The Economist

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Farewell to John McCain

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The world this week

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Politics this week

Aug 30th 2018

A report by the UN Human Rights Council concluded that six senior generals in **Myanmar** should be prosecuted for genocide for leading a pogrom against Rohingya Muslims. The army has tried to deflect condemnation of its actions, but the UN said the crimes were shocking for the "level of denial, normalcy and impunity attached to them". It also criticised Aung San Suu Kyi, Myanmar's de facto leader, for failing to prevent the atrocities. See article.

Scott Morrison became **Australia's** new prime minister, after Malcolm Turnbull was ousted by MPs in his Liberal Party. It is the fifth change of prime minister in a decade. There might be a sixth if a by-election for Mr Turnbull's parliamentary seat in Sydney wipes out the government's one-seat majority. See article.

A visit to **North Korea** by Mike Pompeo, America's secretary of state, was called off. Mr Pompeo was to meet negotiators in Pyongyang, but President Donald Trump said the talks on nuclear disarmament were not advancing, for which he blamed China. North Korea warned that if the talks collapse it will resume tests of missiles and nuclear devices.

The unwelcome mat

Italy allowed almost 140 rescued migrants off a coastguard ship after refusing them entry for nearly a week. But the interior minister warned that Italy will withhold EU budget payments unless a system for sharing out arrivals among other EU countries is found. He also said Italy may breach euro-zone deficit limits in its next budget, due to be published soon. See article.

Far-right protesters battled with police in the **German** city of Chemnitz, in Saxony. They were demonstrating following the fatal stabbing of a German man, reportedly by Middle Eastern migrants. Some of the protesters beat migrants and gave illegal Nazi salutes.

Emmanuel Macron, the **French** president, suffered a blow when his environment minister resigned during a live broadcast, criticising his government for not doing enough to combat global warming.

Alex Salmond, a former first minister of Scotland and a leading figure in the movement for Scottish independence, resigned from the Scottish National Party amid claims of sexual misconduct. He said he hoped to rejoin once he had cleared his name.

In search of friends

Theresa May visited three **African countries,** in the first trip by a British prime minister to the continent for five years. Mrs May is trying to strengthen trade, security and diplomatic ties with the region and to avoid losing influence to powers such as France and China, which have also been stepping up their engagement. See article.

Emmerson Mnangagwa was sworn in as president of **Zimbabwe** after the Constitutional Court rejected a call by the opposition to throw out the results of a flawed presidential election that had been held in July. The court ruled that the opposition had failed to prove its allegation that the vote was rigged.

A judicial commission started hearing evidence of corruption in **South Africa** during the presidency of Jacob Zuma. Testimony at the commission into "state capture" has revealed details of how friends of Mr Zuma allegedly offered positions in his cabinet, including that of minister of finance.

Iran's parliament voted to censure President Hassan Rouhani after grilling him on television over the country's economic problems. Two days earlier parliament sacked the finance minister. Iran is suffering from a collapsing currency and surging inflation, in part the result of America reimposing sanctions after pulling out of an agreement to limit Iran's nuclear programme earlier this year.

The UN released a report accusing the governments of **Yemen**, the **United Arab Emirates** and **Saudi Arabia** of committing war crimes—including rape and torture—during Yemen's four-year civil war. The report said the Houthi rebels, who are fighting the government and its backers, are to blame for many of the same crimes.

All for naught

A referendum to control corruption in **Colombia** failed to pass because turnout, at less than a third of the electorate, was too low. All seven measures received the support of over 99% of voters who participated in the referendum. They included a three-term limit for legislators and a requirement that elected officials publish their tax returns.

America said it would re-evaluate its relationship with **El Salvado**r after the Central American country broke diplomatic ties with Taiwan and established them with China. The White House said that El Salvador's decision would affect "the economic health and security of the entire Americas region". America also recognises China and does not have formal diplomatic relations with Taiwan.

Chile's supreme court ordered the family of Augusto Pinochet, a dictator who ruled from 1973 to 1990, to return part of the money he had stashed in the Virgin Islands. The family must give up $1.6m of a fortune worth $13m.

The new power generation

In **Florida** the party primaries for governor resulted in an interesting matchup for the election. The Republicans chose Ron DeSantis, whose campaign took off when he was endorsed by Mr Trump. The Democrats selected Andrew Gillum, an unabashed progressive who will become the state's first black governor if he wins in November. See article.

A federal court ruled, once again, that **North Carolina's** congressional districts have been gerrymandered along partisan lines to favour Republicans. The Supreme Court had sent the case back to the lower courts for consideration. See article.

Puerto Rico officially raised the death toll from last September's Hurricane Maria to 2,975. That is up from the previous tally of 64, a figure that had always been disputed. The new toll is based on an independent study. See article.

Tributes were paid to **John McCain**, who died from brain cancer aged 81. Mr McCain had represented Arizona in the Senate since 1987. He was probably the most outspoken Republican critic of Mr Trump. The White House got into a flap when its flag was raised to full-staff less than two days after Mr McCain's death. It was lowered again to half-staff, where it will stay until his funeral, which Mr Trump will not attend. See article.

Business this week

Aug 30th 2018

The United States and Mexico reached a deal on revising the **North American Free Trade Agreement**. Mexico made several concessions, notably on car manufacturing, which America had demanded in order to boost its own automotive industry. President Donald Trump suggested that Canada, the other partner in NAFTA, had little choice but to accept the revised accord and said that he might impose new tariffs on its car industry if it did not. Some Republicans chafed at that; a trilateral NAFTA would get a smoother ride in Congress than a bilateral deal with Mexico. See article.

The S&P 500 and NASDAQ **stockmarket** indices reached record highs, with the latter closing above the 8,000 mark for the first time. They were buoyed in part by a measure of American consumer confidence that registered its strongest reading since October 2000. New data showed that the American economy grew at a slightly faster annualised rate in the second quarter than had been thought: 4.2%.

President Mauricio Macri of **Argentina** unexpectedly asked the International

Monetary Fund to speed up the disbursement of a loan worth $50bn. He wants to ensure the country can meet its debt obligations in spite of a growing economic crisis. The Argentine peso has lost more than 40% of its value against the American dollar this year and inflation is rising. See article.

Making your mind up

Elon Musk reversed course and said that **Tesla** would remain a public company after all. The chief executive of the electric-carmaker stunned investors when he announced in a tweet that he intended to take Tesla private and had “secured” funding. He has since scrambled to explain his plans, amid reports that regulators were investigating whether he had followed the proper rules for disclosing them. Explaining his U-turn, Mr Musk said that going private would be more “time-consuming” than he had originally envisaged.

Toyota said it would invest $500m in **Uber** to work on developing autonomous cars. The Japanese carmaker has been more cautious than its global rivals in committing to self-driving technology. Its investment is a boost to Uber’s self-driving project, which suffered a setback after a fatal collision involving a pedestrian and one of its cars in March.

China’s biggest ride-hailing firm, **Didi Chuxing**, came under fire after a second murder of a female passenger by one of its drivers within four months. Didi suspended its carpooling service, for which the driver in question worked, but that did not stop the calls on Chinese social media for a boycott of the firm.

A meaty issue

Missouri became the first state in America to outlaw the description of food products as **“meat”** unless they are made from animal flesh. The law is being challenged by producers of lab-grown and plant-based meat alternatives, industries that have grand plans to take on conventional-meat firms.

Wonga, the biggest provider of payday loans in Britain, said it was considering “all options” amid reports it is close to collapse. The firm opened shop in 2007, charging interest rates that some said were excessive. But a regulatory crackdown that began in 2014 has crimped profits severely.

Wonga has also taken a hit from compensating borrowers for its debt-collection practices. See article.

Yum China, which was spun off from Yum Brands in 2016 and operates the KFC, Pizza Hut and Taco Bell fast-food chains in China, reportedly rejected a $17bn buy-out offer from a consortium of private investment firms. Yum China is the country's biggest restaurant company.

The **Turkish lira** came under renewed pressure after Moody's downgraded 18 Turkish banks, which are heavily reliant on foreign-currency funding. The central bank did little to soothe jittery markets when it reintroduced a cap on overnight lending for banks, a source of liquidity. See article.

After enduring its worst-ever spell of industrial action, **Ryanair** said that pilots in Italy, its second-biggest market, had accepted the terms of a new collective labour agreement. It has recently reached a deal with the union representing Irish pilots and has offered fresh negotiations to its British, German and Spanish pilots.

The Bond market

Aston Martin announced plans for an IPO on the London Stock Exchange. The British maker of sports cars has gone bankrupt several times, but business is now booming, particularly in Asia. Its association with the James Bond films partly explains Aston Martin's success in recent years; it is reproducing 25 versions of the DB5 used in "Goldfinger", complete with revolving number plates "and more". It is unlikely that fans will catch much sight of them: the new DB5s are not allowed to be driven on public roads.

KAL’s cartoon

Aug 30th 2018

Leaders

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  Why startups are leaving Silicon Valley. Its primacy as a technology hub is on the wane. That is cause for concern.
- **NAFTA: Going south** [Thu, 30 Aug 21:30]
  America's deal with Mexico will make NAFTA worse. Its costly new regulations result from flawed economic logic.
- **Education policy: Copying allowed** [Thu, 30 Aug 21:30]
  What other countries can learn from Singapore's schools. Rigorous teaching methods and excellent teachers keep the island-state top of the class.
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  Burmese generals should stand trial for atrocities against the Rohingya. The West should stop coddling Aung San Suu Kyi.
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  Bitcoin and other cryptocurrencies are useless. For blockchains, the jury is still out.

The new geography of innovation

Why startups are leaving Silicon Valley

Its primacy as a technology hub is on the wane. That is cause for concern

Aug 30th 2018

“LIKE Florence in the Renaissance.” That is a common description of what it is like to live in Silicon Valley. America’s technology capital has an outsize influence on the world’s economy, stockmarkets and culture. This small portion of land running from San Jose to San Francisco is home to three of the world’s five most valuable companies. Giants such as Apple, Facebook, Google and Netflix all claim Silicon Valley as their birthplace and home, as do trailblazers such as Airbnb, Tesla and Uber. The Bay Area has the 19th-largest economy in the world, ranking above Switzerland and Saudi Arabia.

