straw hats in December.") But many shale-oil entrepreneurs are not keen on losing control to bigger firms.

Scott Sheffield, the head of Pioneer Natural Resources, a well-capitalised producer focused on the Permian, is holding back—he does not expect a recovery until late 2016, or 2017. Of the five slumps during his career, never has he seen such indebtedness. It is not just small firms. He notes that in September Chesapeake Energy, a pioneer of the shale-gas boom, swapped its unsecured for secured debt to buttress its balance-sheet. "This is the first time I have ever seen such a big company go back to reserve-based lending," he says.

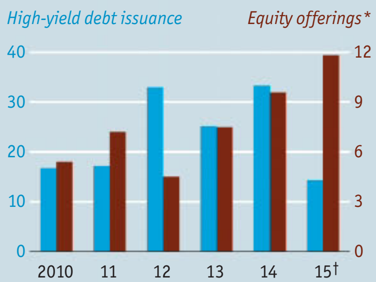
So far these financial strains have been partially disguised by hedges contracted when oil prices were high. Mike Powell of Barclays, a bank, reckons that only a quarter of output is hedged next year. He also thinks regulators will carefully scrutinise companies' year-end reserve assessments, meaning that next spring's redeterminations could be worse than this autumn's. He likens producers to cartoon characters still running when they are over the edge of the cliff.

Debt-free producers are in a far better position. Pioneer has slashed costs by about 30% by drilling only its best wells and keeping its most efficient staff. Mr Sheffield says investors will still back firms with low-cost oil assets. In late September Concho Resources, a Permian-based oil firm, raised $712m in a share offering, to pay off debt. What is more, about $100 billion of private-equity capital is believed to be looking for investment opportunities.

Through its remarkable productivity gains, the American shale industry has become one of the "swing producers" in the global energy market. After a reduction of more than 1,000 oil rigs since last year, only recently has production started to decline. Ms Meyer, the mayor of Cuero, cautiously welcomes the shakeout as "an opportunity for the town to breathe" after six frenetic years. But some of the debt-laden firms that fuelled the bonanza are suffocating. ■

Debt to equity 3

US independent oil firms' fundraising, $bn



Source: Petrie Partners

*Excludes master limited partnerships and offerings less than $25m †To June

Shrinking small-caps 4

Dow Jones US Small Cap Oil & Gas Index

Source: Dow Jones

Indian private universities

Go forth and multiply

DELHI

A crowded home market is encouraging some institutions to expand abroad

FOREIGN universities crave access to India's booming higher-education market. Less well known is how some Indian institutions are venturing overseas. Atul Chauhan, the chancellor of Amity University, rattles off a list of countries, including America, Britain, China, Singapore and the United Arab Emirates, where his Indian outfit has so far opened operations. This month Amity, a non-profit which, unusually, is owned by a for-profit conglomerate, AKC Group, will open its latest foreign outpost, in Romania. Next on its list are Australia, Germany, Brazil and Japan, among others. "Our target is 50 countries in the next ten years," says Mr Chauhan.

Amity's original campus is a set of red-brick-and-glass towers, east of Delhi, whose media-studies department is better equipped than professional broadcasters' studios nearby. It offers more than 240 courses (engineering and business dominate) and says it has 125,000 students, most at 20-plus sites in India, with roughly 10,000 now enrolled overseas.

Going gangbusters excites Amity's bosses, though some competitors say throwing up campuses does not mean embedding a teaching culture, getting capable faculty or achieving high academic standards. "Go to too many places too quickly and you spread yourself too thin," sniffs the boss of a rival Indian private university.

Amity has had missteps. It postponed a planned £100m ($152m) investment in a London campus, says Mr Chauhan, after Britain tightened its visa rules, putting off many would-be foreign students. He says the money was used instead to pay for a 15-acre site in Dubai, where it now has 2,000 students—proof, he says, that "we are here for the next 100 years."

India's well-regarded institutes of technology, which are state-run and thus less nimble than private organisations, are so far staying at home. However, Shobha Mishra Ghosh of FICCI, a business lobby group in Delhi, notes that there are a number of private university groups with the "deep pockets" to expand abroad—as a number of them are now doing. The home market is expanding rapidly—by some estimates, as many as 42m Indians may be in further or higher education by 2020. But the field is crowded: more than 35,000 colleges and 700 universities vie for students. So it makes sense also to pursue the 28m people of Indian heritage who live abroad, and the 200,000 Indians who go overseas to study each year.

Indian rich kids with poor grades are an attractive market for Indian institutions' foreign campuses, says Mrs Ghosh. An undergraduate course might cost $13,000 a year in Dubai, triple the rate at an Indian campus. But it may be easier to get on to. Vinod Bhat, vice-chancellor of the Manipal Group, a chain of six universities, says 60,000 would-be doctors compete for just 190 places each year in the group's mother institution in the southern Indian state of Karnataka; but competition is less fierce at its medical school in Pokhara, in Nepal.

Ranendra Narayan Saha, who runs the Dubai campus of the Birla Institute of Technology and Science, Pilani (BITS-Pilani) also concedes that foreign branches attract rich Indians who would not make it at home. It opened its Dubai branch in 2000 and plans to grow from 1,800 students to 2,500 in four years. Most are Indians, many of them studying engineering or biotechnology, though he wants more diversity.

So far, the Manipal Group is the most successful of the Indian institutions to have ventured abroad. Founded in 1953, it now has two campuses in Malaysia, which between them have trained one in five of the country's practising doctors. Manipal also has outposts in Dubai, Antigua and Nepal. "We are looking at South Africa and Sri Lanka with a lot of interest," says Mr Bhat. "Manipal is beyond an Indian ▸▸

brand," he argues, because many of its Malaysian students are not ethnic Indians. Nor are all the 4,000 doctors and 6,000 engineers now working in America who graduated from one of Manipal's campuses worldwide.

The Observatory on Borderless Higher Education, a British think-tank, predicts that universities from all parts of the world will have opened 280 campuses outside their home countries by 2020, up from 82 in 2006. Much of the growth is "south-to-south", such as Indian institutions spreading their wings in Africa and Asia.

India's universities and colleges have another reason to expand abroad: to get good marks in the most prominent international rankings, it is necessary to have a high proportion of foreign students, and opening campuses abroad makes that easier to achieve. BITS-Pilani is a rare case of a private Indian university to have won a place in the *Times Higher Education*'s global rankings—though only in the lowly 600th-to-800th band.

Private-university bosses acknowledge that, for all the reasons to expand abroad, it is no route to quick riches. "We have a ten-to-fifteen-year mindset, we are very patient," says Amity's Mr Chauhan. Nevertheless, says Mr Bhat of Manipal, "you have to have the will to look at the world as your market"—while not forgetting the main prize back home. ■

Auction houses

Blue period

HONG KONG AND NEW YORK

China's once-bustling art trade is flagging

LONG scrolls adorned the walls and stretched delicately over tables. There were serene landscapes in muted blues, greys and browns. Birds and blossoms provided flashes of orange and pink. These tranquil scenes were the backdrop to a busy week for Hong Kong's art market. On display in a cavernous convention hall, they were just some of the thousands of items in Sotheby's autumn sales, which were themselves part of a series of recent auctions across Hong Kong. Collectors, analysts and auctioneers watched the sales intently. There were some bright spots. On October 6th, for example, Fu Baoshi's scroll of graceful women (pictured) fetched an impressive HK$35.5m ($4.5m). But the prospects for China's art market are cloudy.

Worldwide, art sales are booming. They reached a record €51 billion ($65 billion) last year, according to the European Fine Art Foundation. However, success is uneven. America's art market is bustling; sales in Britain rose last year, too. But what was until recently the world's hottest market is decidedly cooler. Auction sales in mainland China were $5.5 billion last year, about 40% below their peak in 2011, according to a new report from the China Association of Auctioneers and Artnet, an online auction house. Global sales of Chinese art and antiques were $7.9 billion, down 31% from three years earlier. A return to rapid growth seems increasingly unlikely.

China is not the only country where art sales have faltered. New collectors in middle-income countries often start with domestic art, explains Sergey Skaterschikov of Skate's, an art-market research firm. It is little surprise, then, that sales of Brazilian art have slumped along with its economic prospects. Russia's art market has been particularly wobbly. From 2001 to 2007 sales of Russian fine art jumped nearly tenfold to $651m, according to Artnet, as newly flush Russians sought to build collections and diversify their assets. Companies rushed to meet demand. In 2004 a new auction house, MacDougall's, opened in London to deal exclusively in Russian art. Sotheby's and Christie's, the world's biggest auctioneers, held new sales to woo Russian buyers. The financial crisis sent the market plummeting in 2009, but by 2013 it seemed to be reviving. Last year, however, sales dropped by 8%, thanks to sinking oil prices and fallout from Russia's involvement in Ukraine.

Graceful amid the downturn

China's troubles are even bigger and more complex. About ten years ago its art market began to soar. Unfazed by the global downturn, new collectors, speculators and even the government continued to spend heavily. In 2005 China accounted for less than 5% of global art sales. By 2011 its share had risen to 30%, and China had become the world's biggest art market.

Then things turned choppy. There was a big correction in 2012, when global sales of Chinese art and antiques fell by 43%, only to rebound in 2013 and then fall last year. Slower economic growth has sapped demand. An official crackdown on corruption and lavish spending has not helped. Just as important for the auction houses, the supply of the most exceptional pieces of art has tightened, as would-be sellers wait for higher prices. Last year more than half of auction lots were unsold, which suggests soft demand or mediocre-quality supply—or, probably, both.

China's problems have affected some companies more than others. So far Sotheby's and Christie's have been resilient, thanks to their diversified, global businesses. In July Goldman Sachs reckoned that total auction sales at Sotheby's were up by 5% so far this year. Poly Culture, the biggest Chinese auctioneer, has fared worse; its shares have fallen by about half since its initial public offering last year. In an effort to buoy the market—Poly is still mainly state-owned—the firm has become quite the collector. Last year Poly expanded its own stock of art by 82%. This shopping spree has had little apparent effect on its own sales. Revenue for the auction business fell by 27% in the first half of 2015, compared with the same period last year.

Trying to look on the bright side, some auctioneers and dealers argue that a less frothy Chinese art market is a sign that it is maturing. But two factors make it hard to know when the market will return to growth. First, it is difficult to guess when more potential sellers will put their art under the hammer. Recent financial turmoil may prompt some to do so, to raise cash; others may continue to hold out for higher prices. Making conditions for sellers even less appealing, the number of delinquent bidders is on the rise. Last year buyers failed to pay in full for 63% of works "sold" for over 10m yuan ($1.6m), up by 22 percentage points from 2013.

Second, many Chinese collectors of art are rather new to it. That makes it hard to predict trends in demand or estimate the price floor for particular works. Some may switch to buying more liquid Western art. This year Chinese buyers paid nearly $30m for a Picasso and $20m for a Monet at Sotheby's auctions in New York. ■

Schumpeter | Norwegian blues

Now the easy times are over, Norway must rediscover its Viking spirit

IT IS a capitalist country but it is dominated by state-owned enterprises; it is an oil giant but it eschews conspicuous consumption. For decades this unusual economic model has served Norway well: in 1970 it was in Europe's middle ranks as measured by income per head. Nowadays, Norwegians are richer than everyone in Europe except the Luxembourgers. However, the model is beginning to run out of fuel.

Norway's rise to glory began when the first oil was extracted from its continental shelf in 1971. The energy industry sent ripples of prosperity throughout the economy, turning Bergen from a fishing village into an industrial hub, creating companies that specialised in extracting hydrocarbons from beneath a stormy sea and filling hotels with oil workers. The ripples got ever bigger as the oil price lurched upwards from $10 a barrel in the late 1990s to almost $150 in 2008. Oil and gas now account for about a quarter of Norway's GDP and almost half of its exports.

But the recent fall in the oil price to around $50 has put this into reverse. Statoil, the national oil company, has seen its profits and share price plunge. Oil firms have laid off 10% of their workforce and may lay off another 20%. Just as worrying for a country that excels at producing equipment for extracting oil from deep beneath the sea is the rise of a fracking industry that uses different technology to blast oil and gas out of shale beds.

The oil bust is exposing two weaknesses in the Norwegian model. One is bureaucratisation, born of Norway's enthusiastic embrace of state capitalism. The government owns about 40% of the stockmarket, with large stakes in Telenor, a big telecoms operator; Norsk Hydro, an aluminium producer; Yara, a fertiliser-maker; and DNB, a bank, as well as Statoil. That leads to a monochromatic corporate culture. The Norwegians like to boast that they lead the world in corporate diversity because firms are legally obliged to reserve 40% of board seats for women. But sexual balance does not make up for cultural uniformity: many of the country's most senior businesspeople studied together at the Norwegian School of Economics, and still live in each other's pockets.

The second weakness is the over-ripe welfare state. The public sector employs 33% of the workforce in Norway, compared with an average of 19% for the OECD countries. The state is undermining the work ethic: most people enjoy a 37-hour working week, and three-day weekends are common. In 2011 Norway spent 3.9% of GDP on incapacity benefits and early retirement, compared with an OECD average of 2.2%. Norwegians have coined a verb, to "nav", meaning to get money from NAV, the state benefits agency.

The country still has a lot going for it. The Norwegian Pension Fund Global is perhaps the most impressive example of long-term thinking by any Western government. Rather than squandering its oil riches, Norway is saving them in a sovereign-wealth fund that is now the world's biggest, at $873 billion.

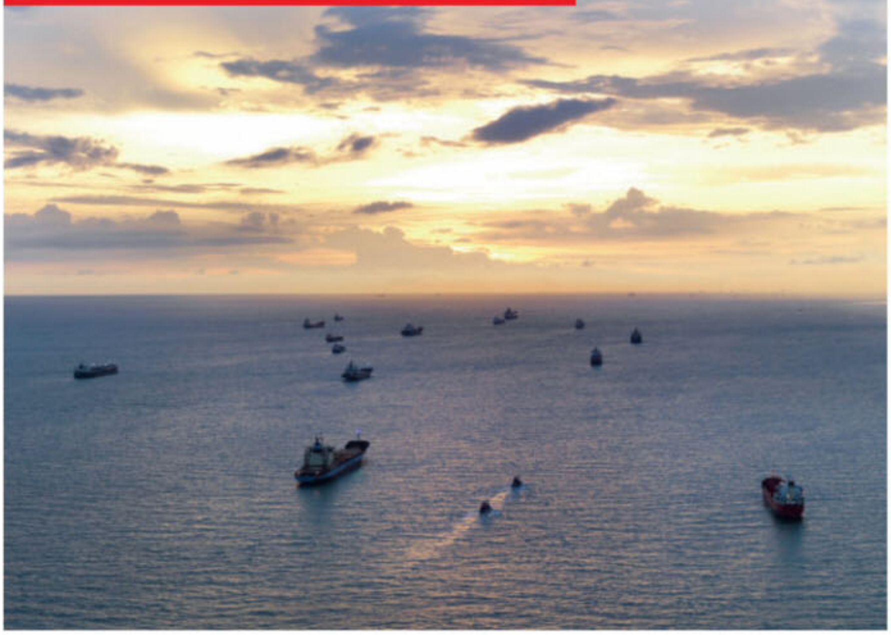
Norway has fish as well as oil in its waters, and exports around $10 billion-worth of them a year, a decent sum for a country of just 5m people. Thomas Farstad, the boss of Norway Seafoods, a (private-sector) fish trader, says that Norway's refusal to join the European Union has made things difficult for his industry. Fishing companies are forced to concentrate on volume because they have to pay high tariffs on exports of processed fish into the EU. But this also means that they have a free hand to manage their own fisheries which, he adds, have never been healthier. Despite the emphasis on volume, the industry has changed dramatically. Aquaculture has gone from nothing in 1970 to accounting for 70% of Norway's total catch. Traditional fishermen are also moving up the value chain, using more efficient ships to reduce manpower and dredging up stuff from ever deeper in the ocean, including plankton which can be used in health foods.

Norway can still produce swashbuckling entrepreneurs, such as John Fredriksen in shipping, Kjell Inge Rokke in property and oil services and Bjorn Kjos in aviation. These men define themselves in opposition to the cosy civil servants who oversee so many of Norway's other businesses. They started their careers with nothing but "two empty hands", as Norwegians say. Mr Rokke began as a fisherman who had dropped out of school, Mr Fredriksen was the son of a welder and Mr Kjos the son of a sawmill owner in a tiny town. They rejoice in breaking the tight rules that govern Norwegian life. Mr Fredriksen lives in London, holds a Cypriot passport and has a most un-Scandinavian relish for splashing his money about. Mr Rokke used complex financial engineering to turn a rundown shipyard in Oslo into a bustling shopping district. Mr Kjos has taken on Norway's powerful unions by, for example, basing planes in Spain and using Spanish flight crews. Norwegian Air has been more consistently profitable than its rival, SAS, and gets better ratings for service.

Attractive Swedish model

With the oil price looking as if it may remain depressed for some time, however, Norway desperately needs to give corporate Vikings like these more room to grow. It also needs to apply the same enterprise to reforming its welfare state. The country's reaction so far to the oil-price drop has been to embrace socialism more firmly: in local elections on September 14th the left made big gains in most of the country's big cities, including Oslo and Bergen, on a programme of higher spending and zero reform.

Harder times are likely to prompt more serious thought. Norway is fortunate in that it can learn from neighbouring countries, with similar cultures, that have implemented wide-ranging reforms. Sweden, in particular, has reinvigorated its model by shrinking its state, allowing private firms to run its schools, hospitals and surgeries, and reducing its tax burden. During the oil boom Norway got used to importing young Swedes to serve in bars and restaurants. Now its best chance of continued prosperity lies in importing not just people from Sweden but ideas, too. ■



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The Trans-Pacific Partnership

Weighing anchor

Negotiators agree on an ambitious trade deal, but opposition to its ratification is already fierce

DONALD TRUMP, an American presidential candidate, denounced it as "a terrible deal". Another, Hillary Clinton, does not think it meets "the high bar" that should be applied to trade pacts. Yet proponents of the Trans-Pacific Partnership (TPP), which encompasses 12 countries in Asia and the Americas, including America and Japan, herald it as the biggest multilateral trade deal in 20 years, which will "define the rules of the road" for international commerce. Which is it?

TPP will apply to 40% of the world's economy. For American exporters alone, 18,000 individual tariffs will be reduced to zero. Much the same will be true for firms in the other 11 members. Even agricultural barriers, usually among the most heavily defended, will start to come down. Foreigners will gain a toehold in Canada's dairy sector and a bigger share of Japan's beef market, for example. Some of these reductions will be phased in lamentably slowly, however: American tariffs on Japanese lorries will last another 30 years.

Tariffs in the region were not that high to begin with, though. More important is TPP's effort to free trade in services. These are not usually subject to the same impediments as, say, agricultural or automotive imports; instead they get tangled up in beyond-the-border rules, such as customs, visas and licensing. TPP promises greater access to markets for more service providers, which over time should provide a boost to productivity.

In spite of scaremongering on the left, the deal does not obviously exalt the interests of big business over those of lowly consumers. For instance, under pressure from Australia, Chile and Peru, America shelved its demand that certain drugs be protected from generic competition for at least 12 years, settling for five instead. In the same vein, TPP's dispute-settlement mechanism explicitly bars tobacco firms from claiming compensation for public-health rules that harm their business.

To mollify unions and other likely opponents in richer countries, several of TPP's 30 chapters are devoted to protections for workers and environmental safeguards. There are clauses that attempt to slow deforestation and overfishing. All parties will also be compelled to follow the International Labour Organisation's basic principles on workers' rights. They will be required to set a minimum wage and regulate working hours. Vietnam will have to allow unions independent of the Communist Party. Such commitments will be enforceable under the treaty's dispute-settlement mechanism.

TPP also attempts to limit the extent to which governments can favour state-owned enterprises. Although there are lots of exceptions, this is quite a concession for the likes of Malaysia and Vietnam. According to Matthew Goodman of the Centre for Strategic and International Studies, a think-tank, "The White House feels this is a big one. It validates their definition of TPP as a 21st-century agreement."

Since the fine print of the deal has not yet been published, and since tariff reductions form so small a part of its measures, it is very difficult to estimate how big a boost TPP will provide its members. The Peterson Institute for International Economics, another think-tank, estimated that it would boost the world economy by $223 billion by 2025. The greatest impact will be felt not in America, but in the less developed members. The study estimates that Vietnamese GDP could rise by as much as an additional 10% over the same period.

In the long run, TPP's impact will depend on whether or not its membership expands, as it in theory might once the deal is up and running. South Korea, not one of the original 12, is pressing for swift accession. The crucial question is China. Many think America only pushed TPP forward in order to bolster its influence in Asia and counter China's. But TPP's economic significance will be severely curtailed if it does not include the country that lies at the heart of almost all Asia's supply chains. China may now step up its push for a broader regional free-trade deal, built in part on TPP, says Jeffrey Schott, a former American trade negotiator.

Until TPP is ratified by its 12 original members, such talk is premature. This process should be straightforward in places like Japan and Singapore, where the ruling ▸▸

parties have commanding majorities. But Canada faces a knife-edge election on 19th October. One of the three main parties is campaigning against the agreement, arguing that it will kill farm jobs.

The biggest row will be in America, where Congress has 90 days to review the deal before putting it to an up-or-down vote, with no amendments. This "fast-track" procedure was narrowly approved earlier this year, despite opposition on both left and right. But Republicans like Mr Trump are already complaining that the deal grants too many concessions to America's commercial adversaries. Democrats like Mrs Clinton, meanwhile, say they are worried it will cost America jobs. Republicans, traditionally advocates of free trade, have a majority in both houses of Congress. But trade deals are often unpopular with voters. It does not help that the presidential campaign will be in full swing when Congress votes, or that the deal is seen as part of the legacy of Barack Obama, a toxic figure for Republicans.

Any foot-dragging would be foolish. The slowing of the Chinese economy and a tepid global recovery from the financial crisis have led to a long-term slowdown in world trade. The value of goods shipped around the globe has been shrinking on and off since early 2009. In the first half of the year it slumped by 13% in dollar terms compared to the same period in 2014. In terms of volume, trade is still growing, but by a fraction of the rates that prevailed before the financial crisis.

The problem is not just cyclical: the ever-broader range of goods manufactured within China, among other structural changes, seems to have slowed trade growth permanently. This is worrying because trade remains the most reliable way for poor countries to become richer. TPP would undoubtedly help spur it. ■

Buttonwood | No TEE, thank you

Governments should avoid arbitrary changes to the tax treatment of pensions

HOW best to encourage people to save for their old age? Governments face many trade-offs when dealing with this issue. In the long run, they want to reduce the dependence of citizens upon the state; in the short term, they may prefer workers to consume rather than save, in order to manage the economic cycle.

Another trade-off is between cost and simplicity. Governments offer tax breaks as an incentive to save for retirement, although it's not clear whether such inducements increase the total amount of saving or merely cause workers to reallocate their savings to tax-favoured vehicles.

The greatest gains from such incentives tend to accrue to the better-off—they have more money to save, after all. But that makes pension tax breaks a tempting target when governments are trying to balance their budgets. Britain introduced a "simple" regime for pensions tax in 2006 and successive governments have been fiddling with the rules ever since. To control the cost, governments have introduced lifetime caps on pension pots and annual limits on contributions; to encourage saving, they have brought in auto-enrolment for pension schemes and investment freedom on retirement.

The latest suggestion is the most radical yet. In a consultation paper, the British government has floated the idea of moving away from the current system (known as "exempt, exempt, taxed" or EET), in which pension contributions are exempt from tax, as are investment gains, but benefits are taxable. Instead, pension contributions would be made from taxed income, but investment gains and retirement income would be tax-free ("taxed, exempt, exempt" or TEE).

Most experts think this is a daft idea. First, more than £2 trillion ($3 trillion) of pension assets have already been accu-

mulated under the current rules. Allowing this to be taken tax-free on retirement would be enormously costly; applying a retrospective tax to those assets would be enormously unpopular. So the EET and TEE systems would have to be run in tandem, making things even more complex.

Second, taxing pension contributions upfront would reduce the incentive to save. Workers would have to take it on trust that they would get their retirement income tax-free—in other words, that a future government would not change the rules again. But workers are unlikely to be that trusting, given all the fiddling that has already taken place. A survey by Hymans Robertson, an actuarial consultant, found that 37% of Britons are not interested in learning about pensions because government policies keep changing.

Third, allowing someone to take all their pension pot tax-free on retirement increases the risk that they will spend it too quickly. That would leave them dependent on the state, negating the point of tax incentives. Australians have the right to withdraw their pension pots at 55 as a tax-free lump sum; a report last year found that 25% of those who used that freedom had run out of money by the age of 70.

Finally, a shift from EET to TEE would result in a short-term tax windfall for the British Treasury. This may well be the primary motivation for suggesting the change. But a big effect would merely be to advance tax receipts from the future. That would surely be a strategic mistake given the ageing of Britain's population. Two decades from now there would be a lot of tax-exempt elderly people.

All these problems explain why most countries tend to use an EET rather than a TEE approach. The puzzle is why the British government raised the issue in the first place. One possible explanation is that it actually has another aim in mind: limiting the tax relief available to higher earners, who get two-thirds of all the tax benefits. This would end up seeming like a "compromise" solution, compared with a shift to taxing contributions upfront.

Depending on the level of tax relief on offer, the government could use reform to encourage lower earners to save more, without increasing the overall cost of the system. Tax relief could be set at an effective rate of 30%, for example—a boost for taxpayers in the 20% band, but reducing the benefit to those on the 40% and 45% rates. Estonia has a system of capped tax relief for private pension contributions.

Dealing with the problem of ageing populations will not be easy. Workers must retire later and employers must adjust to an older workforce. But it also means that workers must build up a pension pot. They need confidence in government policy to encourage them to defer consumption. And that means avoiding arbitrary rule changes, like a switch to a TEE approach. One for the bin.

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Latin America's economies

Grey days

LIMA

A slow road to recovery

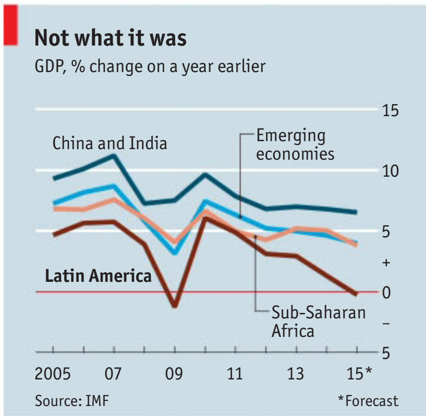
IN 2012, when Latin America was enjoying a burst of rapid economic growth and social progress, the IMF and World Bank decided to hold this year's annual meeting in the region—something they had not done since 1967. They chose Lima, the capital of Peru, one of the region's economic stars. Such decisions are always hostage to fortune, which in this case has been cruel.

Over the past few months most of Latin America's currencies and stockmarkets have suffered a battering. The IMF now expects the region's economy to contract slightly this year (see chart). With emerging markets in general heading downwards, and the world economy poised uncertainly between China's slowdown and an impending rise in interest rates in America, the mood of many of the 12,000 attending the meeting is as grey as Lima's thick, low winter clouds. As the event began, the IMF trimmed its forecast for global growth.

What went wrong in Latin America? The short answer is China's slowdown, which has punctured commodity prices and, with them, exports from and investment in South America.

In some cases the woes are mainly self-inflicted. Brazil and Venezuela kept spending even after the commodity boom began to subside. Both are now suffering deep recessions. Exclude these two and Latin American countries will grow by 2.6% this year on average, according to the IMF.

From the Panama Canal north, the region's economies are tied much more



closely to the United States than to China. Mexico, Central America and the Caribbean are net commodity importers. Growth there is steady, if mostly unspectacular.

Well-managed economies in South America, such as Peru, Chile and Colombia, are adjusting gradually to a harsher world. They are still growing, albeit at only 2-3%, because they have been able to apply a modest amount of monetary and fiscal stimulus. Currency depreciations should eventually pave the way for recovery. But in the short term they have stirred inflation. The central banks of both Peru and Colombia raised their interest rates last month; Chile may follow.

How quickly might recovery come? In Latin America weaker currencies always bring a squeeze in imports before a rise in exports, warns Alejandro Werner, the IMF's senior official for the region. And the structural reforms—more flexible labour markets, better infrastructure and business conditions—the region needs to boost productivity take time. Nevertheless, he forecasts a modest rebound next year.

That depends in part on the outside world. "External demand has to come to the rescue if the slowdown is not to be too pronounced and prolonged," says Augusto de la Torre, the World Bank's chief economist for Latin America. Given the sluggishness of world trade, that may take a while.

Recovery depends, too, on a return of confidence. Chile has closed its current-account gap, but investment remains weak because of political uncertainty. Most forecasters expect Brazil to pick up towards the end of next year, but that requires a credible fiscal squeeze. Having borrowed to finance expansion in the good times, many Latin American firms must retrench too. The IMF finds that the ratio of debt to equity in a sample of 450 non-financial companies in five of the region's bigger economies has risen to 6.5, from four in 2011.

Latin America is not as fortunate as it imagined. Poverty is on the rise again. But it is not the bad old region of the past, of volatility and hyperinflation. The slowdown has not led to financial crises. There are still pockets of growth—not least in Lima, where the annual meeting is taking place in a shiny new convention centre. ■

It used to gallop

Insider trading

Friends without benefits

NEW YORK

America's Supreme Court allows an important ruling to stand

EVEN a non-decision by the Supreme Court can cause waves. On October 5th, as part of its routine disclosure of upcoming cases, the Court declined to take up a petition related to insider trading. The Justice Department had wanted it to overturn an appeals court's decision in December to throw out the conviction of two hedge-fund managers. That means the decision will now stand, setting an important legal precedent.

This is not only a blow to Preet Bharara, the federal prosecutor with jurisdiction over Wall Street who had brought the original case, but also an attack on an aggressive and—up to that point—successful approach to insider trading. Since his appointment in 2009 as the US Attorney for the Southern District of New York, Mr Bharara's office has had a remarkable record in insider-trading cases: 87 findings of guilt, and only one acquittal.