The Valley is not just a place. It is also an idea. Ever since Bill Hewlett and David Packard set up in a garage nearly 80 years ago, it has been a byword for innovation and ingenuity. It has been at the centre of several cycles of Schumpeterian destruction and regeneration, in silicon chips, personal computers, software and internet services. Some of its inventions have been ludicrous: internet-connected teapots, or an app that sold people coins to use at laundromats. But others are world-beaters: microprocessor chips, databases and smartphones all trace their lineage to the Valley.

Its combination of engineering expertise, thriving business networks, deep pools of capital, strong universities and a risk-taking culture have made the Valley impossible to clone, despite many attempts to do so. There is no credible rival for its position as the world's pre-eminent innovation hub. But there are signs that the Valley's influence is peaking (see Briefing). If that were simply a symptom of much greater innovation elsewhere, it would be cause for cheer. The truth is unhappier.

Silicon Plateau

First, the evidence that something is changing. Last year more Americans left the county of San Francisco than arrived. According to a recent survey, 46% of respondents say they plan to leave the Bay Area in the next few years, up from 34% in 2016. So many startups are branching out into new places that the trend has a name, "Off Silicon Valleying". Peter Thiel, perhaps the Valley's most high-profile venture capitalist, is among those upping sticks. Those who stay have broader horizons: in 2013 Silicon Valley investors put half their money into startups outside the Bay Area; now it is closer to two-thirds.

The reasons for this shift are manifold, but chief among them is the sheer expense of the Valley. The cost of living is among the highest in the world. One founder reckons young startups pay at least four times more to operate in the Bay Area than in most other American cities. New technologies, from quantum computing to synthetic biology, offer lower margins than internet services, making it more important for startups in these emerging fields to husband their cash. All this is before taking into account the nastier features of Bay Area life: clogged traffic, discarded syringes and shocking inequality.

Other cities are rising in relative importance as a result. The Kauffman Foundation, a non-profit group that tracks entrepreneurship, now ranks the Miami-Fort Lauderdale area first for startup activity in America, based on the density of startups and new entrepreneurs. Mr Thiel is moving to Los Angeles, which has a vibrant tech scene. Phoenix and Pittsburgh have become hubs for autonomous vehicles; New York for media startups; London for fintech; Shenzhen for hardware. None of these places can match the Valley on its own; between them, they point to a world in which innovation is more distributed.

If great ideas can bubble up in more places, that has to be welcome. There are some reasons to think the playing-field for innovation is indeed being levelled up. Capital is becoming more widely available to bright sparks everywhere: tech investors increasingly trawl the world, not just California, for hot ideas. There is less reason than ever for a single region to be the epicentre of technology. Thanks to the tools that the Valley's own firms have produced, from smartphones to video calls to messaging apps, teams can work effectively from different offices and places. A more even distribution of wealth may be one result, greater diversity of thought another. The Valley does many things remarkably well, but it comes dangerously close to being a monoculture of white male nerds. Companies founded by women received just 2% of the funding doled out by venture capitalists last year.

Shadows of the colossi

The problem is that the wider playing-field for innovation is also being levelled down. One issue is the dominance of the tech giants. Startups, particularly those in the consumer-internet business, increasingly struggle to attract capital in the shadow of Alphabet, Apple, Facebook *et al.* In 2017 the number of first financing rounds in America was down by around 22% from 2012. Alphabet and Facebook pay their employees so generously that startups can struggle to attract talent (the median salary at Facebook is $240,000). When the chances of startup success are even less certain and the payoffs not so very different from a steady job at one of the giants, dynamism suffers—and not just in the Valley. It is a similar story in China, where Alibaba, Baidu and Tencent are responsible for close to half of all domestic venture-capital investment, giving the giants a big say in the future of potential rivals.

The second way in which innovation is being levelled down is by increasingly unfriendly policies in the West. Rising anti-immigrant sentiment and tighter visa regimes of the sort introduced by President Donald Trump have economy-wide effects: foreign entrepreneurs create around 25% of new companies in America. Silicon Valley first bloomed, in large part, because of government largesse. But state spending on public universities throughout America and Europe has fallen since the financial crisis of 2007-08. Funding for basic research is inadequate—America's federal-government spending on R&D was 0.6% of GDP in 2015, a third of what it was in 1964—and heading in the wrong direction.

If Silicon Valley's relative decline heralded the rise of a global web of thriving, rival tech hubs, that would be worth celebrating. Unfortunately, the Valley's peak looks more like a warning that innovation everywhere is becoming harder.

Going south

America’s deal with Mexico will make NAFTA worse

Its costly new regulations result from flawed economic logic

Aug 30th 2018

TRADE disputes have scarred the presidency of Donald Trump. So markets rose in relief when America and Mexico announced on August 27th that they had agreed on changes to the North American Free Trade Agreement (NAFTA). Mr Trump had earlier threatened to walk away from the deal, which eliminated most tariffs between its signatories after coming into force in 1994. As *The Economist* went to press, it was not clear whether Canada, the third party to NAFTA, would join the deal (see article). But across one border, at least, the threat of a trade crisis looks a bit less likely.

The relief may be short-lived. The concessions that Mexico has granted Mr Trump are for the most part economically damaging. The deal looks good for America only through the distorting prism of the president’s mercantilism. And Mr Trump is pursuing his trade agenda with a reckless bellicosity that makes a chaotic outcome more likely.

Planning, redux

If Canada ends up being folded into the agreement, the foundations of NAFTA would remain intact. But there would be several important changes, notably on cars. Today 62.5% of a car's components must be made in North America for the vehicle to avoid tariffs. That will rise to 75%. Nearly half of the components will need to have been made by workers making at least $16 an hour. Because the average wage of Mexican manufacturing workers is $2.30, the benefit to some firms of moving south of the border will fall greatly. Worryingly, it appears that America may yet levy some tariffs on automotive imports from Mexico, if they exceed a given quota. That would put Mexican carmaking into a straitjacket.

By elevating arbitrary rules above the free market, these changes make a mockery of the White House's supposed opposition to intrusive regulation. The result will be lower productivity, higher prices for consumers and a less competitive carmaking industry in North America, which competes as an integrated whole with producers in Europe and Asia. Uncertainty will not disappear. The deal could be rewritten again after six years, thanks to an unspecified review process.

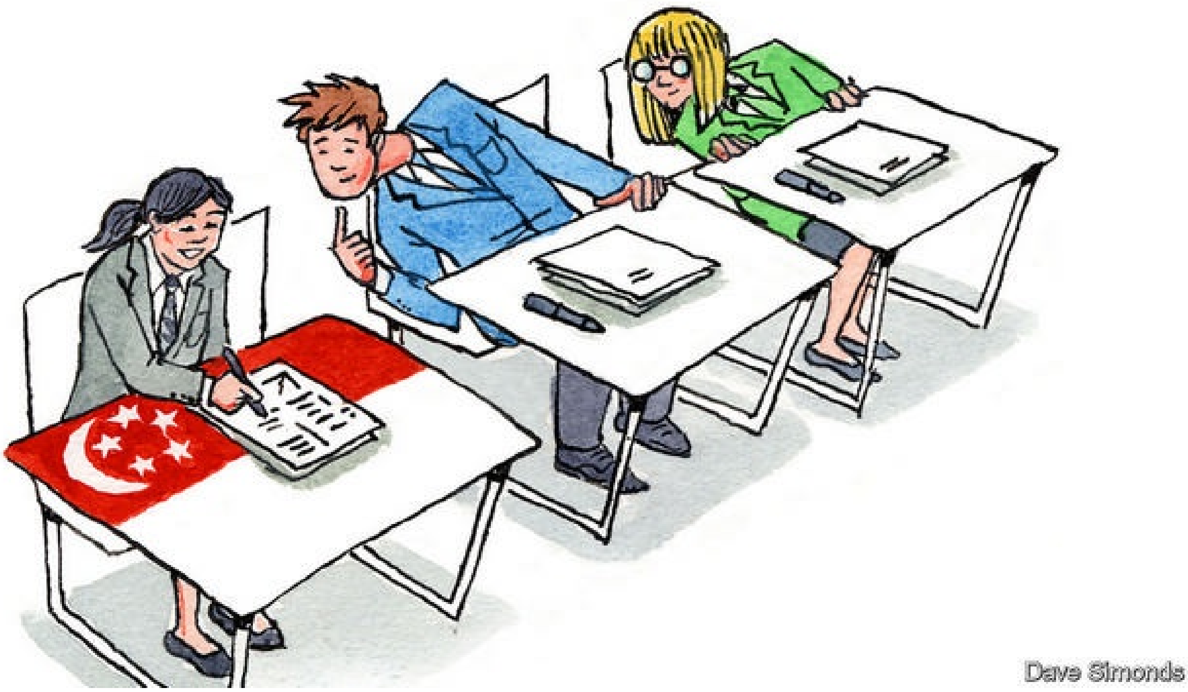
None of this bothers Mr Trump. In his view, the purpose of trade is to maximise exports and minimise imports. The intention of his agreement is clear: to shove firms into abandoning cross-border supply chains in favour of the safe-but-costly option of producing in America. Economic might is a weapon to be used in service of that goal.

Mexico has acceded to so many of Mr Trump's demands partly for domestic political reasons. It suits both the outgoing president, Enrique Peña Nieto, and his successor, Andrés Manuel López Obrador, to have any deal signed before the transition on December 1st. But the principal factor was Mr Trump's threat to impose tariffs on all car imports, not just those above any quota—a threat that still looms over Canada. The president may yet extend his hardball tactics to his dealings with Congress, cancelling the original NAFTA to force legislators to choose between the new agreement and chaos.

America is used to presidents throwing their weight around in Washington. Yet Mr Trump's attitude to trade is uniquely reckless. He has bullied his way to what he sees—wrongly—as a better deal with Mexico; he is intent on doing the same to Canada. He is using the ludicrous pretext of national security to justify his threats of car-import tariffs, in order to circumvent the rules of the World Trade Organisation. North America’s economies can withstand this folly. But the rules-based system of global trade, which relies on goodwill between countries, may prove to be more fragile.