This record is all the more impressive given the stature, connections and legal resources of the defendants. Among the most prominent were Rajat Gupta, who sat on the boards of Goldman Sachs and Procter & Gamble, and once led McKinsey, a consultancy; Raj Rajaratnam, head of Galleon, once among America's largest hedge funds; and eight employees of SAC Capital, another top-tier hedge fund. All were sen- ▸▸

tenced to jail.

Now the courts have done what defendants failed to do—put Mr Bharara on the defensive. The two hedge-fund managers whose case was thrown out—Todd Newman and Anthony Chiasson—were accused of being members of a circle that involved analysts at fund managers, employees at Dell and NVIDIA, two technology firms, and others. Information about upcoming quarterly earnings was passed through the network. That proved to be extremely valuable, resulting in $4m in profits for Mr Newman and $68m for Mr Chiasson. As damaging as this may have appeared, it was diluted by testimony, cited in the appeals-court opinion, indicating that, to at least a limited extent, the sharing of special information between large funds and investor-relations departments is common.

Under the standard imposed by the appeals court, prosecutors must henceforth show that the person providing the inside information received a "direct personal benefit". That is a shift from what Mr Bharara's team had claimed was sufficient: showing that the recipient could profit from the information, and was a friend or family member of the person providing it. The "benefit", in short, came from merely providing something of value to someone the provider valued.

Mr Bharara has said he believes that 90% of the prior convictions will stand under the new rules. But that still raises questions about not only past cases but also those yet to come. Thirteen are pending and others surely in development.

A second component of the appeals-court decision was that prosecutors must show that the recipient of the information was both aware that the information came from someone who had an obligation not to provide it, and that the recipient was aware that the provider received a benefit. That was not challenged in the government's appeal, but has nonetheless rattled prosecutors: if confidential information is passed along a chain of people, the chances grow that this test will not be met.

"There's a category of conduct that arguably will go unpunished going forward," said Mr Bharara in response to the Supreme Court's decision. "This creates an obvious road map for unscrupulous behaviour." Under the new standards, he added, a chief executive with access to material, non-published information could pass it along, knowing it could be worth millions of dollars to the recipient, yet possibly avoid prosecution because he was not explicitly compensated.

Mr Bharara predicts that the consequences could harm the "integrity" of the markets. Perhaps. Investing has always been, to at least some degree, about finding and using information that others do not have. Insider-trading cases are typically full of grey areas. But one thing in this legal back-and-forth could not be clearer: by sitting on their hands, the justices of the Supreme Court have taken the shine off the hitherto glittering record of Wall Street's prosecutor-in-chief. ■

Agricultural commodity markets

Oily food

Fuel-price shocks have a big influence on the price of food

THE prices of staple crops, like those of other commodities, are falling fast. In August they reached their lowest level for eight years, down by over 41% from their peak in 2011. That is not because people are eating less, or because farmers have become much more productive. Nor is it because of a slowdown in Chinese growth, in contrast to many other commodities. Whether going down or up, food prices are largely driven by other factors, among them oil prices and government policy.

Oil first. Cheap fuel means cheaper food. Natural gas, whose price is tied to that of oil, is used for producing fertiliser; other hydrocarbons are used for machinery and transport. Roughly 20% of the cost of producing grain comes from oil, according to Kona Haque at ED&F Man, an agricultural-commodities merchant. Cheap oil also means less demand for biofuels, which in turn means cheaper food because of reduced appetite for grains used in biofuels, particularly maize (corn). Biofuel demand, once an insignificant feature of food markets, now has a sizeable impact: from 2000 to 2011, America went from using 6% of its corn crop (the world's biggest) to make ethanol, to 40%.

Derek Headey and Shenggen Fan of the International Food Policy Research Institute, based in Washington, DC, estimate that the rising cost of oil increased the price of American corn, wheat and soybeans by 30-40% between 2001 and 2007 simply by raising input costs. Adding in the impact of higher oil prices on the demand for biofuels, the effect on food prices was even greater, according to a paper by Sheng-Tung Chen, Hsiao-I Kuo and Chi-Chung Chen, three economists in Taiwan.

Just as the price of food went up with that of oil, its current fall owes more to low oil prices than a self-correcting food market, says Josef Schmidhuber of the UN's Food and Agriculture Organisation. In theory, when prices rise, producers should respond by expanding supply. But investment in agriculture did not increase in response to price increases. It dropped by 4.5% in real terms during a run-up in prices in 2008, and remained flat despite the price spike of 2011-12.

In part, this is simply a matter of timing. Agricultural investment naturally lags price movements, since it takes time to bring more land under cultivation and grow a new crop. But even allowing for that, the rich world seemed blind to the price signals of 2008 and 2011, presumably because of the credit crunch and a lack of unused arable land. Britain's Overseas Development Institute found that only 23% of the post-2008 expansion in cereal supply came from rich-world commercial farms.

Instead, production was ramped up in developing countries, particularly in Asia and Africa. India accounted for 29% of the global increase in wheat production between 2005 and 2013. Taken together, China, India and Vietnam accounted for 61% of the global rise in rice production. However, it was not the market that induced this rise, but governments. Policymakers wanted to support domestic agriculture after seeing how the price spike could threaten their food security.

India added to subsidies on fertilisers and power for farmers, as well as cancelling the debts of small farmers and offering them fresh credit. At the same time as dampening prices for consumers by releasing grain stocks, the government raised the "support" prices at which it buys up excess grain. All told, both China and India increased annual government spending on agriculture by 20-30% in 2008.

For all the extra grain produced, government interference made the price increases worse in many respects. As the price of rice started to creep up in late 2007, China, India, Vietnam and many other producers began restricting rice exports. Such policies can help keep domestic prices down, but they worsen food shortages for everyone else. India's ban led to great hardship in neighbouring Bangladesh: as the share of Bangladesh's rice imports coming from India fell from 95% in 2007 to 3% in 2009, local rice prices almost doubled. Will Martin ▸▸


Adopt Me.
And change my world.

and Kym Anderson of the World Bank found that export bans explained 45% of the increase in international rice prices. Fear of shortages also led to stockpiling: the Philippines imported more rice in the first quarter of 2008 than it had for the whole of the previous year.

Grain stocks were low in 2008, which left little cushion when prices began to surge. But even though stocks have since been rebuilt, they may not be of much use during the next price spike. Robert Subbaraman of Nomura, an investment bank, argues that stocks are concentrated in developing countries such as China and Thailand that could resort to export bans in times of high prices. Such a moment may not be far off: the incipient El Niño weather pattern normally provokes chaos in agricultural markets. ■

Health spending

The pause before fast-forward

A new study suggests the current hiatus in spending will be temporary

THE recent slowdown in American health spending has attracted much attention. Some have dared to hope that a decades-long trend has been broken, in part because of cost-saving measures within reforms introduced by Barack Obama in 2010. But a new study of international health spending and financing published by the OECD, an intergovernmental think-tank, shows that wider influences must be at work, since America is not alone in experiencing such a deceleration over the past few years. That in turn suggests that medical spending is merely pausing before resuming its upward trajectory.

Between 2000 and 2009 real health spending per person grew at an annual rate of 4% on average across the 30 or so mainly rich countries that belong to the OECD. Since 2009 the rate has slackened to just 0.3% a year (see chart). Despite the slowdown in America, spending growth there has been higher than the OECD average. In several countries, health spending per person has fallen, most markedly in the periphery of the euro area.

The generalised nature of the slowdown in health spending indicates that it occurred mainly in response to the economic setbacks arising first from the global financial crisis and then from the euro crisis. That has induced a general squeeze on public spending, including on health care. The recession and sluggish recovery have kept wages—a big part of medical budgets—subdued, says Mark Pearson, who is in charge of health policy at the OECD.

This strongly suggests that the hiatus in health-spending growth in the rich world will prove temporary. As advanced economies continue to recover, cost pressures within health systems that are currently being suppressed will push up budgets again. The OECD projects an increase in average public health spending from 6% of GDP to 8% over the next two decades.

That rise will occur because the underlying forces pushing up medical costs remain in place. In particular health spending is driven by technological advances that increase the scope and quality of medical interventions. These improvements are hugely valued by people, reflecting the fact that as they get richer (and older) their demand for health care rises. The bill is largely picked up by third parties, whether through public budgets or by insurers in the private sector. This weakens incentives to resist rising costs.

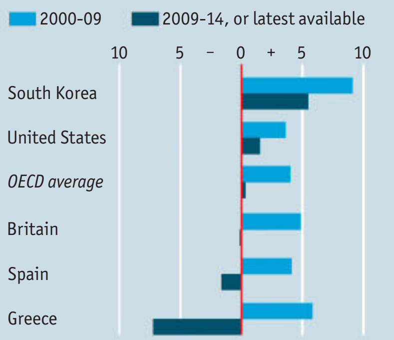
Such are the pressures that some of the apparent success in restraining costs may prove illusory. In particular, general budget curbs can work for a time but the dam eventually bursts. In Britain, for example, there is mounting evidence that the clampdown on its health budget will be difficult to sustain. Programmes to prevent disease and to promote healthier behaviours have been particular targets for cuts across rich countries, even though this is a false economy in anything other than the short term.

Although demand can be held back by user charges or higher co-payments, this can have unwelcome effects in deterring sick people who are less well-off from getting the care they need. A more promising direction for containing costs is to overhaul the ways that providers are paid and to generate more competition between them. But these methods have limits in systems where public financing predominates. The unpalatable truth is that it is very difficult to restrain medical spending. In America as well as in other advanced countries, health expenditure will remain a fiscal headache because it is the hardest component of public spending to tame. ■

Fiscal medicine

Real health spending per person

Average annual % change



Source: OECD

Fund management

Two's a crowd

A new paper suggests big asset managers could warp markets

COULD asset managers pose a systemic risk to the economy? Some regulators, looking for the cause of the next crisis, worry that they might, particularly at times when markets are already volatile and liquidity ebbing. Fund-management firms, understandably, take the opposite view: unlike banks, they do not take risks with their own money and do not have much debt.

A new paper* suggests that big fund managers could have an outsize impact on the market. It does so by examining the impact of the merger of two asset managers in 2009: BlackRock and Barclays Global Investors (BGI). The deal created the biggest fund-management group in the world, looking after $2.7 trillion of assets at the time. Between them BlackRock and BGI had stakes in some 60% of listed global firms, by value.

The authors focus on the reactions of other investors to the merger. In theory, they could have piled into the shares jointly owned by BlackRock and BGI, viewing their stakes as a seal of approval from the world's largest investor. But they did the opposite, rushing out of the stocks when the deal went through. The jointly owned shares underperformed: for those stocks where the increase in BlackRock ownership due to the merger was unusually high, risk-adjusted returns fell by 1% per month over the three months it took to consummate the deal.

The motivation for such sales, the authors suggest, was the risk of a future "fire sale" were BlackRock forced to liquidate its position suddenly. Such a sell-off might lead a share to plunge in price—a big risk for other fund managers who might need to sell such shares to meet redemption demands from their own clients. Sure enough, the authors found that asset managers who had previously seen more volatile flows into and out of their own funds were more likely to desert the BlackRock stocks.

Mutual-fund investors are not guaranteed to panic; there was no sign of mass withdrawals from equity funds as markets plunged in 2008, for example. But the authors suggest that, were a large fund manager to suffer a future hit to its reputation that caused clients to lose confidence, the impact on the market could be big.

* "Who is afraid of BlackRock?" by Massimo Massa of Insead, David Schumacher of McGill University and Yan Wang of Erasmus University

Free exchange | Quantitative frightening

The world's vast stockpile of reserves is falling, raising fears of dwindling global liquidity

A DEFINING feature of the world economy over the past 15 years was the unprecedented accumulation of foreign-exchange reserves. Central banks, led by those in China and the oil-producing states, built up enormous hoards of other countries' currencies. Global reserves swelled from $1.8 trillion in 2000 to $12 trillion by mid-2014. That proved to be a high point. Since then reserves have dropped by at least $500 billion. China, whose reserves peaked at around $4 trillion, has burnt through a chunk of its holdings to prop up the yuan, as capital that had once gushed in started to leak out. Other emerging markets, notably Russia and Saudi Arabia, have also called on their rainy-day stashes.

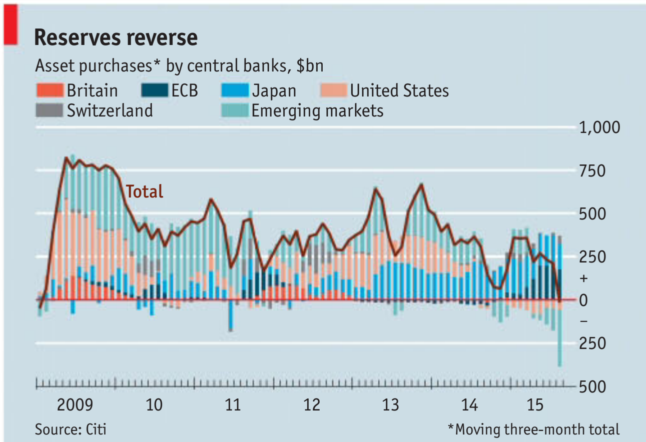
This has sparked warnings that the world faces a liquidity squeeze from dwindling reserves. When central banks in China and elsewhere were buying Treasuries and other prized bonds to add to their reserves, it put downward pressure on rich-world bond yields. Running down reserves will mean selling some of these accumulated assets. That threatens to push up global interest rates at a time when growth is fragile and financial markets are skittish. Analysts at Deutsche Bank have described the effect as "quantitative tightening".* In principle, rich-world central banks can offset the impact of this by, for instance, additional "quantitative easing" (QE), the purchase of their own bonds with central-bank money. In practice there are obstacles to doing so.

That one country's reserves might influence another's bond yields was expressed memorably in 2005 by Ben Bernanke, then a governor at the Federal Reserve and later its chairman, in his "global saving glut" hypothesis. Large current-account surpluses among emerging markets were a reflection of excess national saving. The surplus capital had to go somewhere. Much of it was channelled by central banks into rich-world bonds held in their burgeoning reserves. The growing stockpiles of bonds compressed interest rates in the rich world.

Controlling for the range of things that influence interest rates, from growth to demography, economists have attempted to gauge the impact of reserve accumulation. Francis and Veronica Warnock of the University of Virginia concluded that foreign-bond purchases lowered yields on ten-year Treasuries by around 0.8 percentage points in 2005. A recent working paper by researchers at the European Central Bank found a similar effect: increased foreign holdings of euro-area bonds reduced long-term interest rates by about 1.5 percentage points during the mid-2000s.

Yet there are doubts about how tightly reserves and bond yields are coupled. Claudio Borio of the Bank for International Settlements and Piti Disyatat of the Bank of Thailand have noted that Treasury yields tended to rise in 2005-07 even as capital flows into America remained strong, and that rates then fell when those inflows slackened. The link has been rather weak this year, too. Reserves have been run down but bond yields in both America and Europe have also fallen.

One explanation is that domestic variables outweigh foreign ones. Bond-buying by the Federal Reserve during its QE programme in 2008-14 mattered more in setting America's long-term interest rates than increased reserve allocation by foreign central banks. In the past half year, the European Central Bank's QE has had a dampening effect on euro-area yields. This suggests that changes in foreign-exchange reserves are not an insurmountable force. To the extent that a decline causes unwanted tightening, central banks in the rich world can counter it by buying bonds. Then again, although asset sales by central banks in emerging markets now exceed purchases by their counterparts in the rich world (see chart), the Fed shows little appetite to resume QE.



There may be other mitigating factors. The capital leaving emerging markets has not vanished. Much of it has ended up back where it originally came from. If a Chinese billionaire wants to take his cash out of the country, say, he can trade his yuan for dollars by various illicit means. That reduces China's currency reserves, namely its holdings of American bonds. The billionaire then uses the cash to buy a home in Los Angeles. The seller of that home puts the proceeds in a local bank, which, in turn, may use the deposit to buy American bonds.

Lost and found

It is the countries that amassed reserves in the first place that probably have more to worry about. When their central banks began buying foreign assets, they paid for them with newly printed money, thereby increasing the money supply. As they switch from buying foreign assets in order to suppress their currencies to selling those assets in order to prop them up, they will correspondingly shrink the stock of money.

But even these concerns may be overdone. Reserves are not the only determinant of domestic money supply. Central banks soaked up much of the money created when they initially accumulated reserves, thus "sterilising" the impact. They can now undo that, for instance, by lowering the amount of money banks must keep at the central bank, as China has been doing. And just as central banks in the rich world use open-market operations—buying and selling domestic assets on a daily basis—to influence short-term interest rates, so can those in the developing world. Such operations require skill and deep capital markets, however.

Authorities have one more crude brake on quantitative tightening: capital controls. China has clamped down on cash outflows in recent weeks and its reserves, which fell by $95 billion in August, dropped by a less alarming $43 billion in September. If money breaks through its barriers and surges out again, China might be forced to devalue the yuan for a second time. With anxiety about the world economy rising, many hope the dam will hold for a little longer. ■

*Studies cited in this article can be found at www.economist.com/qt15

Economist.com/blogs/freeexchange

The 2015 Nobel science prizes

Wisdom, ancient and modern

This year's Nobels go to the inventors of two anti-parasite drugs, the discoverers of how cells repair their DNA, and the researchers who showed neutrinos have mass

IT IS easy, in the arrogance of scientific advance, to forget that less than a century and a half ago most medicines were herbal remedies. To this day, some of the best-known, including aspirin, morphine and digitalis, are either made from plants or based on plant molecules. So the fact that artemisinin, the newest treatment for malaria, is derived from a plant used for that purpose in China for well over 2,000 years should be no surprise. The earliest recipe consulted by artemisinin's discoverer, Tu Youyou, was "The Handbook of Prescriptions for Emergencies", written in 340BC by Ge Hong (depicted alongside). It gave her helpful hints on how to extract the herb's active principle.

Artemisinin has played a pivotal role in the halving, since 2000, of the number of deaths inflicted by malaria (see pages 22-24). Dr Tu was therefore a laudable winner of a share in this year's Nobel prize for physiology or medicine. She took an idea she had developed originally in a secret Chinese project designed to help keep North Vietnamese soldiers malaria-free during the Vietnam war, and pushed it forward to become the saviour of a field in which existing drugs were becoming less and less useful, because of the evolution of resistance to them by the parasite that causes malaria.

The other winners of the medicine prize, William Campbell of America and Satoshi Omura of Japan, claim their shares for the discovery of another drug, avermectin, which is deployed against certain parasitic worms. This, too, is derived from a living organism, a bacterium called *Streptomyces* of which Dr Omura grew thousands of strains during the 1970s. He was looking for potential drugs, inspired by the fact that it had been the source of streptomycin, an early antibiotic. Dr Campbell then picked up on this work and struck lucky with one of Dr Omura's compounds, which he found killed nematode worms of the sort that cause filariasis and river blindness. Today avermectin's descendant, ivermectin, is regarded as so important that it is on the World Health Organisation's List of Essential Medicines, which catalogues those drugs that even the most basic medical system needs.

Staying on message

The chemistry prize went to three researchers—Tomas Lindahl, a Swede, Paul Modrich, an American, and Aziz Sancar, a Turk—who between them helped work out how living creatures keep DNA's message legible and ungarbled in the face of a hostile world. DNA faces a constant stream of chemical and physical attacks. Mutated or damaged DNA causes cancer, seems to be one reason why animals age, and is behind inherited diseases such as cystic fibrosis and haemophilia. To try to counteract this, cells nurse their DNA with a variety of proteins designed to repair damage before it can cause problems.

Dr Lindahl discovered one type of damage. DNA, he found, is not a stable molecule. A variety of chemical processes degrade it, including one in which cytosine (which is one of the four bases that encode genetic information) spontaneously transforms into an unwanted chemical called uracil. Having worked out the rate of decay, Dr Lindahl realised that multicellular life ought to be impossible: the DNA in its cells would simply crumble away too quickly.

Since multicellular life clearly is possible, some sort of repair mechanism must exist. Working on bacteria, he discovered two proteins designed to fix this sort of damage. A whole suite of such "base-excision repair" proteins is now known to exist, in complex life as well as the single-celled sort. These are capable of fixing more than 100 different types of DNA damage.

Dr Sancar's work illuminated how cells repair the damage caused by ultraviolet radiation. Exposure to ultraviolet can cause adjacent bases on a DNA strand to form bonds with each other, rather than with their counterparts on the other side of the molecule's famous double helix. Dr Sancar helped elucidate the chemical mechanism, called "nucleotide-excision repair", by which the damaged chunk of DNA is cut out and replaced with a fresh, correctly functioning piece.

Dr Modrich, meanwhile, studied the damage that can occur during DNA replication. The original DNA molecule present in a fertilised egg cell is copied and recopied trillions of times over the course of an organism's life. But the process ▸▸

is imperfect. Dr Modrich helped discover the "mismatch repair" system, which, as the name suggests, fixes mismatches that arise between DNA's two strands during the process of cell division, reducing the error rate a thousandfold.

Parasite control is immediately relevant to human well-being. Understanding DNA repair points the way to better medicine. The physics prize went to a more rarefied piece of research—but an important one, nevertheless, because it may lead to an explanation of why the universe is made of matter rather than having been an equal mix of matter and antimatter that would have long since annihilated itself. This is the discovery that subatomic particles called neutrinos have mass. The winners here were Takaaki Kajita, of Japan, and Arthur McDonald, a Canadian.

Once upon a time

Neutrinos were proposed in 1930 as a way to balance the equations of nuclear decay. They exist in immense numbers, seeping from Earth's core, streaming from the sun, and sailing across the galaxy from far-flung supernovae. Yet they are exceptionally disinclined to interact with other types of particle. It took until 1956 to catch one in a laboratory.

Neutrinos come in three "flavours"—electron, muon and tau—that correspond to the fundamental particles of those names. Originally, they were thought to be massless, but two things were amiss. The first, noticed originally in the 1960s, was that not enough neutrinos were coming from the sun. Theory suggests solar neutrinos, generated by the fusion reactions that power the sun, should all be electron neutrinos, and these were the only sort that early detectors could register. But when, in 2001, Dr McDonald used more sophisticated detection equipment he found that the missing neutrinos were there—they just weren't electron neutrinos. Dr Kajita, meanwhile, had discovered a second anomaly three years earlier. This was that when cosmic rays smash into the atmosphere they create fewer muon neutrinos than they should.

One explanation tied the whole mess together: neutrinos must change flavour as they travel. And for this to happen, theory requires they have some mass.

That they do is now accepted—hence the prize. How this could explain the universe's existence relies on a complex chain of reasoning that leads to the formation out of the Big Bang of much heavier neutrinos than those of today. These then decayed asymmetrically, with a preference for particles made of matter rather than antimatter, leading to all the matter now around. This may sound a far-fetched conclusion to base upon a mathematical calculation. But then, back in 1930, so did the very existence of neutrinos. ■

Food safety

Particle biology

A better way to avoid shellfish poisoning

FILTER-FEEDING bivalve molluscs, such as mussels, oysters, scallops and clams, are a useful and tasty source of protein. They can, though, also be harbingers of illness. A filter-feeder lives, as the name suggests, by trapping and consuming particles (mostly bacteria and single-celled algae) suspended in water it pumps through its body. If those particles are themselves toxic, they can seriously discomfort, and occasionally kill, a human who eats a mollusc that has been feeding on them.

The most common culprits are algae called dinoflagellates and diatoms, several species of which make potent toxins. These algae often multiply into spectacular blooms along coastlines. Even in the absence of such a bloom, though, they can be abundant enough to cause problems. For this reason, in most places in the rich world at least, bivalves intended for sale have to be tested before they go to market. That involves taking samples to a laboratory, which is cumbersome and time-consuming. What is needed is a simple test that can be carried out on-board a ship. And Waqass Jawaid, of Queen's University in Belfast, thinks he has one.

One way of screening shellfish is pretty crude. This is to inject a mouse with a sample and see if it gets ill— a procedure no longer used in Europe, but still permitted in parts of America. The alternative, a mix of chromatography and mass spectrometry, is more sensitive, but requires expensive equipment and trained staff. Dr Jawaid's method, which he and his colleagues report in the *Journal of Agricultural and Food Chemistry*, employs antibodies to create a system similar to a pregnancy test.

The system's testing strip has three bands. The first is covered with the antibodies in question, which have a special affinity for okadaic acid, one of the most common algal toxins. These antibodies are loosely bound to the strip's surface, so they will wash away if a sample is applied. Next to the antibody band is a band covered with molecules that have a special affinity for the antibody—but only if it is not bound to okadaic acid. Beyond these two bands is a third, which is peppered with similar molecules to the second, except that in their case they have an affinity for the antibody whether or not it is not bound to okadaic acid.

Crucially, the second and third bands turn red if their molecules bind to the antibody. This means that, if a sample containing okadaic acid is placed on the first band and allowed to diffuse along the strip, only the third band will turn red (because the antibodies picked up by the sample will be bound to okadaic acid). If the sample is okadaic acid-free, however, two red bands will form.

Prototypes of Dr Jawaid's detector were indeed able to distinguish and reject all samples whose okadaic-acid levels exceeded established safety limits. They also threw up false positives, by rejecting some samples with highish levels of okadaic acid that did not actually breach these limits. But that is in contrast to mouse assays, which are subject to false negatives—ie, passing as safe samples that are not.

Compared with the mouse test, then, Dr Jawaid's errs on the side of caution. It is also cheaper than the chromatography-mass spectrometry approach. But its greatest advantage may be that, because it can be done on-board ship for an instant result, it shortens the time it takes for shellfish to make it from the seabed to the table. ■

Guaranteed dinoflagellate-free

Data analysis

On the other hands

Honest disagreement about methods may explain irreproducible results

IT SOUNDS like an easy question for any half-competent scientist to answer. Do dark-skinned footballers get given red cards more often than light-skinned ones? But, as Raphael Silberzahn of IESE, a Spanish business school, and Eric Uhlmann of INSEAD, an international one (he works in the branch in Singapore), illustrate in this week's *Nature*, it is not. The answer depends on whom you ask, and the methods they use.

Dr Silberzahn and Dr Uhlmann sought their answers from 29 research teams. They gave their volunteers the same wodge of data (covering 2,000 male footballers for a single season in the top divisions of the leagues of England, France, Germany and Spain) and waited to see what would come back.

The consensus was that dark-skinned players were about 1.3 times more likely to be sent off than were their light-skinned confrères. But there was a lot of variation. Nine of the research teams found no significant relationship between a player's skin colour and the likelihood of his receiving a red card. Of the 20 that did find a difference, two groups reported that dark-skinned players were less, rather than more, likely to receive red cards than their paler counterparts (only 89% as likely, to be precise). At the other extreme, another group claimed that dark-skinned players were nearly three times as likely to be sent off.

Dr Uhlmann and Dr Silberzahn are less interested in football than in the way science works. Their study may shed light on a problem that has quite a few scientists worried: the difficulty of reproducing many results published in journals.

Fraud, unconscious bias and the cherry-picking of data have all been blamed at one time or another—and all, no doubt, contribute. But Dr Uhlmann's and Dr Silberzahn's work offers another explanation: that even scrupulously honest scientists may disagree about how best to attack a data set. Their 29 volunteer teams used a variety of statistical models ("everything from Bayesian clustering to logistic regression and linear modelling", since you ask) and made different decisions about which variables within the data set were deemed relevant. (Should a player's playing position on the field be taken into account? Or the country he was playing in?) It was these decisions, the authors reckon, that explain why different teams came up with different results.

How to get around this is a puzzle. But when important questions are being considered—when science is informing government decisions, for instance—asking several different researchers to do the analysis, and then comparing their results, is probably a good idea. ■

Dysmorphology

Looking for answers

OXFORD

Face-recognition technology can diagnose developmental disorders

THERE is something of the 19th century about the science of dysmorphology. The idea that medical conditions, such as Down's or Angelman's syndromes, whose main consequences are neurological and behavioural, imprint themselves on the body's shape in ways reliable enough to be used for diagnosis sounds disturbingly like phrenology or physiognomy. Be that as it may, they do—and for these and many other developmental disorders, dysmorphology works. Indeed, on this basis, the 16th-century painting above is thought to be of a child with Angelman's.

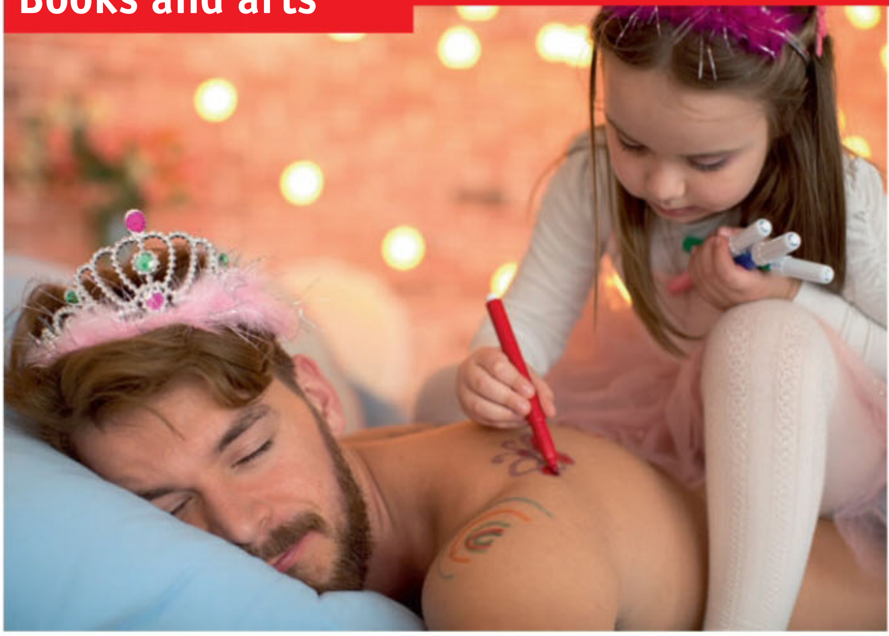
A group of researchers at Oxford University would, though, like to make dysmorphology work better. They want to bring it into the 21st-century world of face-recognition technology, and thus extend its range. Christoffer Nellaker and Andrew Zisserman began from three premises. First, of the 6,000 known developmental disorders, about half express themselves, in part, in the face. Second, most are so rare that a doctor is unlikely to come across any given one of them during his career, so he will have no chance to learn how to recognise them. Third, they are nevertheless, in aggregate, common enough that distinguishing them is important.