What other countries can learn from Singapore's schools

Rigorous teaching methods and excellent teachers keep the island-state top of the class



Dave Simonds

Aug 30th 2018

WHEN the island of Singapore became an independent country in 1965, it had few friends and even fewer natural resources. How did it become one of the world's great trading and financial centres? The strategy, explained Lee Kuan Yew, its first prime minister, was "to develop Singapore's only available natural resource: its people".

Today Singapore's education system is considered the best in the world. The country consistently ranks at the top of the OECD's Programme for International Student Assessment (PISA), a triennial test of 15-year-olds in dozens of countries, in the main three categories of maths, reading and science. Singaporean pupils are roughly three years ahead of their American peers in maths. Singapore does similarly well in exams of younger children, and the graduates of its best schools can be found scattered around the world’s finest universities.

The island-state has much to teach the world. But other countries are reluctant pupils. One reason is that Singapore favours traditional pedagogy, with teachers leading the class. That contrasts with many reformers’ preference for looser, more “progressive” teaching intended to encourage children to learn for themselves. Although international studies suggest that direct instruction is indeed a good way of conveying knowledge, critics contend that Singapore has a “drill and kill” model that produces uncreative, miserable maths whizzes. Parents worry about the stress the system puts on their children (and on them, even as they ferry kids to extra classes).

Yet Singapore shows that academic brilliance need not come at the expense of personal skills. In 2015 Singaporean students also came first in a new PISA ranking designed to look at collaborative problem-solving, scoring even better than they did in reading and science. They also reported themselves to be happy—more so than children in Finland, for instance, a country that educationalists regard as an example of how to achieve exceptional results with cuddlier methods of teaching. Not content with its achievements, Singapore is now introducing reforms to improve creativity and reduce stress (see article). This is not a sign of failure, but rather of a gradual, evidence-led approach to education reform—the first of three lessons that Singapore offers the rest of the world.

Where other countries often enact piecemeal and uncoordinated reforms, Singapore tries to look at the system as a whole. It invests heavily in education research. All reforms are tested, with the outcomes diligently monitored, before being rolled out. Close attention is paid to how new ideas and results should be applied in schools. Carefully developed textbooks, worksheets and worked examples—practices often seen as outdated in the West—are used to inject expertise into the classroom. The result is good alignment between assessments, accountability and teaching styles.

The second lesson is to embrace Singapore’s distinctive approach to teaching, notably of mathematics—as America and England are already doing to some extent. It emphasises a narrower but deeper curriculum, and seeks to ensure that a whole class progresses through the syllabus. Struggling pupils get compulsory extra sessions to help them keep up; even the less-able do comparatively well. An analysis in 2016 in England found that the Singaporean approach boosted results, though it was somewhat watered down in transition.

The third and most important lesson is to focus on developing excellent teachers. In Singapore, they get 100 hours of training a year to keep up to date with the latest techniques. The government pays them well, too. It accepts the need for larger classes (the average is 36 pupils, compared with 24 across the OECD). Better, so the thinking goes, to have big classes taught by excellent teachers than smaller ones taught by mediocre ones. Teachers who want more kudos but not the bureaucratic burden of running schools can become “master teachers”, with responsibility for training their peers. The best teachers get postings to the ministry of education and hefty bonuses: overall, teachers are paid about the same as their peers in private-sector professions. Teachers are also subject to rigorous annual performance assessments.

Class dismissed

The system is hardly faultless. Other countries might wish to avoid Singapore’s dividing of high-and low-achievers into separate schools from the age of 12. The benefits of doing so are unproven, and it contributes to stress about exams. Singapore’s size, moreover, allows for an unusual degree of centralisation. The director-general of the ministry of education says he knows more than 80% of head teachers by name, which makes it easier to keep tabs on what is going on. Other trade-offs would be unpalatable elsewhere. In most countries, teachers’ unions and parents are resistant to big classes, for instance. That is a shame. Education would be much better if more countries copied Singapore’s homework.

Genocide in Myanmar

Burmese generals should stand trial for atrocities against the Rohingya

The West should stop coddling Aung San Suu Kyi

Aug 30th 2018

WHEN Rohingya Muslims began fleeing from Myanmar to Bangladesh a year ago, the cause was obvious: the army had gone on the rampage. But the Burmese government maintained that the mass exodus from Rakhine state—723,000 people, by the UN's count—stemmed from a simple misunderstanding. The army, it insisted, was just searching for Rohingya militants who had attacked police posts. It was only because of false rumours of military abuses, officials blithely declared, that villagers had taken fright and headed for the border.

On August 24th the UN's Human Rights Council delivered its official response to this drivel. After a year's research, including 875 individual interviews, it published a report which affirms that the army led a pogrom that claimed the lives of more than 10,000 Rohingyas (see article). Most damningly, the report finds evidence that the violence was premeditated and amounted to genocide. Senior generals, the report concludes, should be put on trial for war crimes.

It is an indictment of the world that the Burmese army is, thus far, getting away with mass murder. Myanmar's rulers, the UN's authors lament, have responded with "denial, normalcy and impunity". Aung San Suu Kyi, Myanmar's de facto leader, has set up worthless committees to investigate. The only soldiers to have been punished are seven infantrymen who were implicated in a massacre by a detailed Reuters report. (The government also put the journalists in question on trial for obtaining secret documents.) China and Russia defend Myanmar; Western governments have been feeble in their response.

Apologists for the Burmese government insist that it is almost impossible for anyone, foreign or local, to do much about this, since the Burmese army is a law unto itself. It made way for a civilian government only two years ago, after imposing a constitution that gives it complete control over its own affairs and all matters of security. What is more, ordinary Burmese tend to view Rohingyas, most of whom are Muslim, as a threat to Buddhism, the religion of the majority. And Ms Suu Kyi, the argument runs, does not have the authority to rein in the army, and would only alienate voters and undermine her own standing by attempting to do so. By the same token, should the West take Myanmar too strongly to task for the army's conduct, it would imperil the fragile democracy for which it and Ms Suu Kyi fought for so long. It would also, the theory goes, drive Myanmar into the arms of China.

These arguments are not only an affront to justice—they are also wrong. Acquiescing to the abuses in Rakhine does not help entrench democracy. Instead, it will give the generals the impression that they can act with impunity in other parts of Myanmar where they are fighting ethnically-based insurgencies (the UN report says the army is also committing atrocities in the fight against the Shan and Kachin). And foreigners, far from strengthening Ms Suu Kyi by tiptoeing around the atrocities, simply reinforce the idea that the army is calling the shots and that her government is little more than a figleaf.

There is reason to believe that the generals will respond to pressure.

International ostracism and sanctions played a part in their decision to retreat from government in 2016. Ms Suu Kyi, moreover, has stood up to the army in the past, not least by insisting on leading the government despite the clause the generals inserted into the constitution barring her from the presidency. She should stand up to the generals again, or risk seeming complicit in their crimes. Concerned foreigners, too, should defend their principles. If a democracy can be preserved only by turning a blind eye to genocide, then it is not worthy of the name, much less the world's protection.

Time to squeeze the generals

There is plenty that foreign governments can do. A good first step would be for the Security Council to do as the report's authors suggest and refer Myanmar's generals to either the International Criminal Court or an ad hoc tribunal. If China vetoes that, so be it. At least it would be clear where everyone stands. There are plenty of other ways to apply pressure, most obviously by squeezing the extensive business empire on which the generals rely. The alternative is to encourage jackbooted butchers everywhere.

Show me the money

Bitcoin and other cryptocurrencies are useless

For blockchains, the jury is still out

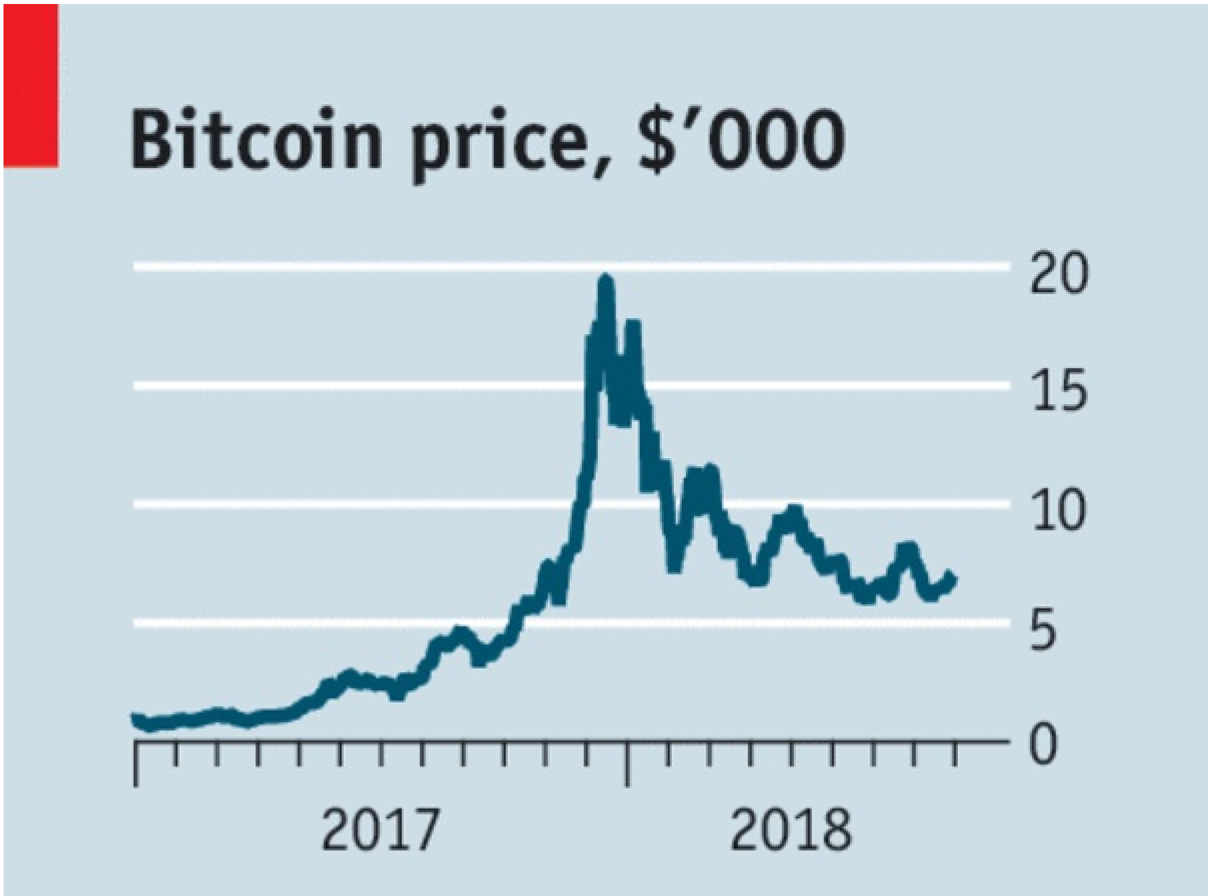
Aug 30th 2018

AN OLD saying holds that markets are ruled by either greed or fear. Greed once governed cryptocurrencies. The price of Bitcoin, the best-known, rose from about $900 in December 2016 to $19,000 a year later. Recently, fear has been in charge. Bitcoin's price has fallen back to around $7,000; the prices of other cryptocurrencies, which followed it on the way up, have collapsed, too. No one knows where prices will go from here. Calling the bottom in a speculative mania is as foolish as calling the top. It is particularly hard with cryptocurrencies because, as our Technology Quarterly this week points out, there is no sensible way to reach any particular valuation.