Dr Nellaker and Dr Zisserman are therefore developing software that learns to spot syndromes (collections of co-occurring symptoms) by looking at pictures of people who have been diagnosed with them. The program pays attention to the features in each face that are important for a diagnosis, such as the shape and position of the eyes, eyebrows, lips and nose. It then clusters faces with common characteristics, as exhibiting the same syndrome. Crucially, the pictures it uses do not have to be staged (as, for example, a machine-readable passport photograph is) to have consistent lighting, background, angle of presentation of the face, and so on. The program is able to learn to ignore such things in ways human beings find hard.

So far, the researchers have tested the system on 1,400 pictures of people with eight of the most common disorders. These include Down's and also progeria, which causes children to age rapidly. It was, as they had hoped, able to divide the photographs spontaneously into eight clusters. Moreover, these clusters agreed 93% of the time with doctors' diagnoses of the people whose photographs were in them.

That is good. It could certainly be improved upon, though, and Dr Nellaker and Dr Zisserman are not suggesting that their system has advanced enough to take over the diagnosis of these eight reasonably well-understood conditions. But 93% accuracy may well be an improvement on current diagnosis of rarer developmental disorders. At the very least, it would narrow the range of likely diagnoses.

Tests of 1,300 pictures of people with another 83 disorders—syndromes for which far fewer images are available for the initial training—have shown it works with these, too. That would make it worth searching for other pictures of such conditions, to improve accuracy. To this end, Dr Nellaker and Dr Zisserman are forming collaborations with teams in other countries. They also plan to launch a website to which anyone who has been diagnosed with a relevant disorder can upload a photograph of himself, for the software to learn from. If it all works, then the old science of dysmorphology really will have been given a new lease of life. ■



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Promoting gender equality

Juggling mums and halo dads

Why organisations will have to change radically to make work-life balance a reality

Unfinished Business: Women Men Work Family. By Anne-Marie Slaughter. *Random House; 352 pages; $28. Oneworld; 352 pages; £16.99*

ANNE-MARIE SLAUGHTER is a respected American foreign-policy expert. A prominent "liberal hawk" advocating the protection of human rights around the world, she has served as the policy-planning director for the State Department and, before that, as the dean of Princeton University's prestigious Woodrow Wilson School of Public and International Affairs. But Ms Slaughter only became a near-household name when she waded into America's "mummy wars", the fight over how women can both raise healthy families and lead high-powered careers.

In 2010 Sheryl Sandberg, Facebook's chief operating officer, began giving speeches on women in the workplace. She encouraged her audiences to remain committed to their jobs, and offered advice about self-confidence and cultivating senior "sponsors". The talks earned her broad acclaim, and their message was the core of her bestselling book, "Lean In".

In July 2012, however, Ms Slaughter took a meat cleaver to Ms Sandberg's insinuation that anyone with brains and determination can navigate the work-family obstacle course. In a cover story for the *Atlantic* titled "Why Women Still Can't Have It All", Ms Slaughter revealed that the reason she left her high-octane government job was to spend more time with her two teenage sons. Despite enjoying advantages most working mothers could only dream of (two upper-middle-class incomes and a husband with flexible working hours) she decided she could not properly support her children, who were in Princeton, while living five days a week in Washington, DC. No one could accuse Ms Slaughter of lacking the will or the skill to get ahead in a man's world. The problem, she wrote, lay not with weak-kneed women but with the structure of the American workplace, where 24-hour demands made it impossible to be both a professional leader and a steady presence in family life.

The article has been read 2.7m times, prompting what Ms Slaughter calls a "tsunami of response". Some critics took her to task for "leaning back" and setting a poor example for career women. Others assailed her for preaching a "plutocratic" feminism focusing on the problems of the rich and powerful. Following a multi-year discussion tour, Ms Slaughter has now expanded her views into a book.

"Unfinished Business" retraces much old ground. On her dispute with Ms Sandberg, she is resolute. "We often cannot control the fate of our career and family," she writes. "Insisting that we can obscures the deeper structures and forces that shape our lives…Plenty of women have leaned in for all they're worth but still run up against insuperable obstacles…Sandberg focuses on how young women can climb into the C-suite in a traditional male world of corporate hierarchies. I see that system itself as antiquated and broken."

Ms Slaughter has widened her conceptual lens in response to her critics. Whereas the *Atlantic* article was written "for my demographic [of] highly educated, well-off women who are privileged enough to have choices in the first place", "Unfinished Business" is full of voices from outside her social group. She cites working-class mothers like Tanya Sockol Harrington, who cannot finish a university degree while raising four children. She quotes black feminists, such as Taigi Smith, who writes that "historically, white women were working hard to liberate themselves from housework and child care, while women of colour got stuck cleaning their kitchens and raising their babies." And she reproduces a "blistering but justified letter" from a gay man, who fears that her framing of work-life balance as a women's issue could set back homosexual families' struggle for recognition.

Ms Slaughter has backtracked from her claim that women's "maternal imperative" might explain why they so often choose family over work. Instead, she says, the root problem is a systematic imbalance in the esteem granted to "two complementary human drives: competition, the impulse to pursue our self-interest in a world in which others are pursuing theirs, and care, the impulse to put others first."

Discrimination against caregiving, the author writes, harms women, non-whites, gays and stay-at-home dads (who often lurk behind female CEOs) alike. And it wreaks broad damage. She cites studies showing that children who receive high-quality care up to the age of five were four ▸▸

times more likely than a control group to go to university, and that the elderly have far better odds of avoiding nursing homes if they have several children and at least one daughter. America's skills shortage might lie in caregivers who have been squeezed out of the workforce. "As a society we lose massive amounts of talent," she writes. "We lose the distance runners, the athletes with the endurance, patience, fortitude and resilience to keep going over the long haul."

Ms Slaughter should be applauded for devising a "new vocabulary" to identify a broad, misclassified social phenomenon. And she is razor-sharp on outlining the cultural shifts necessary to give caregiving its due—particularly those from her side of the gender divide. For women to achieve equality in the workplace, men will need to be equal in the home. And Ms Slaughter concedes that women, who "define the nature of masculinity as much as other men do…have to find and embrace an image of a man who can care for children; earn less than we do; have his own ideas about how to organise kitchens, lessons and trips; and still be fully sexy and attractive as a man."

The book also offers some valuable suggestions for employers. She touts the success of "results-only" work environments, which have been adopted at many big firms and let staff work whenever and wherever they want as long as they accomplish their tasks. And she gushes over the family-friendly policies of the Pentagon, which subsidises on-site day care and allows members to take time off for family without hindering their careers.

But Ms Slaughter is also realistic about the limits of doing good while doing well; many companies will choose not to make changes. To level "the playing field for those businesses that are trying to do the right thing…we need the kind of political change that establishes a new floor." And she offers a laundry list of public policies that would establish an "infrastructure of care" in the United States, similar to the systems in Scandinavia. It includes adjusting school schedules to match work schedules, raising wages for people in caregiving occupations, public investment in child care and early education, paid family leave for both sexes and stronger anti-discrimination laws and enforcement.

"Unfinished Business" leaves some unfinished business of its own when it comes to making this wish list a reality. Anyone as versed in foreign policy as Ms Slaughter knows that hope is not a strategy. She says electing more women to political office would help. This suggestion is perhaps a veiled presidential endorsement of her former boss, Hillary Clinton, who blurbed her book, and it may only be setting another laudable but distant goal. But by putting these issues on the agenda, Ms Slaughter has already taken an essential first step. ■

Detroit's glory days

Before the clouds came in

Once in a Great City: A Detroit Story. By David Maraniss. *Simon & Schuster; 464 pages; $32.50*

EMINEM steps out of a sedan and into Detroit's spectacular Fox Theatre, with its Corinthian columns and recumbent lions. He walks down the aisle towards a black gospel choir onstage, robed in red and black, their voices rising. The Detroit-based rapper turns around, defiantly pointing at the camera. "This is the Motor City. This is what we do," he says.

David Maraniss choked up when he saw this two-minute Chrysler advertisement during the Super Bowl, the annual football extravaganza, with its images of smokestacks, ice skaters and Diego Rivera's "Detroit Industry" murals. Suddenly he realised how much he still cared for his birthplace, where he spent the first six and a half years of his life. So much so that he decided to write his 12th book about the city, when it was at the peak of its economic, political and cultural power. He picked the early 1960s, from the autumn of 1962 to the spring of 1964.

At the time Detroit was the economic engine of America. In January 1963 *Life* magazine published a story under the headline "Glow from Detroit Spreads Everywhere". The factories of Ford, General Motors, Chrysler and American Motors were firing on all cylinders. The increase in women drivers, the trend towards two-car families, the rising income of the post-war baby boomers and the promise of foreign markets inspired tremendous optimism for the industry's growth. The annual motor show was the biggest and most important event of its kind, the Academy Awards on wheels; on occasion even the vice-president came.

Detroit was also a centre of progressive politics and the civil-rights movement. Mr Maraniss devotes an entire chapter to Walter Reuther (pictured, left), the memorable boss of the most powerful union, the United Auto Workers (UAW). His parents, German immigrants, raised him with visions of social justice and workers' rights. Reuther was an idealist but also a pragmatist, which made him enemies on the left as well as the right. George Romney, the Republican governor of Michigan in 1963, called him "the most dangerous man in Detroit" because of his ability to bring about "the revolution without seeming to disturb the existing norms of society".

Reuther was concerned with civil rights almost as much as with workers' rights. He invited Martin Luther King (pictured) to the UAW's 25th-anniversary dinner and afterwards distributed copies of King's speech to the rank-and-file. When hundreds of protesters were jailed after King's Birmingham campaign of civil disobedience, Reuther dispatched two UAW staffers with $160,000 in money belts to bail them out of jail. "It could be said that to a significant degree Detroit and its autoworkers were the [civil rights] movement's bank," Mr Maraniss writes. In Detroit in June 1963 King led the "Walk to Freedom", then the largest civil-rights march, and delivered a version of his "I Have a Dream" speech which he would give nine weeks later at the Lincoln Memorial in Washington, DC.

One of the book's strengths is its colourful cast: Jerome Cavanagh, the progressive Irish-Catholic mayor of Detroit, a bon vivant, father of eight and sharp dresser, who "kept four extra suits, 13 striped ties and a cabinet of fresh shirts" in a study adjoining his office; Henry Ford's grandson, Henry II, called the Deuce, who was "impeccably dressed yet with a touch of the peasant, with his manicured nails and beer gut and carefree proclivities, his frat-boy party demeanour and head full of secrets". Mr Maraniss also interviewed Berry Gordy, the founder of Motown, the record company, who now lives in Los Angeles. He describes how Motown was the product of the entire Gordy family, especially Mr Gordy's four older sisters. And how thanks to Grinnell's, a well-known local piano-maker, the ready availability of pianos, even for black families, as well as inspiring state-school music teachers fostered the talent that flocked to Motown.

For all Detroit's glow, the storm clouds were already gathering in the early 1960s. Mr Maraniss cites a study by Wayne State University in 1963 that predicted the population of Detroit would drop from nearly 1.7m to 1.2m between 1960 and 1970 and continue to dwindle. "Productive persons who pay taxes are moving out of the city, leaving behind the non-productive," the report noted. It also mentioned that in 1960 Detroit's population was 28.9% black and forecast that by 1970 the city would be 44.3% black, pointing out that blacks who had the resources moved to the suburbs "with the same urgency as whites".

The report turned out to be unusually prescient. In spite of the efforts of Reuther, Cavanagh, King and others, Detroit was rocked by one of the worst race riots in its history in 1967. From then on the pace of the city's decline quickened. By the time Mr Maraniss was writing his meticulously researched book, which at times provides almost too much detail for the uninitiated, Detroit had declared bankruptcy. Its population was 83% black, its workers were largely unskilled and the city's headcount had shrunk to 688,000. The city that had given America so much was in desperate need of help. ■

Treading the boards

A new take on Greek tragedy

The Almeida Theatre in north London shakes up the classics

REVERENCE is a dirty word at the Almeida Theatre in Islington, north London. Rupert Goold, the artistic director, and Robert Icke, his associate, are resolved to take dusty, distant cultural artefacts of drama and shake them hard, so that they will entertain modern audiences, especially those with no previous knowledge of the plays. Mr Icke holds that to save the classics from withering, a director must be willing even to reinterpret the original author's intentions.

This summer Messrs Goold and Icke have directed freshly translated versions of the oldest of all "dusty theatrical artefacts": the ancient Greek tragedies of Aeschylus and Euripides. These versions ruthlessly rewrite texts and alter plots. In Euripides's "Medea", the last of the season of three plays, which opened on October 1st directed by Mr Goold, Medea murders her two children as revenge on her unfaithful husband. Not at the Almeida: in this version, her sons die—or perhaps do not—by eating sleeping pills.


Klytemnestra the Cool

Mr Icke's version of "Oresteia" by Aeschylus is described as "a new adaptation", but classics scholars insist that it is much more than that. The masked male chorus which propels all Greek tragedy, so memorable in Sir Peter Hall's production at the National Theatre in 1981, is jettisoned. Mr Icke's "Oresteia" starts with 46 pages of text (out of 113 in all) that are a dramatisation of the long choral ode in Aeschylus's "Agamemnon". It deals with his decision to sacrifice his daughter Iphigenia to ensure his ships a fair wind for Troy. Mr Icke believes that, without this prelude, it is hard to appreciate fully the ensuing, awe-inspiring family tragedy in which his wife Klytemnestra kills Agamemnon to avenge their daughter's death, and then is murdered in turn by their son, Orestes. The extra material makes for a long evening, but it speeds by. Only the "Bakkhai", the second of the Almeida's three plays, conforms to the traditional Greek unities of time and place and, as in ancient Greece, has all the speaking roles played by three actors, backed by a chorus (though of Bacchic ladies rather than masked men).

Although the end of "Medea" may not be as dreadful as Euripides intended, these radical departures have been a critical success. Simon Goldhill, a professor of Greek literature at King's College, Cambridge, has no trouble justifying the wholesale reassessment of Greek tragedy, arguing that great works require heavy maintenance to restore their power. "All translators are traitors," he writes, "but some traitors turn out to be liberators who let us recalibrate what matters."

The Greek season defines the Almeida's style of work. Mr Goold has unearthed a rich new seam of modern theatre by reviving and generally energising work by authors such as Luigi Pirandello and Bret Easton Ellis. His delightful version of "The Merchant of Venice" set in Las Vegas, was played largely for laughs, with the verse adapting easily to a singsong southern American accent. Even his failures, such as a "King Lear" and Puccini at the English National Opera, had moments that linger in the memory.