It was not supposed to be this way. Bitcoin, the first and still the most popular cryptocurrency, began life as a techno-anarchist project to create an online version of cash, a way for people to transact without the possibility of interference from malicious governments or banks. A decade on, it is barely used for its intended purpose. Users must wrestle with complicated software and give up all the consumer protections they are used to. Few vendors accept it. Security is poor. Other cryptocurrencies are used even less.

With few uses to anchor their value, and little in the way of regulation, cryptocurrencies have instead become a focus for speculation. Some people have made fortunes as cryptocurrency prices have zoomed and dived; many early punters have cashed out. Others have lost money. It seems unlikely that this latest boom-bust cycle will be the last.

Economists define a currency as something that can be at once a medium of exchange, a store of value and a unit of account. Lack of adoption and loads of volatility mean that cryptocurrencies satisfy none of those criteria. That does not mean they are going to go away (though scrutiny from regulators concerned about the fraud and sharp practice that is rife in the industry may dampen excitement in future). But as things stand there is little reason to think that cryptocurrencies will remain more than an overcomplicated, untrustworthy casino.



The Economist

Can blockchains—the underlying technology that powers cryptocurrencies—do better? These are best thought of as an idiosyncratic form of database, in which records are copied among all the system's users rather than maintained by a central authority, and where entries cannot be altered once written. Proponents believe these features can help solve all sorts of problems, from streamlining bank payments and guaranteeing the provenance of medicines to securing property rights and providing unforgeable identity documents for refugees.

Nothing to lose but your blockchains

Those are big claims. Many are made by cryptocurrency speculators, who hope that stoking excitement around blockchains will boost the value of their related cryptocurrency holdings. Yet firms that deploy blockchains often end up throwing out many of the features that make them distinctive. And shuttling data continuously between users makes them slower than conventional databases.

As these limitations become more widely known, the hype is starting to cool. A few organisations, such as SWIFT, a bank-payment network, and Stripe, an online-payments firm, have abandoned blockchain projects, concluding that the costs outweigh the benefits. Most other projects are still experimental, though that does not stop wild claims. Sierra Leone, for instance, was widely reported to have conducted a “blockchain-powered” election earlier this year. It had not.

Just because blockchains have been overhyped does not mean they are useless. Their ability to bind their users into an agreed way of working may prove helpful in arenas where there is no central authority, such as international trade. But they are no panacea against the usual dangers of large technology projects: cost, complexity and overcooked expectations. Cryptocurrencies have fallen far short of their ambitious goals. Blockchain advocates have yet to prove that the underlying technology can live up to the grand claims made for it.

Letters

- **On climate change, tax reform, Canada, Brexit: Letters to the editor** [Thu, 30 Aug 21:30]
  Letters to the editor. On climate change, China, tax reform, Canada, Brexit.

Letters

Letters to the editor

On climate change, China, tax reform, Canada, Brexit

Aug 30th 2018

Letters are welcome and should be addressed to the Editor at letters@economist.com

Playing with fire

Your sober leader concluding that "the world is losing the war against climate change" also suggested that averting climate change "will come at a short-term financial cost—although the shift from carbon may eventually enrich the economy" ("In the line of fire", August 4th). In fact, the evidence has been clear since the publication of the Stern Review in 2006 that the benefits of the low-carbon transition far outweigh its costs.

Climate scientists continue to warn of the potentially disastrous effects of allowing greenhouse-gas concentrations in the atmosphere to grow over the coming decades. Unfortunately, economic models usually omit, or discount, the biggest risks of climate change, such as destabilisation of the land-based polar ice sheets. As a result, many policymakers do not understand the scale and urgency of action required now to avoid dangerous climate change in the future.

Much of the supposed short-term financial costs of tackling climate change could be met through economically sensible policies, such as eliminating the hundreds of billions of dollars spent each year on subsidies for fossil fuels and increasing the extent and strength of carbon pricing across the world. This money could be invested in helping poor people in every country gain access to clean and efficient sources of energy.

BOB WARD
Policy and communications director
Grantham Research Institute on Climate Change and the Environment
London School of Economics

Beginning an article on climate change with the image of a wildfire misrepresented the issue. You did not discuss forest and land management, the wildland-urban interface and the increase in the things that ignite wildfires. I agree, wildfires in California are being affected by rising global temperatures, but you oversimplified this in an attempt to get people to pay attention. The tendency to attribute environmental challenges solely to climate change diminishes the ability to address issues through better management and local decision-making. Winning the war on climate change will not stop the devastating effects of wildfires. Better urban planning and updated land-management policies might.

EVAN WATSON
Redding, California

Not so mega
* Your article on Tianjin's slowing economy covered many of the concerns held by the international business community and local government officials ("Where are the people?", August 4th). However, it played down what we businesspeople see as earnest efforts to right the ship and come clean on past mishaps. Those of us working in this Chinese city have seen a notable shift in attitude from local officials who have redoubled their implementation of the national economic reform agenda in the past 12 months. Furthermore, the Tianjin Commission of Commerce recently opened a Foreign Invested Enterprises Complaint and Service Centre to begin to take the shortcomings of the region's administration head on. Are these steps alone enough to turn the economy around? No. But they represent a shift in the right direction that, should the government move decisively towards a transparent and open system, can reinvigorate confidence in the region, and allow Tianjin to contribute more to the planned Jing-Jin-Ji (Beijing, Tianjin and Hebei) economic zone."

YUP FAN CHEUNG
Chairman
Tianjin Chapter of the European Union Chamber of Commerce in China

Death and taxes

I have never understood why taxing the wealth of the dead through an inheritance tax would have any detrimental effect on the incentives of the living ("Stuck in the past", August 11th). Inheriting wealth, if anything, reduces the incentives of the offspring of the wealthy and encourages indolence. However, your leader on tax reform also argued against the deduction of interest in the accounts of a corporation because it subsidises debt. This requires careful consideration.

Interest is taxable in the hands of its recipient, just as wages or rents are. If it were not deducted in the accounts of the payer, it would be taxed twice: once in the inflated profit of the corporate payer and again in the hands of the recipient (probably a bank). Eliminating the deduction of interest would therefore result in double taxation and increase the aggregate taxation of corporations. Double taxation is not something often promoted by economists.

JOHN GILLIGAN
Director
Finance Lab

Said Business School
University of Oxford

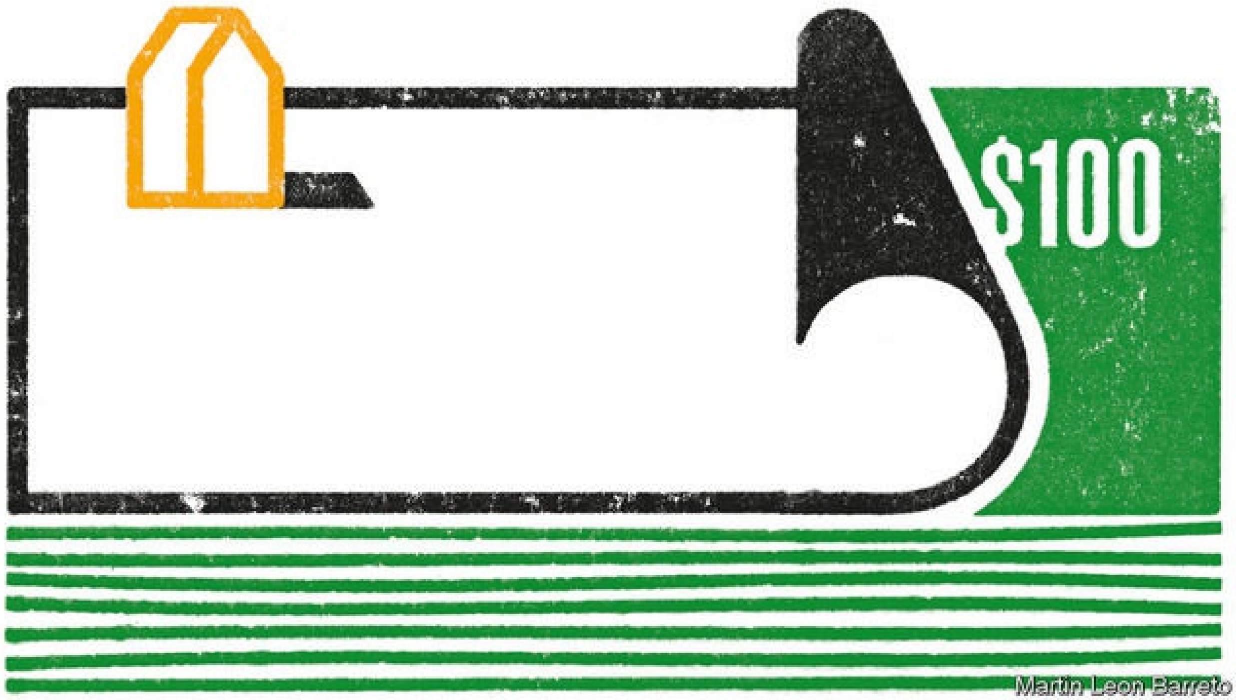
Ideally, taxes "should target rents, preserve incentives and be hard to avoid", you say. In the very next paragraph you recommend increasing inheritance taxes, which meet none of these criteria. Inheritances are not "rents". Inheritance taxes have large negative incentive effects (look at the estate-planning industry) and they are easy to avoid (benefactors can just spend all their wealth during their lifetimes). In short, inheritance taxes are a very inefficient way to raise revenue; they are a remnant stuck in the past.