Now aged 43, Mr Goold is an ebullient figure. "I'm a populist basically," he says. Art shouldn't be a chore or a trial. A graduate of Cambridge University, he served an apprenticeship in repertory theatres in


A mighty Medea

Salisbury and Northampton, unlike Mr Icke, whom he hired not long after he graduated (he says he envied Mr Icke's confidence). To ensure that he directed his choice of plays, Mr Icke had started his own companies, at home in Stockton-on-Tees and as a student at Cambridge.

Little, it seems, is safe from their revisionist ardour. Mr Icke rescued George Orwell's "1984" from the obscurity of the sixth-form syllabus and transformed it into a taut, macabre West End hit. But the Almeida has a fondness for new work as well as reimagined classics; plays by award-winning young British writers such as Lucy Kirkwood ("Chimerica") and Mike Bartlett ("King Charles III", which is due to open in New York on October 10th), were performed in Islington before transferring to the West End or Broadway.

Actors like working there. Since small theatres like the Almeida cannot pay well, actors choose the work over the money. In this Greek season, the two most memorable performances are by Lia Williams (pictured, left) as Klytemnestra and Kate Fleetwood, who is Mr Goold's wife (pictured, above), as Medea. Each exhibits an emotional range that holds the action together. The rage, temper and insult of the dialogue between Medea and her husband Jason, here conducted on their mobile phones, reveal a direct linguistic link from ancient Greece to contemporary soap opera.

Whatever quibbles there might be about the editing, cutting and rewriting of the texts, surely the significant question about this ambitious project is whether the audience is gripped by the performances. Enthusiastic word-of-mouth suggests the answer is yes. ■

Also in this section

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Leadership

Getting it right

Pay attention to the mundane things of business life

Discover Your True North: Becoming an Authentic Leader. By Bill George. *Wiley; 320 pages; $32 and £21.99*

What You Really Need to Lead: The Power of Thinking and Acting Like an Owner. By Robert Kaplan. *Harvard Business Review Press; 224 pages; $27 and £17.99*

Leadership BS: Fixing Workplaces and Careers One Truth at a Time. By Jeffrey Pfeffer. *HarperBusiness; 272 pages; $29.99. To be published in Britain by HarperBusiness in December; £18.99*

CONFIDENCE in business leaders is at a record low. An opinion poll by Edelman in 2014 showed that fewer than 50% of respondents trusted chief executives. Another poll, for *Parade* magazine, found that 35% of American employees would forgo a substantial pay rise if they could see their direct supervisors fired. A recent review of the academic literature concluded that "one in every two leaders and managers" is judged "ineffective (that is, a disappointment, incompetent, a mis-hire, or a complete failure) in their current roles". Even bosses are turning on their fellow bosses: in 2011 nearly a sixth of the world's 2,500 biggest firms fired their CEOs.

What can be done to improve this lamentable state of affairs? Three new books provide different answers. Bill George is a former CEO of Medtronic who teaches at Harvard Business School (HBS) and the author of "Discover Your True North". Leaders must become more authentic to earn their followers' trust, he says. Robert Kaplan, a former HBS professor who was recently appointed head of the Federal Reserve Bank of Dallas, argues in "What You Really Need to Lead" that potential leaders need to learn to "think like owners" if they are to succeed. Jeffrey Pfeffer, who hails from HBS's great rival on the West coast, the Stanford Graduate School of Business, takes a very different tack in "Leadership BS". His book maintains that what "the leadership industry" needs is less warm waffle and more hard-headed realism.

Mr George's work, an expanded and updated version of his bestseller of 2007, is essentially a self-help book for the C-suite and the weakest of the three. It is littered with feel-good stories about business people who have transformed themselves into leaders by discovering their true selves. Authentic leaders, he believes, can rid capitalism of the short-termism that disfigures it. But is "authenticity" really the essential ingredient of great leadership? Leaders often have to be inauthentic to succeed—for example, they have to put on a brave face when they are dealing with personal tragedies or pretend they like their colleagues when they can't stand them. And are leaders who cultivate authenticity any more successful than those who don't? The author fails to provide detailed evidence to back up his tales of self-discovery.

"What You Really Need to Lead" contains the seed of an interesting idea. But Mr Kaplan does little to help it grow. Like Mr George he relies too much on anecdote and too little on systematic research. He also devotes far too much space to attacking the idea that leadership is an innate quality and therefore something that can't be taught. But few people hold such a hardline position. Most believe that leadership is rather like music: the lucky few may have a natural talent for it, but most people can learn it, and even the lucky few need some instruction. Mr Kaplan is himself part of a giant global industry that is predicated on the idea that leadership can be learned. McKinsey estimates that American companies spend about $14 billion a year on leadership development. HBS's own mission is to "educate leaders who will make a difference in the world".

Of the three books, much the most impressive is "Leadership BS". Mr Pfeffer asks probing questions where most leadership writers make vague assertions and he is careful to invoke careful research where others provide convenient anecdotes. He takes a hatchet to the idea that successful leaders need to be exemplars of moral virtues such as modesty, truthfulness or Mr George's authenticity. Great leaders tend to be complex people who are driven as much by egoism as by a desire to do good. And self-evident virtues tend to be less self-evident when tested in the crucible of business. Take modesty: successful leaders are almost by definition people who are good at promoting themselves. Or honesty: if entrepreneurs didn't overestimate their chances of success to both themselves and their customers they would never get off the ground. Steve Jobs's charisma was once described by a colleague as a "reality-distortion field".

Mr Pfeffer's motive for wielding his hatchet is practical as well as academic: he thinks the idea that you can solve the leadership problem by encouraging good behaviour is counter-productive. Would-be virtuous leaders discover that they have to make compromises to deal with the complexities of business life; workers have their expectations dashed; and organisations discover that they have to deal with real people rather than moral exemplars.

He argues that the leadership industry needs to shift its attention from exhortation to implementation: organisations need to put systems in place that reward good behaviour and punish bad behaviour. Preaching the virtues of authenticity and leaders serving their workers may be exhilarating. But improving the quality of leadership requires careful attention to the mundane things of business life, such as getting the structure of incentives right, strengthening the corporate culture and improving the quality of boards. ■

The circular economy

Greening of business

Helping the environment must be presented as a boon to business first

SUSTAINABILITY suffers from an image problem. Not with granola-crunching sandal-wearers, but with executives and the middle-of-the-road consumers to whom they want to sell their wares. How exactly companies make their offerings, or design their services, has always mattered enormously to margins. The effects on the environment less so. But resources can stretch only so far: by the middle of the century the global population will be 9.7 billion people, up from 7.3 billion now according to the UN. Most growth will occur in Asia and Africa. Between 2014 and 2030 estimates say 2.5 billion new middle-class consumers will join the crush, guzzling their way to a better standard of living.

Waste to Wealth: The Circular Economy Advantage. By Peter Lacy and Jakob Rutqvist. *Palgrave Macmillan; 216 pages; $35 and £21.99*

Green Giants: How Smart Companies Turn Sustainability into Billion-Dollar Businesses. By E. Freya Williams. *Amacom; 288 pages; $27.95*

No Ordinary Disruption: The Four Global Forces Breaking All the Trends. By Richard Dobbs, James Manyika and Jonathan Woetzel. *PublicAffairs; 288 pages; $27.99 and £18.99*

Fans of the "circular economy" want growth decoupled from the ever more voracious consumption of resources. Three new books promote this view to varying degrees. Peter Lacy and Jakob Rutqvist, both of Accenture and authors of "Waste to Wealth", believe reuse and reduction will ensure that firms can "future-proof" their "growth agendas". In "Green Giants" Freya Williams wants companies to do good as a by-product of their usual activities. After working for Ogilvy advising big firms on going green, she has come to believe that sustainability must be "built in" to operations, not merely "bolted on". And Richard Dobbs, James Manyika and Jonathan Woetzel, who all work for McKinsey's Global Institute and have written "No Ordinary Disruption", see the circular economy chiefly as a clever way to cut costs amid the vast technological and demographic shifts already under way.

Efficiency is an obsession for the optimistic Messrs Lacy and Rutqvist. Cars sit unused for 90% of their lives, according to "Waste to Wealth". Consumers should instead consider paying to drive as and when they need, renting a vehicle through car-sharing apps such as DriveNow and car2go. But this analysis presupposes that people spend their money on wheels mainly for mobility and not, for example, to stir up the envy of their neighbours.

The authors provide reams of alternative examples of green practices and the firms behind them. Tesla's flashy electric vehicles may cut emissions while keeping their drivers hip, for one. But the book assumes that bosses are green converts, keen to overhaul their operations, and fails adequately to persuade those who might not be. Instead it just offers reams of factual fodder for those already on-board.

The idea of leasing products to customers, rather than selling them, drives efficiency (as the car-sharing apps show). Firms renting out vehicles want them to last as long as possible. But as no one wants to rent socks that someone else has worn, other types of retailers may struggle with this model, especially as durability may interfere with future sales. The longer socks last, the longer it will take a customer to buy a new pair. Recycling can help instead. Clothing firms such as H&M see it both as a way to hedge against volatile cotton prices and as a means of securing customer loyalty. In 2013 the chain encouraged customers to bring in old clothes in exchange for discount vouchers on new ones. A year later it launched a recycled denim collection and collected more than 3,000 tonnes of ancient frocks and fuzzy jumpers, many of which became pipe insulation or damping material in carmaking.

For some, "green" may mean "weedy".

Smart shoppers shy away from ecological washing powders they fear will not clean their tightest, whitest trousers. So firms keen to do good may manage to do so only quietly. Chipotle, an American burrito chain, is its country's largest seller of naturally raised meats yet also its most profitable fast-food restaurant business. Chipotle's revenues were more than $4 billion in 2014, according to "Green Giants", a pacey attempt to convince business types of the advantages of sustainability.

Of the three books, "No Ordinary Disruption" does the best job of arguing why companies must consider their use of resources, and so inadvertently makes the strongest case for going green. The authors' clear assessments explain why bosses cannot afford to view it merely as a costly fad. Startups have never been better placed to challenge incumbents across the world. Mid-tier cities across the developing world, rising in population and prominence, incubate such companies with vital local knowledge. Western firms may owe their future success to fast-growing centres they have not yet heard of: Surat, for example, which accounts for two-fifths of India's textile production. Increasing interconnections between markets mean behemoths will suffer when suppliers fall short. Recycling and using resources sparingly will help firms survive despite the onslaught of newer foreign rivals. ■

Behavioural economics

Learning from failure

Black Box Thinking: The Surprising Truth About Success. By Matthew Syed. *John Murray; 352 pages; £20. To be published in America in November by Portfolio; 336 pages; $27.95*

Inside the Nudge Unit: How Small Changes Can Make a Big Difference. By David Halpern. *W.H. Allen; 400 pages; £20*

EMBRACING failure is a cliché of the business world. The *Harvard Business Review* devoted an entire issue to it in 2011. People should be open about their mistakes and tolerant of others'; this is the route to improvement, goes the thinking. But as Matthew Syed, a journalist at the *Times*, shows in a new book, "Black Box Thinking", in practice a "stigmatising attitude towards error" pervades everyday life. This has big implications.

Success brings its own rewards, but the world comes down hard on those who are deemed failures. The desire to avoid such opprobrium prompts people to cover up mistakes, argues Mr Syed. Doctors tell patients of "complications". Police fail to drop cases against people accused of committing a crime, even after clear evidence emerges of their innocence. Politicians plough on with policies even when it is obvious they are not working. All are psychological strategies to avoid admitting fault.

Fear of failure can have devastating consequences, as Mr Syed shows in a story about United Airlines. In 1978, as a plane approached its destination, the pilot worried that the landing gear had not come down. Desperate, he tried to establish what was wrong, becoming blinded to the plane's dwindling fuel reserves. Eventually the tank was empty and the plane crashed. The worry of making a mistake—subjecting the passengers to a bumpy landing—blinded him to bigger problems.

The story is a metaphor. Investors hold on to losing stocks longer than they should. Unable to face the shame of a bad return, they end up with a much bigger loss. Fred Goodwin of RBS, a bank, fretted about the colour of the carpets at head office while his firm collapsed under the weight of the financial crisis. The medical profession is especially intolerant of mishaps, says Mr Syed. This means that mistakes are not scrutinised and people do not learn from them. Small wonder that blunders are pervasive. According to one study of acute care in hospitals, one in ten patients "is killed or injured as a consequence of medical error or institutional shortcomings".

What to do? One solution is making it easy for people to own up or speak up, as the airline industry has learned to do better than any other. Mr Syed's more novel suggestion, though, is the rigorous testing of business strategies. This forces people to make improvements. The gold standard is the "randomised control trial" (RCT), in which a treatment group is compared with a control group. Capital One, a credit-card company, has used RCTs obsessively—over the fonts it uses, for example, and the scripts at its call-centres—to assess which initiatives fail and which do not. James Dyson, a technology entrepreneur, and Google are other cheerleaders for this hyper-rational school of management.

This approach may also hold benefits for governments. David Halpern is the boss of the British government's Behavioural Insights Team (BIT), known as the "nudge unit", which uses RCTs to improve policy. His new book, "Inside the Nudge Unit", offers an interesting, if familiar, discussion. Identifying points of failure and making small changes, he argues, reaps disproportionate gains. By including a message on a car-tax form appealing to people's sense of humanity, the BIT sharply boosted organ donations.

Much still needs to be done. Between 2010 and 2012 the BIT saved the British government only £300m ($457m), a negligible proportion of GDP. Few businesses incorporate RCTs as extensively as Capital One. Much more could be done. Hospitals could subject doctors to RCTs; identify the mistake-prone and then help them. Civil servants could randomly test the economic impact of policies, such as changes to income tax, before rolling them out. It sounds extreme, but confronting failure rationally would bring huge rewards. ■

Entrepreneurs in emerging nations

Tough nuts

From the Other Side of the World: Extraordinary Entrepreneurs, Unlikely Places. By Elmira Bayrasli. *PublicAffairs; 320 pages; $25.99*

BOOKS about business in emerging countries often fall into two traps. Either they are hagiographies about the wrong people, celebrating well-connected tycoons from business dynasties as gutsy pioneers. Or they airbrush the grimy, exhausting business of running firms in places with bad infrastructure, graft and weak legal systems. Novelists have done a better job than business writers at capturing reality. A thousand MBA texts could happily be incinerated if they were replaced with Aravind Adiga's "The White Tiger" or Mohsin Hamid's "How to Get Filthy Rich in Rising Asia".

Elmira Bayrasli's new book, "From the Other Side of the World", avoids both pitfalls. She opens with a refreshing set of riffs that lay out her view that companies, not governments, create jobs and that the barriers facing start-ups in poor countries can be huge. At the heart of the book are profiles of bosses in seven different countries. Ms Bayrasli has an eye for arresting scenes. In conservative Pakistan she meets a businessman running a dating website. In Mexico her subject tries to revive Acapulco, where drug-dealers thrive in darkness because 18,000 of the city's 45,000 streetlights do not work. Her book reveals common characteristics. Entrepreneurs in far-flung places often have an American education. And they are able to tap into a burgeoning global network of venture-capital investors focused on the emerging world.