WALTER NICHOLSON
Naples, Florida

Milton Friedman thought that the least bad taxes are those that are visible. He opposed VAT and regretted having devised the monthly withholding mechanism for income tax. Invisible taxes are the force behind the unstoppable growth of government spending in the 21st century, just as Friedman foresaw.

Citizens might be willing to pay for a state only half the size it is today, if taxes were more salient. But you imply that tax in total must keep increasing, with the state collecting, and wasting, all the surpluses created by the economy.

RODOLFO DE LUCA
Buenos Aires



Your briefing claims to support a tax on the value of land, but it is instead an endorsement of a tax on gains from increases in the price of land ("On firmer ground", August 11th). A tax on the value of land is a partial but cumulative confiscation of property. By contrast, a tax on the increase in the price of land is not cumulative. And it deals with the main problem at hand: nobody should be allowed to profit from the passive ownership of land.

PEDRO LEÃO
Lisbon

The most successful experiment in Henry George's "single-tax" idea is Fairhope, Alabama. It was founded in 1894 as a single-tax colony, and today is a thriving bay-front community consistently rated as one of the best small towns in the American South. The Fairhope Single Tax Corporation still owns about 20% of the town, and most of the charming downtown area.

CHARLES DAVIS
Malvern, Pennsylvania

Feel-good intentions

Canada’s prime minister, Justin Trudeau, likes to stroke the national ego (yes, we have one) with taglines about Canadians always standing up for values and positions of virtue. The honest-broker role, favoured by diplomatic realists, used to be a mainstay of Canada’s international brand. But Mr Trudeau’s feel-good sermonising has undermined his own potential as a diplomatic fixer. The shambles created by failing to anticipate the Saudi perception and reaction to a Canadian tweet for the immediate release of jailed activists is a good example (“Meddlesome maple leaves”, August 11th). Not only are the human-rights campaigners still in jail, they may be in greater jeopardy since Canada made itself NGT: non grata by tweet.

CAROL CLEMENHAGEN
Ottawa

Honest Abe on Brexit

“No deal for Britain is better than a bad deal for Britain,” Theresa May has said, regarding Brexit (“No ordinary deal”, [August 4th](#)). Agree, disagree, or both. Just remember what Abraham Lincoln said more than 150 years ago:

> “Elections belong to the people. It’s their decision. If they decide to turn their back on the fire and burn their behinds, then they will just have to sit on their blisters.”

BERNABÉ GUITÉRREZ
Jaén, Spain

* Letters appear online only

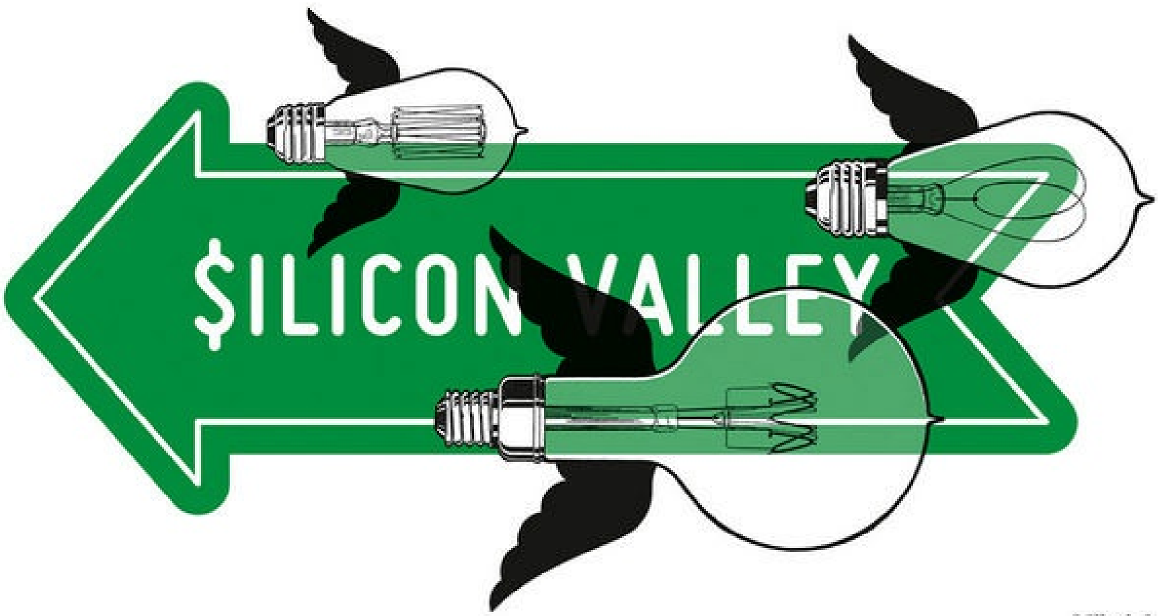
Briefing

- **The geography of technology: A victim of its own success**
  [Thu, 30 Aug 21:30]
  Silicon Valley is changing, and its lead over other tech hubs narrowing. Great success has brought high costs and structural change.

Techsodus

Silicon Valley is changing, and its lead over other tech hubs narrowing

Great success has brought high costs and structural change



Mikel Jaso

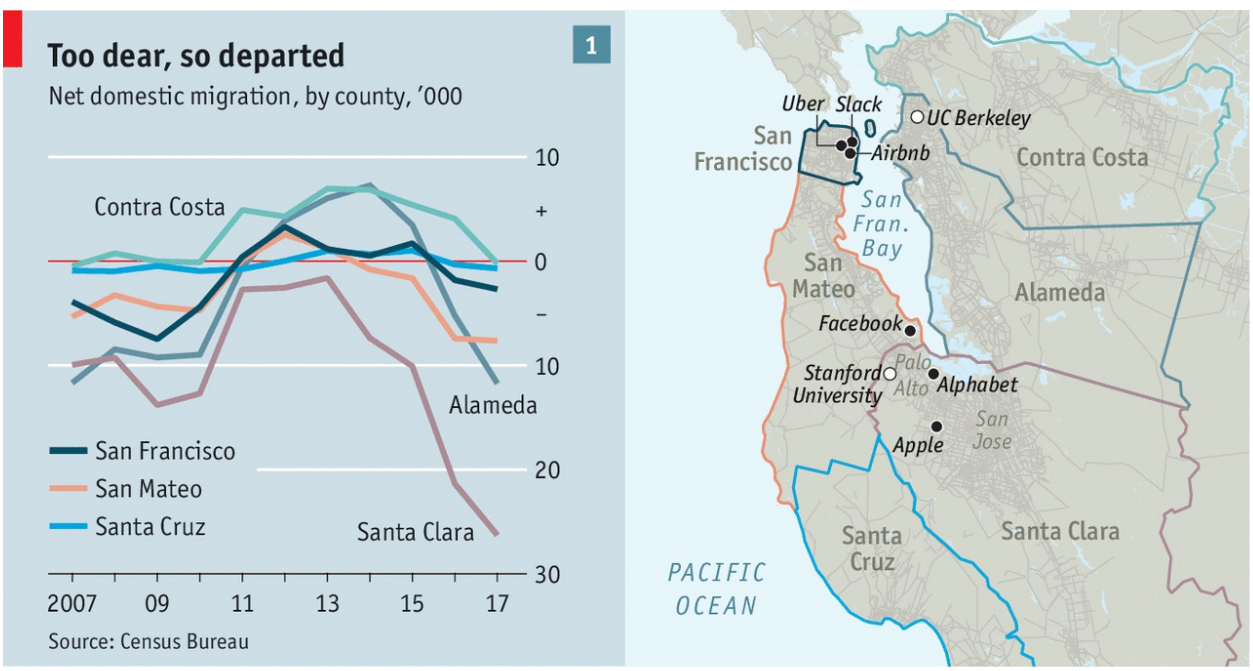
Sep 1st 2018 | SAN FRANCISCO

THE garage in which Hewlett-Packard was started in 1939 is now a private museum—a modest monument to the cut-price creativity and bare-knuckle entrepreneurship that made Silicon Valley famous. Drive south from Palo Alto through 20 minutes of inevitable traffic to Sunnyvale and you will find a landmark of a different kind. Nothing of technological note has taken place there. But in February this small two-bedroom house, which boasts just the sort of garage a startup would once have felt at home in, sold for \$2m, 40% more than its asking price, within two days of listing—a new record for the area. That translates into a price of \$25,386 per square metre (\$2,358 per square foot).

When Ajay Royan of Mithril Capital, an investment fund, asks rhetorically "How are you supposed to have a startup in a garage if the garage costs millions of dollars?", he is barely exaggerating the problem. The immense success of its tech industry means that the San Francisco Bay Area in which Silicon Valley sits has the highest cost of living in America. A median-priced home costs $940,000, four-and-a-half times the American average. The Department of Housing and Urban Development considers a family earning less than $120,000 in San Francisco "low income".

As a result, a region that has long drawn people in is beginning to cast them out. More Americans are leaving the Valley than moving to it. In 2017 several counties in the area saw their largest combined domestic outward migrations in around a decade (see chart 1). In a recent survey by the Bay Area Council, a think-tank, 46% of Bay Area residents said they planned to leave in "the next few years", up from 34% in 2016.

This is not just a case of people of more modest means being pushed out by carpet-bagging techies. At this year's "FOO camp", a freewheeling annual gathering of hackers and others, a session called "Should I/you leave the Bay Area?" saw a strong turnout. Participants shared their gripes about the high cost of living, bad traffic and a "toxic" culture obsessed with money.