The book has two flaws. First, having set out her stall in red-blooded capitalist fashion at the beginning, Ms Bayrasli loses her nerve. China's entrepreneurs are criticised for their focus on making money. She hopes that successful firms in emerging economies can act as a bulwark against autocracy and corruption, when they often happily accommodate both. Second, her analytical framework is not as impressive as her reporting. The book lacks any measure of the scale of startup activity across the emerging world, and the lessons for managers can sound trite. As a result it does not answer the question it raises: can entrepreneurs help societies get rich even if their governments are hopeless and their economies volatile? Given that at least three of the seven countries featured are now facing currency crises, that is a shame.

Courses

Announcements

Appointments

INSTITUTE OF INTERNATIONAL MONETARY RESEARCH

THE UNIVERSITY OF BUCKINGHAM

DIRECTOR of
INSTITUTE OF INTERNATIONAL MONETARY RESEARCH

The Institute of International Monetary Research (IIMR) has been established in association with the University of Buckingham (www.buckingham.ac.uk). The Institute is to be a world leader in analysing developments in money and banking, and their impact on major economies. The founder and first Director is Professor Tim Congdon CBE. Professor Congdon, who has been part-time and unpaid, wants to stand down to concentrate on writing and research. The trustees wish to appoint a full-time Director.

The employer will be the Institute, based on premises on the university campus. The newly-appointed Director is likely to be involved in post-graduate teaching. He or she will promote path-breaking research on the relationships between banking, credit and money, and then between money and macroeconomic outcomes, so that such calamities as the Great Recession never happen again.

The ideal candidate will have strong academic qualifications, and a record of achievement in teamwork and/or administration. Salary will be based on the professorial scale in UK universities, but may be higher.

Enquiries may be made to Ms. Gail Grimston, PA to the Director of the IIMR, on 01280 827524, e-mail: gail.grimston@buckingham.ac.uk. Applications in the form of a covering letter and CV should be addressed to Professor Tim Congdon and e-mailed to: gail.grimston@buckingham.ac.uk

The closing date for applications is 30th October, 2015, with a view to probably taking up the position in early 2016.

The Economist

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RBA

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AFR

EXPRESSION OF INTEREST
PROJECT MANAGEMENT OFFICE FOR RWANDA BANKING SKILLS DEVELOPMENT

The Rwanda Bankers Association (RBA), Financial Sector Deepening Africa (FSDA), and Access to Finance Rwanda (AFR) wish to identify and contract a consultant or consultancy firm to perform the role of Project Manager for establishment of the Rwanda banking and financial sector skills development programme.

RBA seeks to promote professional standards through education and professional courses among its members. It organises and coordinates activities aimed at promoting the development of new products within the banking sector and support the exchange of data/information. It also lobbies the Government of Rwanda and its relevant ministries on policies and laws that affect the banking sector.

FSDA, a financial sector deepening trust. FSDA aims to support financial sector development across sub-Saharan Africa (SSA), including in non-FSD countries, by encouraging skills development and the transfer of knowledge (e.g. research, business models, policy approaches etc.) across borders, and by building the capacity of financial systems in other ways. FSDA's initial funding is from the UK's Department for International Development ("DFID"). Besides FSDA, there are currently eight FSDs operating in Africa (in Nigeria, Kenya, Tanzania, Rwanda, Southern Africa (FinMark Trust), Zambia, Mozambique and Uganda).

AFR was established by the UK Government, the Ministry of Finance and Economic Planning and the National Bank of Rwanda. It is funded by DFID, the World Bank and KfW. AFR seeks to increase financial inclusion in Rwanda by building institutional capacity within the financial sector and by promoting access to financial services. Its overall goal is to develop sustainable improvements in the livelihoods of poor people through reduced vulnerability to shocks, increased incomes and employment creation.

The scope will include:

- Set up the PMO and ensure that it is appropriately resourced
- Initiate the procurement process for an international professional banking skills examining and certification partner who will support the development of an entry-level conversion qualification curriculum and accreditation benchmarks
- Coordinate the design and development of entry-level conversion curriculum for banking skills training
- Develop a business plan, including a budget and roadmap for the project
- Develop policies and procedure manuals for activities that will be undertaken
- Develop the programme's intervention logic and logical framework; monitor progress against milestone indicators and deliver agreed periodic reports
- Develop, in consultation with the project steering committee, the Rwanda Institute of Financial Services; define its mandate, develop the legal framework and initiate the process for its establishment and operationalization.

EOI should contain:

- Names and CVs (maximum 3 sides of A4 paper each) of lead consultant (s) including qualifications and relevant experience in providing the kind of services required and an outline of team structure
- A short statement of why you believe your firm the right experience and blend of expertise for this assignment
- A short description of anticipated risks and how you would expect to deal with these
- Confirmation of your/your firm's availability to carry out this work, giving details of any prior commitments on your time
- Any information that you believe should be taken into account in the shortlisting process

Please note- a detailed financial proposal and/or detailed work plan are not required at this stage.

Your EOI should not exceed 3 sides of A4 (font size 11), excluding CVs, company brochures etc. EOIs should be sent to **info@fsdafrica.org** under a subject line reading **"Project Management Office for Rwanda"**. Detailed EOI can be obtained from FSD Africa's website **www.fsdafrica.org (call tab)**

Expression of interest must be received by FSD Africa no later than 1200 (EAT)
Monday 9 November, 2015

classified@quantum-productions.co.uk

REPUBLIC OF RWANDA

REQUEST FOR EXPRESSION OF INTEREST

RWANDA LAW REFORM COMMISSION

Name of Project: Law Revision | Tender Reference No: 11/RLRC/OB/2015-2016
Type of tender: International | Source of funds: Government of Rwanda

Rwanda Law Reform Commission (RLRC) is seeking Expressions of Interest from qualified and experienced companies/firms for the implementation of a Law Revision Project with funding of the Government of Rwanda.

Description of services

The goal of this Law Revision Project, which is the first of its kind in Rwanda, is the production of a consolidated edition of the nation's laws in their most up-to-date and accurate form. The services involved in this process are but not limited to the following:

1. Incorporation of all cumulative amendments to each law into a single consolidated text
2. An editorial process to specifically address issues like;
   - eradicating small drafting, typographical or printing errors;
   - reconciling legislative inconsistencies, including between the text of the same law in each of the three official languages (Kinyarwanda, English & French);
   - simplifying and modernising the phraseology of the laws;
   - pruning away obsolete laws and provisions; and
   - generally improving the arrangement and layout of the laws.
3. Translation of any laws that are not currently available in all three official languages.

The following are the expected outputs/deliverables:

- Database of consolidated and revised laws
- Printed editions of the revised laws
- Online research portals

Requirements from interested companies/firms

- Full name and nationality (country of registration) of the company/firm and contact person, postal address, telephone and email address
- Evidence of previous experience and expertise in providing the required services which should include; name of Project, Client (with address), scope of work, contract value, contract period
- Details of core staff for the assignment
- Detailed Methodology and time period for accomplishment of the assignment.

Only shortlisted companies/firms will be invited to submit proposals. Participants should be able to certify that they have not been blacklisted nor defaulted on contractual obligations.

Well printed bids properly sealed in an envelope and presented in 4 copies, one of which is the original, must be delivered by hand or mail to the address mentioned below no later than November 02, 2015 at 10:00 am (local time). Opening of bids will take place on the same day at 10.30 am (local time) in the RLRC boardroom. Late bids will be rejected.

The Secretary General,
Tel: +250789000480
Email: judith.mbabazi@rlrc.gov.rw

Boulevard de l'Umuganda
Gasabo District, Kimihurura
P.O Box 4894, KIGALI-RWANDA

Economic data

% change on year ago

	Gross domestic product latest	Gross domestic product qtr*	Gross domestic product 2015†	Industrial production latest	Consumer prices latest	Consumer prices 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 $ Oct 7th	Currency units, per $ year ago
United States	+2.7 Q2	+3.9	+2.5	+0.9 Aug	+0.2 Aug	+0.3	5.1 Sep	-429.0 Q2	-2.5	-2.6	2.04	-	-
China	+7.0 Q2	+7.0	+6.8	+6.1 Aug	+2.0 Aug	+1.6	4.0 Q2§	+287.8 Q2	+3.1	-2.7	3.09§§	6.36	6.14
Japan	+0.8 Q2	-1.2	+0.7	+0.2 Aug	+0.2 Aug	+0.7	3.4 Aug	+118.8 Aug	+2.8	-6.8	0.33	120	108
Britain	+2.4 Q2	+2.6	+2.5	+1.9 Aug	nil Aug	+0.1	5.5 Jun††	-149.2 Q2	-4.8	-4.4	1.82	0.65	0.62
Canada	+1.0 Q2	-0.5	+1.1	-1.1 Jul	+1.3 Aug	+1.2	7.0 Aug	-48.5 Q2	-3.0	-1.8	1.46	1.30	1.12
Euro area	+1.5 Q2	+1.4	+1.5	+1.9 Jul	-0.1 Sep	+0.1	11.0 Aug	+316.9 Jul	+2.8	-2.1	0.60	0.89	0.79
Austria	+0.5 Q2	-2.6	+0.7	+1.3 Jul	+1.0 Aug	+1.0	5.7 Aug	+10.7 Q2	+1.2	-2.1	0.89	0.89	0.79
Belgium	+1.3 Q2	+1.7	+1.3	+0.7 Jul	+1.1 Sep	+0.5	8.8 Aug	-5.8 Jun	+1.9	-2.6	0.97	0.89	0.79
France	+1.1 Q2	nil	+1.1	-0.8 Jul	nil Aug	+0.2	10.8 Aug	-6.0 Jul‡	-0.5	-4.1	0.98	0.89	0.79
Germany	+1.6 Q2	+1.8	+1.6	+2.5 Aug	nil Sep	+0.2	6.4 Sep	+280.5 Jul	+7.7	+0.7	0.60	0.89	0.79
Greece	+1.7 Q2	+3.7	+0.5	-1.3 Jul	-1.5 Aug	-1.1	25.2 Jun	-1.3 Jul	+2.5	-4.1	7.77	0.89	0.79
Italy	+0.7 Q2	+1.3	+0.7	+2.7 Jul	+0.3 Sep	+0.2	11.9 Aug	+38.5 Jul	+2.0	-2.9	1.70	0.89	0.79
Netherlands	+1.8 Q2	+0.8	+2.0	+0.6 Jul	+0.8 Aug	+0.4	8.5 Aug	+85.3 Q2	+10.3	-1.8	0.79	0.89	0.79
Spain	+3.1 Q2	+4.1	+3.2	+5.1 Aug	-0.9 Sep	-0.4	22.2 Aug	+19.6 Jul	+0.5	-4.4	1.83	0.89	0.79
Czech Republic	+4.6 Q2	+4.4	+3.4	+6.3 Aug	+0.3 Aug	+0.3	6.2 Aug§	+2.4 Q2	-0.1	-1.8	0.65	24.1	21.7
Denmark	+2.0 Q2	+0.6	+1.5	+2.4 Aug	+0.5 Aug	+0.6	4.5 Aug	+21.1 Jul	+5.4	-2.9	0.89	6.64	5.89
Norway	+2.2 Q2	-0.4	+0.7	+5.2 Aug	+2.0 Aug	+1.7	4.3 Jul‡‡	+37.8 Q2	+9.3	+5.9	1.49	8.21	6.48
Poland	+3.6 Q2	+3.6	+3.4	+5.3 Aug	-0.8 Sep	nil	10.0 Aug§	-3.0 Jul	-1.4	-1.5	2.67	3.77	3.31
Russia	-4.6 Q2	na	-3.8	-4.2 Aug	+15.7 Sep	+15.2	5.3 Aug§	+65.0 Q2	+4.9	-2.8	10.43	62.5	40.0
Sweden	+3.3 Q2	+4.6	+2.9	+3.8 Aug	-0.2 Aug	+0.1	6.4 Aug§	+35.1 Q2	+6.6	-1.2	0.69	8.25	7.20
Switzerland	+1.2 Q2	+1.0	+0.9	-2.5 Q2	-1.4 Sep	-1.1	3.3 Aug	+60.9 Q2	+7.8	+0.2	-0.17	0.97	0.96
Turkey	+3.8 Q2	na	+2.9	+1.5 Jul	+7.9 Sep	+7.5	9.6 Jun§	-45.0 Jul	-4.9	-1.6	10.47	2.92	2.27
Australia	+2.0 Q2	+0.7	+2.3	+1.2 Q2	+1.5 Q2	+1.7	6.2 Aug	-47.4 Q2	-3.7	-2.4	2.63	0.72	0.88
Hong Kong	+2.8 Q2	+1.6	+2.4	-1.3 Q2	+2.5 Aug	+3.1	3.3 Aug‡‡	+7.4 Q2	+2.8	nil	1.65	7.75	7.75
India	+7.0 Q2	+6.6	+7.4	+4.2 Jul	+3.7 Aug	+5.1	4.9 2013	-25.9 Q2	-1.1	-3.8	7.54	65.0	61.5
Indonesia	+4.7 Q2	na	+4.8	+5.7 Jul	+6.8 Sep	+6.4	5.8 Q1§	-21.6 Q2	-2.5	-2.0	8.54	13,825	12,203
Malaysia	+4.9 Q2	na	+5.4	+6.1 Jul	+3.1 Aug	+2.5	3.2 Jul§	+8.8 Q2	+2.5	-4.0	4.15	4.22	3.26
Pakistan	+5.5 2015**	na	+5.7	+4.7 Jul	+1.3 Sep	+3.9	6.0 2014	-2.6 Q2	-0.7	-5.1	9.10†††	104	102
Philippines	+5.6 Q2	+7.4	+6.4	-0.5 Jul	+0.4 Sep	+2.4	6.5 Q3§	+11.7 Jun	+4.1	-1.9	3.73	46.1	44.6
Singapore	+1.8 Q2	-4.0	+2.9	-7.1 Aug	-0.8 Aug	+0.2	2.0 Q2	+69.5 Q2	+21.2	-0.7	2.50	1.41	1.28
South Korea	+2.2 Q2	+1.3	+2.4	+0.3 Aug	+0.6 Sep	+0.8	3.4 Aug§	+104.8 Aug	+6.7	+0.3	2.09	1,162	1,066
Taiwan	+0.5 Q2	-6.6	+3.2	-5.5 Aug	+0.3 Sep	+0.1	3.7 Aug	+72.8 Q2	+12.8	-1.0	1.19	32.6	30.4
Thailand	+2.8 Q2	+1.5	+3.4	-8.3 Aug	-1.1 Sep	+0.8	1.0 Aug§	+24.4 Q2	+2.4	-2.0	2.68	35.9	32.6
Argentina	+2.3 Q2	+2.0	+0.5	+0.5 Aug	— ***	—	6.6 Q2§	-8.3 Q2	-1.7	-3.6	na	9.45	8.48
Brazil	-2.6 Q2	-7.2	-2.7	-8.9 Aug	+9.5 Sep	+8.9	7.6 Aug§	-84.5 Aug	-4.2	-6.0	15.57	3.79	2.40
Chile	+1.9 Q2	nil	+2.8	-5.1 Aug	+5.0 Aug	+3.9	6.5 Aug§‡‡	-0.3 Q2	-1.2	-2.2	4.48	679	597
Colombia	+3.0 Q2	+2.4	+3.3	+0.3 Jul	+5.4 Sep	+4.2	9.1 Aug§	-20.8 Q2	-6.7	-2.1	7.74	2,894	2,025
Mexico	+2.2 Q2	+2.0	+2.4	+0.7 Jul	+2.6 Aug	+2.9	4.3 Aug	-25.3 Q2	-2.3	-3.4	5.90	16.6	13.4
Venezuela	-2.3 Q3	+10.0	-4.5	na	+68.5 Dec	+84.1	6.6 May§	+10.3 Q3	-1.8	-16.5	10.48	6.30	6.35
Egypt	+4.3 Q4	na	+4.2	+6.0 Jul	+7.9 Aug	+10.0	12.7 Q2§	-12.2 Q2	-1.4	-11.0	na	7.83	7.15
Israel	+1.8 Q2	+0.1	+3.3	+1.1 Jul	-0.4 Aug	-0.2	5.3 Aug	+10.2 Q2	+4.9	-2.8	2.15	3.85	3.71
Saudi Arabia	+3.5 2014	na	+2.7	na	+2.1 Aug	+2.7	5.7 2014	+39.7 Q1	-2.7	-12.7	na	3.75	3.75
South Africa	+1.2 Q2	-1.3	+1.5	+5.6 Jul	+4.6 Aug	+4.8	25.0 Q2§	-15.6 Q2	-4.7	-3.8	8.19	13.4	11.2

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, August 27.01%; year ago 38.49% †††Dollar-denominated bonds.