The Economist

"We're seeing a lot of the talent moving or saying they won't come here," says Dan Rosensweig, who runs Chegg, an education-tech company in Santa Clara. "It's hard to imagine doing another startup in Silicon Valley. I don't think I would," says Jeremy Stoppelman, the boss of Yelp, a review site. "I will probably never scale another company in the Bay Area," says one of the founders of a public internet company. He says that for his next venture he will keep a small team in the Bay Area but will hire most of the software developers and executives in other cities, where the cost of talent and the risk of them being poached are both lower.

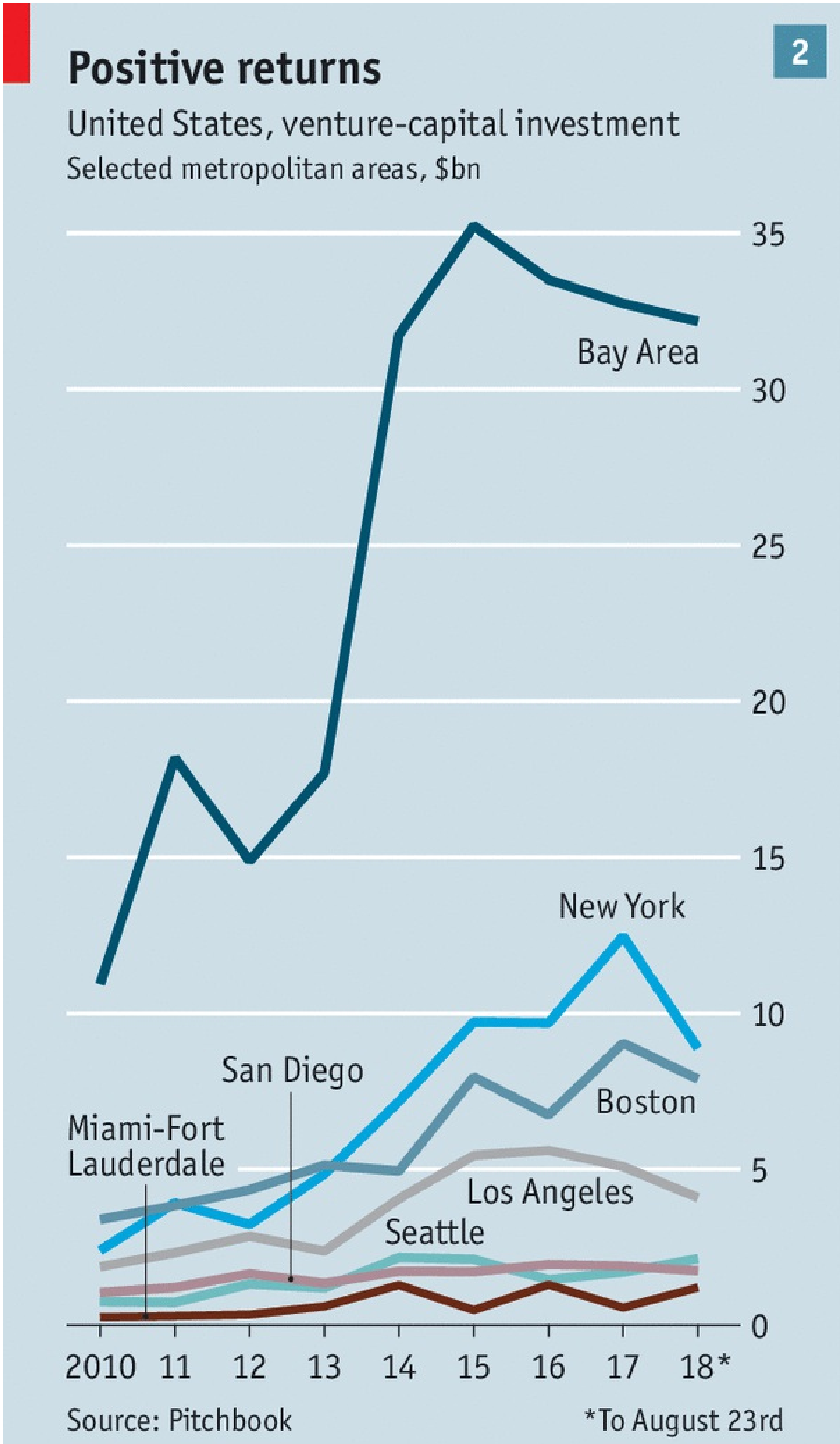
Silicon Valley is still a place where new ideas can flourish, fortunes can be made and products that change millions of lives will get dreamed up and brought to market. But thanks to its past success it is no longer the ferment it once was, and it is unlikely it will ever again dominate the technology world in quite the way it has over the past decades. The cost of living and operating a firm will drive more people away. The dominance of the companies that have generated its current wealth will change the paths to success for those who stay. And unfavourable governmental policies will further harm the Valley's dynamism.

A whole generation

On top of all that, Silicon Valley's own products and services make it ever easier to start out elsewhere, or everywhere, and be connected to Silicon Valley's culture through messaging, video-conferencing and collaborating online. By changing the way companies work, this technology is making it ever more feasible to have a presence in the Valley while keeping most or almost all of your employees elsewhere. No other tech hub in this more spread-out world will grow as powerful as Silicon Valley has been. But its lead over a growing pack of competitors will narrow.

With its strong networks of experts, stellar universities, culture of risk-taking, deep-pocketed investors and history of helping startups grow into giants, Silicon Valley—now taken, for the purposes of discussions like this, to include San Francisco proper—has over decades become the tech hub that all others measure themselves against. The centre of semiconductor innovation from the 1960s on—hence the name—in the 1990s it made big bets on the internet, which by the 2000s it dominated. Since then its firms have created the operating systems on which more than 95% of the world's smartphones run.

From 2010 to this year venture capitalists invested $168bn in firms in the Bay Area, a third of the total they invested in America. No other area comes close (see chart 2). In the second quarter of 2018 the Valley was home to three of the world's five most valuable companies: Apple, Alphabet (Google's parent) and Facebook, valued between them at almost $2.5 trillion. Apple and Alphabet, true natives, were born in garages in Los Altos and Menlo Park, respectively. Facebook moved into somewhat plusher digs while still an infant. It hosts 57 unicorns—private startups valued at more than $1bn—including household names like Airbnb and Uber.



The Economist

At a number of points in the past it has looked as though the Valley's ascent was over. In the early 1980s its semiconductor-memory-makers lost out to Japanese competitors; in 2000 the dotcom bubble burst. But the Valley has always kept climbing, and there are plenty who believe that, unequalled in its wealth and its claim on the world's attention, it can go on doing so. Things may currently be unhelpfully overheated; some think a recession might clear out some badly run companies and lower costs for the fitter survivors. But the long-term outlook is cheery. "Florence was in its position for more than 200 years," says Mike Volpi of Index Ventures, which invests in startups. "Silicon Valley still has many years to go."

Others, though, think things have really changed. AnnaLee Saxenian, dean of the School of Information at the University of California, Berkeley, says she has spent her whole career "defending the Valley's vitality whenever people have said it's over". Now, she thinks there has been an important cultural shift.

In "Regional Advantage", a seminal study published in 1994, Ms Saxenian compared Silicon Valley's culture to that of the rival tech cluster around Boston, Massachusetts, known as Route 128. The Valley started to outstrip its competitor in the late 1980s, she argued, because Route 128 was dominated by large, hierarchical companies that were inward-looking and secretive. They valued corporate loyalty and strongly discouraged employees from leaving for a competitor or starting their own venture. In the Valley, in contrast, information was shared much more freely both within companies and between them. Leaving to start something of your own was not frowned upon. Indeed it was encouraged; established firms helped support or spin off younger ones.

"Regional Advantage" has become a classic study of what works and goes wrong for innovation ecosystems, but it may need a new afterword. Ms Saxenian says that the tech titans have developed an increasingly "autarkic" culture that goes against the way that the Valley used to work, "shutting off the flow of talent." "The problems of Boston," she says, "are reappearing here".

There have always been big companies in the Valley. Today's are bigger—

but they are also able to use their size differently. A giant internet company can move into new areas a lot faster than a big incumbent semiconductor company could in the days when the Valley's original cultural norms were set. The big firms can seize on novelty almost as quickly as startups do—and with a lot more oomph.

That has made it harder for young startups to prosper and grow into big companies themselves. They are imitated, stamped out or acquired while they are still young. Some talk of a "kill zone" around the big companies, where it is impossible for startups to operate. Innovation continues, but without the near-nutty breadth of approaches that used to be one of the area's strengths.

A new explanation

The giants have other chilling effects. It used to be that working for an incumbent firm was safe but not lucrative, unless you were a top executive. Those who made real money had sweated it out as early employees at startups that made it big. Now profitable business models, piles of cash and soaring share prices mean giants can afford to pay employees handsomely. "The payoff of a higher-risk startup is not so different from what you would get over the same number of years at Google or Facebook earning top dollar," explains Yelp's Mr Stoppelman.