Markets

	Index Oct 7th	% change on one week	% change on Dec 31st 2014 in local currency	% change on Dec 31st 2014 in $ terms
United States (DJIA)	16,912.3	+3.9	-5.1	-5.1
China (SSEA)	3,197.4	nil	-5.7	-7.9
Japan (Nikkei 225)	18,323.0	+5.4	+5.0	+4.9
Britain (FTSE 100)	6,336.4	+4.5	-3.5	-5.2
Canada (S&P TSX)	13,868.4	+4.2	-5.2	-15.7
Euro area (FTSE Euro 100)	1,077.8	+4.1	+3.9	-3.5
Euro area (EURO STOXX 50)	3,226.4	+4.1	+2.5	-4.8
Austria (ATX)	2,350.1	+5.4	+8.8	+1.0
Belgium (Bel 20)	3,440.0	+2.9	+4.7	-2.8
France (CAC 40)	4,667.3	+4.8	+9.2	+1.4
Germany (DAX)*	9,970.4	+3.2	+1.7	-5.6
Greece (Athex Comp)	680.1	+4.0	-17.7	-23.6
Italy (FTSE/MIB)	22,007.3	+3.3	+15.8	+7.5
Netherlands (AEX)	440.6	+4.6	+3.8	-3.6
Spain (Madrid SE)	1,026.9	+6.3	-1.5	-8.5
Czech Republic (PX)	977.4	+0.7	+3.2	-2.0
Denmark (OMXCB)	842.6	+2.1	+24.8	+15.6
Hungary (BUX)	21,371.1	+2.3	+28.5	+20.9
Norway (OSEAX)	670.8	+7.7	+8.2	-1.2
Poland (WIG)	50,961.9	+2.3	-0.9	-6.6
Russia (RTS, $ terms)	844.1	+6.9	+11.2	+6.8
Sweden (OMXS30)	1,452.0	+2.5	-0.9	-5.9
Switzerland (SMI)	8,639.0	+1.5	-3.8	-1.6
Turkey (BIST)	78,698.1	+6.1	-8.2	-26.6
Australia (All Ord.)	5,228.4	+3.4	-3.0	-14.9
Hong Kong (Hang Seng)	22,515.8	+8.0	-4.6	-4.6
India (BSE)	27,035.9	+3.4	-1.7	-4.5
Indonesia (JSX)	4,487.1	+6.2	-14.2	-23.1
Malaysia (KLSE)	1,689.3	+4.2	-4.1	-20.5
Pakistan (KSE)	33,376.2	+3.4	+3.9	nil
Singapore (STI)	2,961.8	+6.1	-12.0	-17.3
South Korea (KOSPI)	2,005.8	+2.2	+4.7	-0.9
Taiwan (TWI)	8,495.2	+3.8	-8.7	-11.5
Thailand (SET)	1,393.7	+3.3	-6.9	-14.8
Argentina (MERV)	10,919.4	+11.3	+27.3	+14.0
Brazil (BVSP)	48,914.3	+8.6	-2.2	-31.4
Chile (IGPA)	18,548.1	+2.7	-1.7	-12.1
Colombia (IGBC)	9,721.3	+4.7	-16.4	-31.4
Mexico (IPC)	43,832.0	+2.8	+1.6	-9.5
Venezuela (IBC)	11,726.5	-1.2	+204	na
Egypt (Case 30)	7,354.6	+0.3	-17.6	-24.8
Israel (TA-100)	1,337.1	+2.8	+3.7	+5.0
Saudi Arabia (Tadawul)	7,602.7	+2.7	-8.8	-8.7
South Africa (JSE AS)	52,565.4	+4.9	+5.6	-8.6

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

	Real GDP, % change Low/high range 2015	Real GDP, % change Low/high range 2016	Real GDP, % change average 2015	Real GDP, % change average 2016	Consumer prices % change 2015	Consumer prices % change 2016	Current account % of GDP 2015	Current account % of GDP 2016
Australia	1.9/2.5	2.0/3.0	2.3 (2.4)	2.6 (2.7)	1.7	2.5	-3.7 (-3.2)	-3.4 (-3.0)
Brazil	-3.2/-2.4	-2.0/0.2	-2.7 (-1.9)	-0.9 (0.2)	8.9 (8.6)	6.4 (6.1)	-4.2 (-4.1)	-3.4 (-3.8)
Britain	2.3/2.7	1.7/3.0	2.5	2.3 (2.4)	0.1 (0.2)	1.4 (1.5)	-4.8	-4.1 (-4.0)
Canada	0.9/1.6	1.2/2.3	1.1 (1.4)	1.9 (2.0)	1.2 (1.1)	1.9 (2.0)	-3.0 (-2.9)	-2.5 (-2.4)
China	6.6/7.1	6.0/7.2	6.8 (6.9)	6.5 (6.7)	1.6 (1.5)	2.0	3.1 (3.0)	3.0 (2.7)
France	0.9/1.2	0.9/1.8	1.1	1.4 (1.5)	0.2	1.0 (1.1)	-0.5 (-0.7)	-0.4 (-0.6)
Germany	1.5/1.8	1.4/2.7	1.6 (1.7)	1.8 (2.0)	0.2 (0.4)	1.4 (1.6)	7.7 (7.6)	7.3 (7.2)
India	6.2/7.8	5.9/8.4	7.4 (7.5)	7.7 (7.8)	5.1 (5.3)	5.3 (5.5)	-1.1 (-1.2)	-1.2 (-1.5)
Italy	0.5/0.9	0.9/1.6	0.7 (0.6)	1.2	0.2	1.0	2.0	1.9 (2.0)
Japan	0.4/1.0	0.6/1.7	0.7 (0.8)	1.2 (1.5)	0.7	0.9 (1.0)	2.8 (2.7)	2.8 (2.6)
Russia	-4.7/-3.3	-2.0/1.0	-3.8 (-3.6)	-0.3 (0.3)	15.2 (14.8)	7.3 (6.7)	4.9	4.8 (4.4)
Spain	3.0/3.3	2.0/3.2	3.2 (3.0)	2.6	-0.4 (-0.3)	0.8 (1.0)	0.5 (0.8)	0.4 (0.9)
United States	2.2/2.6	1.9/3.1	2.5 (2.4)	2.6	0.3 (0.4)	1.8 (2.0)	-2.5 (-2.6)	-2.5 (-2.6)
Euro area	1.2/1.6	1.3/2.1	1.5 (1.4)	1.7	0.1 (0.2)	1.1 (1.2)	2.8 (2.6)	2.6 (2.4)

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

Other markets

	Index Oct 7th	% change on one week	% change on Dec 31st 2014 in local currency	% change on Dec 31st 2014 in $ terms
United States (S&P 500)	1,995.8	+3.9	-3.1	-3.1
United States (NAScomp)	4,791.2	+3.7	+1.2	+1.2
China (SSEB, $ terms)	309.7	nil	+9.1	+6.5
Japan (Topix)	1,493.2	+5.8	+6.1	+6.0
Europe (FTSEurofirst 300)	1,423.8	+3.9	+4.0	-3.4
World, dev'd (MSCI)	1,641.0	+3.7	-4.0	-4.0
Emerging markets (MSCI)	828.7	+4.6	-13.3	-13.3
World, all (MSCI)	396.2	+3.8	-5.0	-5.0
World bonds (Citigroup)	885.0	+0.5	-1.9	-1.9
EMBI+ (JPMorgan)	708.0	+2.3	+2.3	+2.3
Hedge funds (HFRX)	1,188.4§	+0.8	-2.5	-2.5
Volatility, US (VIX)	19.1	+24.5	+19.2	(levels)
CDSs, Eur (iTRAXX)†	83.2	-9.3	+45.7	+35.3
CDSs, N Am (CDX)†	83.8	-10.2	+41.1	+41.1
Carbon trading (EU ETS) €	8.2	+3.0	+12.5	+4.4

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

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The Economist commodity-price index

2005=100

	Sep 29th	Oct 6th*	% change on one month	% change on one year
Dollar Index				
All Items	129.6	131.4	+0.9	-15.1
Food	150.6	152.7	+2.8	-10.5
Industrials				
All	107.7	109.4	-1.7	-21.0
Nfa†	107.9	109.8	nil	-14.9
Metals	107.7	109.2	-2.4	-23.4
Sterling Index				
All items	155.7	157.2	+1.9	-10.3
Euro Index				
All items	143.6	145.1	+0.2	-4.8
Gold				
$ per oz	1,131.8	1,149.8	+2.4	-5.0
West Texas Intermediate				
$ per barrel	45.2	48.6	+6.3	-45.2

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.

A fighting life

Lord Healey, a giant of the Labour Party, died on October 3rd, aged 98

WHEREVER he went, Denis Healey took photographs. From a Brownie box camera, which ignited the boyhood passion, he soared up to an Olympus, snapping all the way. More than 42,000 photographs and slides eventually filled his house in Sussex. At summits, banquets and college dinners what other guests saw of him was mostly a toothy grin beneath a large flashing lens, and over it those extraordinary eyebrows, God's gift to cartoonists, twitching up and down.

A photographer places himself at a certain distance from events; so did he. Though caught up for 40 years in the whirl of British politics, and especially Labour's sempiternal internecine struggles, he attracted no clique or claque around him, and did not try to. He said he went to the Members' Tea Room in the House of Commons, the Labour Party's den of plots, only when he actually wanted a cup of tea. Though heartily gregarious, he was politically a loner who beat his own path.

He often did so bruisingly. At east London by-elections in the 1960s he twice floored fascist hecklers with his fists. Colleagues were summed up unsparingly. Roy Jenkins had "the sleek pomposity of Mr Podsnap"; to be attacked by Geoffrey Howe was like "being savaged by a dead sheep"; Margaret Thatcher was "Rhoda the Rhino", and her love for Milton Friedman's economic policies "sado-monetarism". Vast reading and a double first in Mods and Greats (classics and philosophy) from Oxford gave him an inexhaustible supply of allegory and metaphor on which to draw.

In 1976 he came very close to being prime minister, but was beaten by Jim Callaghan. In 1980 he almost became leader of the Labour Party, only to be bested by Michael Foot. He would not have minded being prime minister; but his dream job was foreign secretary, where he could do most to prevent another war like the one he had coolly fought in. He had credentials: as a student he had cycled through Nazi Germany, and from 1946 he was Labour's international secretary, helping to rebuild Europe's battered socialist parties. Yet he was never foreign secretary either. In 1979 he was given the shadow job, sheer frustration. It was, as Coleridge wrote, "unmeaning as moonlight on the dial of the day."

The two posts he held in government were secretary of defence and chancellor of the exchequer. He loved the first, all globe-trotting and congenial top brass, even though he had to withdraw from east of Suez and chop £400m out of the arms budget. The chancellorship was something else. Knowing nothing of "absurd" economics, he had to sort out a country with soaring inflation, a massive balance-of-payments deficit and no growth; in 1976 the markets began to abandon sterling, which had to be rescued with a loan of £1.9 billion from the IMF. Freedom from its grip ("Sod off Day", he called it) took a year to achieve, and only at the cost of enraging the unions with curbs on wage rises. Their resentment roiled Labour for a decade.

A knight against pomposity

His relations with the hard left had never been sweet. He detested those "Toytown Trots", and as early as 1959 had warned the Labour Party not to "teach Socialist Sunday school" but to engage with the problems of the average worker—like the man in his constituency of Leeds South East, who brought him a jar of slugs to demonstrate how damp his kitchen was. (Such episodes easily moved him to tears.) In the shadow cabinet he strenuously opposed nationalisation for the sake of it, or knee-jerk opposition to NATO and the Americans. He did not mind milking the rich, gleefully anticipating the "howls of anguish"—but only in order to make their taxes proportionate to those on the poor. In 1981, "by an eyebrow", he defeated the left-wing Tony Benn for the deputy leadership of the party. He thereby saved it to govern another day—only to live long enough to see it fall again to leftist Sirens in 2015.

Immersed in all this, he was also detached from it. Relishing politics, he did not take it too seriously. He happily appeared with TV comedians, plunked on pianos at election time and was made a Knight of the Order Against Pomposity. And he had a hinterland, as he put it. Family—three children and Edna, his staunchly supportive wife—was his first delight. After that came poetry, painting, music and his camera. He slipped away from an IMF meeting in Washington to hear a Ravel opera, played truant from a summit at Rambouillet to catch the scenery, and even nipped off to the Edinburgh Festival as sterling crashed.

For him, art of all kinds came closest to explaining the human predicament. He learned more from a novel by Virginia Woolf, or a poem by Yeats, than from any political treatise. As one who wrestled inconclusively with the biggest issues of the day—whether nuclear weapons really deterred, whether the EU and its antecedents were really good for Britain—he loved, too, the way that a painting by Cotman or a sonata by Beethoven could make many disparate elements into one architecture of beauty. If only politics could do the same.

He was asked in old age what advice he would give to students of politics. His answer was one word: "Live." Eat, drink, fight, love, work, travel—and take photographs. For as he ended his autobiography, in Blake's words, "He who kisses the joy as it flies/ Lives in eternity's sunrise." ■

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Why SAP Uses Oracle?

Oracle Database	SAP HANA
In-memory acceleration runs by pushing a button	*In-memory acceleration by rewriting application*

Oracle Runs SAP Apps 2x Faster than HANA

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