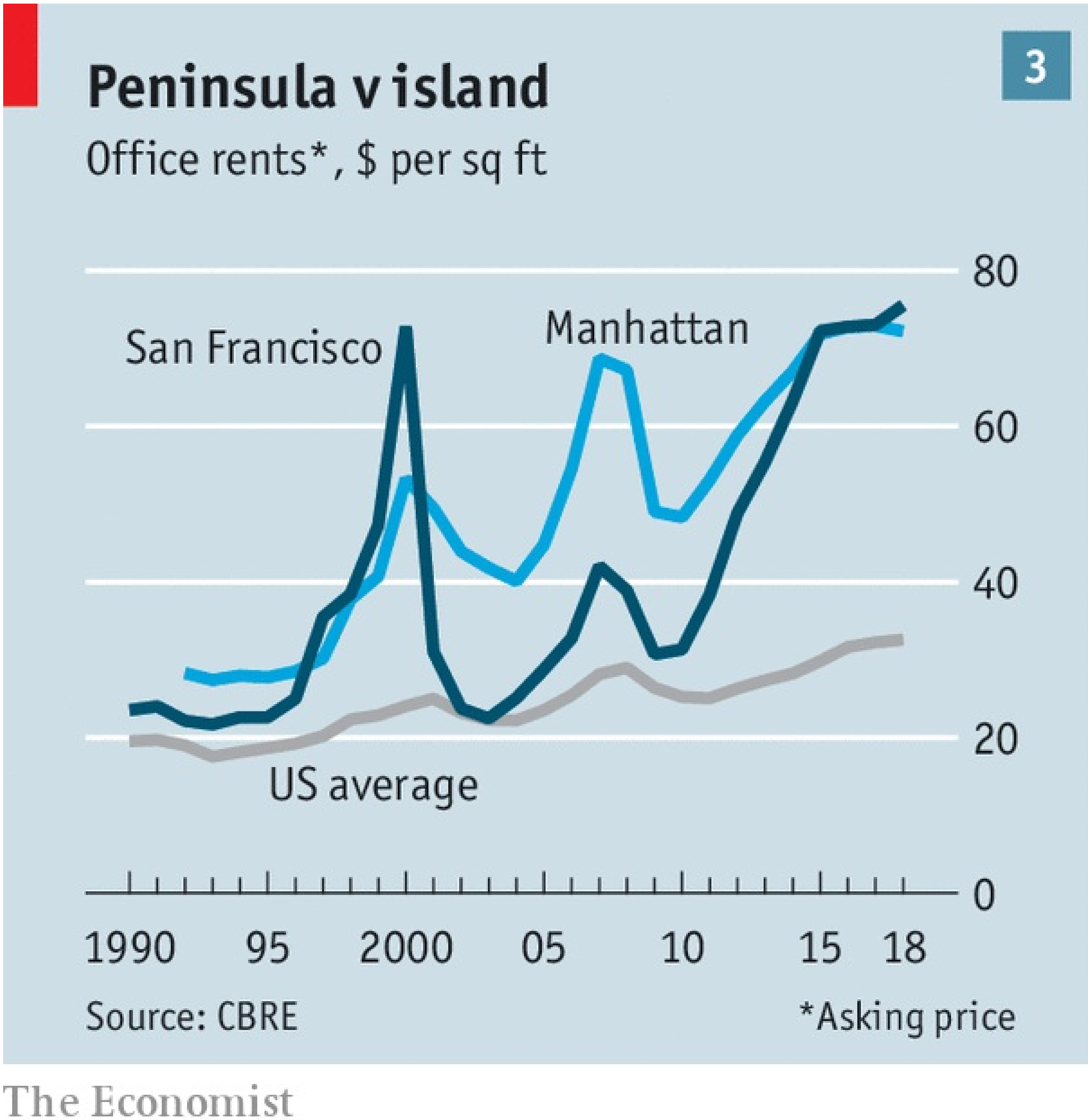
In 2017 Alphabet, Apple and Facebook issued $16.2bn in stock-based compensation. Even those in middle-management positions are paid handsomely; the median compensation is $240,000 at Facebook and around $200,000 at Alphabet.

Where Ms Saxenian sees the ghost of Route 128, Tim O'Reilly, a publisher and Valley-watcher of long standing sees a flickering echo of Hollywood, with successful entrepreneurs acting the part of high-maintenance movie stars. Those with graduate degrees in artificial intelligence can fetch $5m-10m a year. People complain that such pampering has eroded tech's work ethic, with employees focusing on free lunches and other perks. In the *Financial Times* earlier this year Michael Moritz, chairman of the venture-capital firm Sequoia, suggested that American techies could learn from the hard-driving culture of Chinese entrepreneurs.

Others draw a comparison with Wall Street, seeing greed taking on ever greater importance. This has been amplified not just by the Bay Area's high costs but also by the amount of capital flooding in. For example, SoftBank, a Japanese conglomerate, has raised a $100bn technology fund, which is more than the entire American venture-capital industry invested last year. And like both Hollywood and Wall Street, the Valley has its share of toxic masculinity and entrenched sexism. A mere 2% of venture-capital funding went to female founders' startups last year.

Companies like Airbnb and Uber, which have raised lots of cash, can compete in this monied-up world. Young startups increasingly cannot. Launching a startup rarely makes actuarial sense, since the odds of success are so slim. But when office space, homes and top talent were within the reach of young, unproven companies there was a constant spate of dreamers willing to try it. At today's prices, the spate has slowed. Claire Haidar of WNDYR, a productivity startup that relocated to America from Ireland in 2017, reckons it costs at least four times as much to base a startup in the Bay Area as it would in most other cities in America.

Many Silicon Valley startups are currently as much as 15% behind their hiring goals for the year, says Mr Volpi. This hurts their prospects of survival. Things don't necessarily get easier as growth kicks in. According to CBRE, a real-estate firm, it costs $62.4m a year to run a 500-person startup with 7,000 square metres of office in San Francisco, more than anywhere else in America or Canada (see chart 3). That is 47% and 49% more than it costs to run a startup in Portland and Atlanta, respectively, and more than double what it costs in Vancouver and Toronto.



It is still possible for a Valley startup to grow large. Slack, which launched its workplace-messaging app in 2013, claims a private-market valuation of $7.1bn. However, its boss, Stewart Butterfield, is an experienced entrepreneur who had already had a well-known hit (Flickr, which was sold to Yahoo in 2005). Fewer first-time entrepreneurs are breaking through.

The corralling of talent in big companies is not just bad for startups. It is bad for future technological diversity. Talented people can still launch wild new projects from inside the giants—but probably not as new, or as wild, as they would in a startup culture where the pool of other innovators with whom to team up would be larger and more diverse. The problem which dogged Route 128 has come to the Valley in a big way. “People join the big firms, and especially Apple, and they fall off the face of the earth. It’s a genuine problem for the ecosystem,” says John Lilly, a venture capitalist with Greylock.

Route 128 did not just lose out because of culture. It also lost out because it was pursuing a technology, the minicomputer, from which the market was turning away. With smartphones ubiquitous and social networking more than a decade old, people in tech are increasingly worried about what is next. Even if the Silicon Valley giants can spot it, they may not be best placed to capitalise on it; flexible as the giants are, they cannot do everything. If the new new thing takes off elsewhere, Silicon Valley’s advantages will be lessened.

Take the continued spread of cloud computing, an increasingly lucrative business for both Amazon and Microsoft. If either could make its cloud-computing platform as dominant as Windows was in the PC era, it could cause yet more activity to move closer to Seattle, where both firms reside and which is already a buzzing tech hub much cheaper to live and work in than the Valley. Other technologies which could conceivably pull power away from the Valley might include blockchains (see Technology Quarterly) or quantum computing. Blockchains are by their nature decentralised; quantum computing could reorient the tech world toward China.

It is entirely possible that the next disruptor will be none of these things. But it is all but certain that something will supersede devices with the Valley’s namesake semiconductor at their heart as the key to success in tech, and that that will matter.

Having giants around can provide benefits as well as kill zones; in looking after their own interests through political lobbying and the like they often look after their neighbours’, too. But the biggest political problem for American tech firms, in the Bay Area and elsewhere, is one that has proved beyond even the best-paid lobbyists. A lot of Americans are worried about immigration, and President Donald Trump is determined to act on their behalf.

More than half of the top American tech companies were founded by immigrants or the children of immigrants. Despite lobbying from the tech giants, the Trump administration has brought in rules that severely restrict the number of foreigners who can receive work visas. Some tech firms have experienced delays of up to 18 months for foreign hires whom they might otherwise have been able to bring over swiftly. Students who come to America for degrees increasingly end up going home afterwards, willingly or not. “If you ask me ten years from now why Silicon Valley failed, it will be because we screwed up immigration,” predicts Randy Komisar of Kleiner Perkins, a venture-capital firm.

Nor have the tech giants as yet managed to improve things by using their muscle with local officials to ease some of Silicon Valley’s specific problems. Instead of building more affordable housing in a timely manner, which the Bay Area desperately needs, San Franciscan politicians are in the midst of discussing legislating the abolition of corporate cafeterias in order to force techies to eat lunch out. Big new infrastructure projects to ease congestion and make it easier to get to work from further away are nowhere to be seen. Instead there are private luxury buses to the tech campuses—which became, a few years ago, the centre of the first big popular protests against the new elite.

People in motion

Faced with high costs and the chilling effect of the neighbourhood giants, entrepreneurs who would once have planned to build their businesses entirely in the Valley are increasingly pursuing three other courses: launching their startups somewhere else; moving their headquarters somewhere else once they reach a certain size; or keeping their headquarters in the Valley but scaling their operations elsewhere—“Off Silicon Valleying”, as some call it. Mark Pincus, the founder of Zynga, a games developer, predicts companies “will have to think about multiple locations much earlier in their trajectory.”

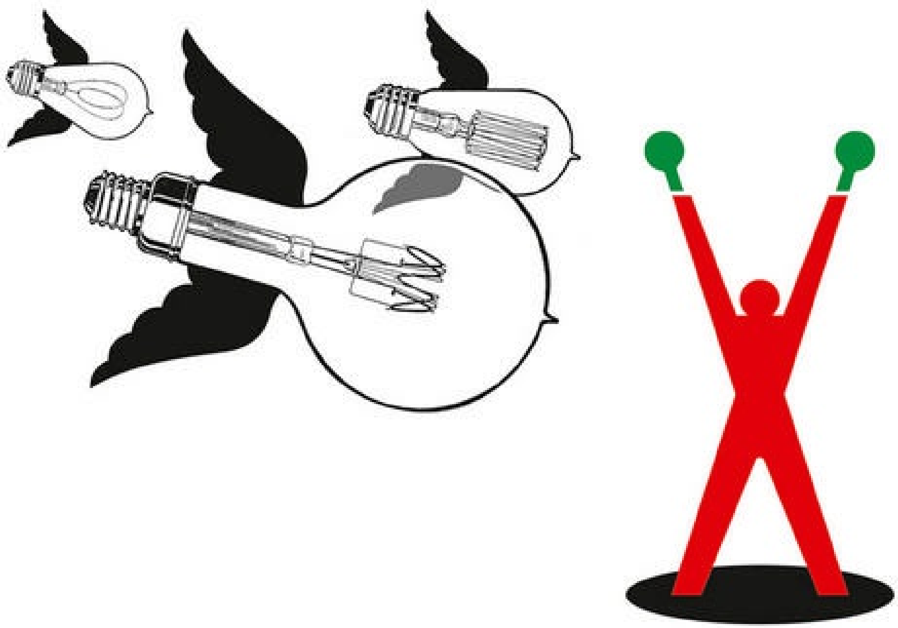
Take Indinero, which sells accounting software. Jessica Mah, the startup’s 28-year-old boss, was born and raised in New York City. She started her first company in middle school and moved to the University of California, Berkeley, to study computer science. After graduating she went to Y Combinator, the prominent boot camp for startups in Mountain View. In

2009 she started Indinero in San Francisco. What could be more Silicon Valley?

But by 2014 Ms Mah had realised that "there was no way for me to build a profitable business in the Bay Area. I had to expand elsewhere." She asked her employees to relocate, both to other American cities and to the Philippines. Today the firm employs 200 people, but only around 30 of them are in the Bay Area. Portland is its official headquarters. Ms Mah's life is a ceaseless round of virtual meetings and real travel, but she reckons that building her startup in more affordable cities has enabled her to save millions of dollars.

Such a decision does not just cut costs. Hiring in other cities reduces the odds of talented employees being poached by the tech giants and other startups—especially engineers, who are in high demand. Indeed a startup in a place with cheaper housing and less crowded freeways (even on a comfortable corporate bus with Wi-Fi, a two-hour commute is a pain) can become the poacher. San Francisco has many charms, but it is not particularly salubrious. People regularly encountering used drug needles, human excrement and sidewalks full of homeless people when they arrive home late at night at their $4,000-a-month one-bedroom flat in San Francisco sometimes think they might just prefer it elsewhere.

This dispersion of startups embodies a deep irony. The technology industry, which has disrupted nearly all other sectors, is disrupting itself. The communications tools and virtual workplaces that Valley firms have pioneered let teams work productively across cities and time zones without ever meeting one another in person. The headquarters in Dallas to which Ms Haidar relocated WNDYR, the productivity startup, contains only four of its 33 employees. The far-flung crew communicates through Telegram, an instant-messaging app, talks with clients through Slack, uses Zoom for meetings and collaborates on goal-setting with software from Lucid and Google.



Mikel Jaso

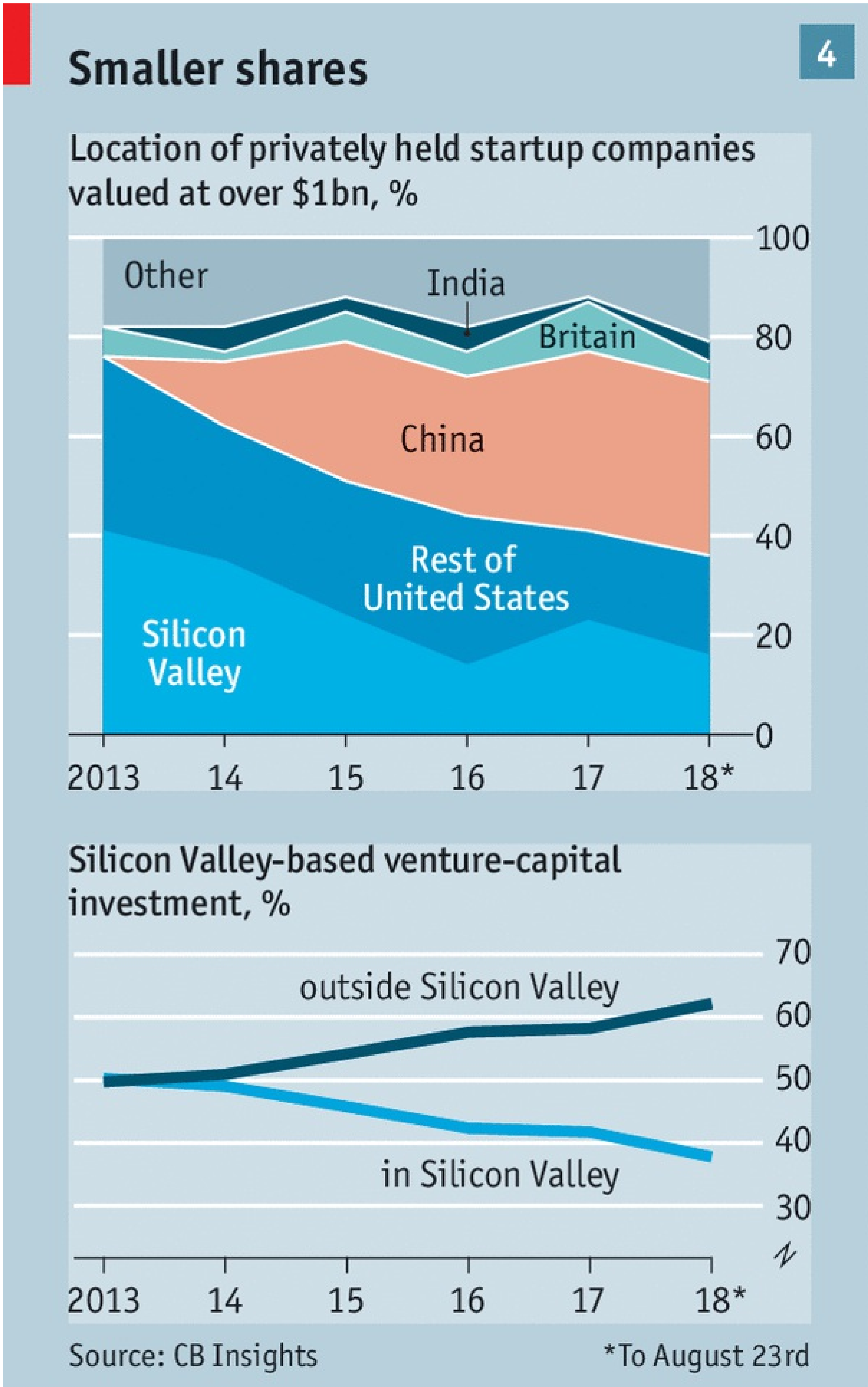
This does not mean that all places have become equal. Startups thrive on “network effects”: entrepreneurs, like internet users, tend to cluster where their peers are. Having a world-class university or two nearby can be very important for such hubs, especially if they actively encourage commercial activity, as Stanford has. It also helps to have an “anchor tenant” that validates the place and draws employees there; they can then leave to start their own companies or work elsewhere. This is one reason that Seattle, home to the two of the world’s biggest five companies not based in the Valley, is doing so well.

A strange vibration

Being a place where people want to live helps a lot, too. Putting together such a package does not in itself create a Silicon Valley simulacrum: history, culture and a lot of established venture capitalists are not easily replicated. But it does well enough. “There are probably a dozen cities that are just as promising [as San Francisco in which] to start a tech company today,” says Peter Thiel, a feisty venture capitalist who will soon move from San Francisco to Los Angeles, a city which has welcomed many Valley refugees before him. It has its own growing tech scene—one that gained more attention when the online-media company Snap chose to set up shop there.

Portland, Oregon; Austin, Texas; Vancouver (close to the United States, but easier for foreign immigrants to come and work in); London; Berlin: they all fit the bill, and then some. After considering 23 factors, such as employee compensation, retention, taxes, available funding, ease of access to other cities and the weather, the cities that Ms Haidar saw as runners up to first-choice Dallas were Phoenix, Arizona and Boulder, Colorado. The Kauffman Foundation, a think-tank, now ranks the Miami-Fort Lauderdale area as number one in America for startup activity. As each grows, each offers more opportunities for people who decide to move on from their current job. Internationally, Beijing and Shenzhen are hugely important. Admittedly, they mainly appeal to Chinese entrepreneurs who can speak the language and navigate the local business environment; but that is a big pool. And some foreigners are giving it a go, too.

"Silicon Valley will continue to be the strongest innovation ecosystem in the world, but on a relative basis it will become less important," predicts Steve Case, the former boss of America Online. He now runs Revolution, a venture-capital firm based in Washington, DC, which is looking hard for investments outside the Bay Area. According to CB Insights, a research firm, in 2013 Silicon Valley-based investors put about half their money into startups outside the Bay Area; in the year to date, that share has risen to 62%. This has mirrored the geography of "unicorns": in 2013 some 41% were based in Silicon Valley; today only 16% are, with 35% headquartered in China (see chart 4).



The Economist

Even Silicon Valley's most conventional venture capitalists are preparing for geographical diversification. One storied firm with headquarters on Sand Hill Road in Palo Alto was recently considering signing a new ten-year lease for a larger office space in nearby San Francisco. It decided not to. "A decade from now we're going to be spending less time, not more time, in this area," explains one of the partners.

Coming to Silicon Valley to network and fundraise will continue to provide advantages; nowhere else will match it for apprenticeship or pilgrimage. "There's no place that's replacing Silicon Valley," says Mr Thiel. But it will be less critical to stay and set up shop here. "The Valley is going to become an idea instead of a place," predicts Glenn Kelman, the boss of Redfin, a property company. "Wall Street went through a similar transformation," he says, its name becoming shorthand for a whole industry. As tech firms set their sights on disrupting old-fashioned industries, like health care and logistics, they may find that it helps to be based in cities that claim deep expertise in these areas—and where garages housing startups are not just the stuff of museums and memory.

United States

- **Socialism in America: Shivering the chains** [Thu, 30 Aug 21:30]
  Socialism in America. The increasing popularity of socialism is more about stiffening Democrats' spines than revolution.
- **Hurricane deaths: Counting** [Thu, 30 Aug 21:30]
  Hurricane Maria was the most deadly storm in America since 1900. The final death toll in Puerto Rico was more than a hundred times the initial estimate.
- **Honey fraud: The bee's needs** [Thu, 30 Aug 21:30]
  The scourge of honey fraud. America's taste for honey is nectar for con men.
- **Googling the news: Fake views** [Thu, 30 Aug 21:30]
  .
- **Gender dysphoria: Trans parenting** [Thu, 30 Aug 21:30]
  Why are so many teenage girls appearing in gender clinics?. A new paper suggests this may be partly a social phenomenon.
- **Lexington: Shadows across the sunbelt** [Thu, 30 Aug 21:30]
  Arizona, and the Republican Party, after John McCain. The departure of both of Arizona's senators will weaken their party and country.

Shivering the chains

Socialism in America

The increasing popularity of socialism is more about stiffening Democrats' spines than revolution

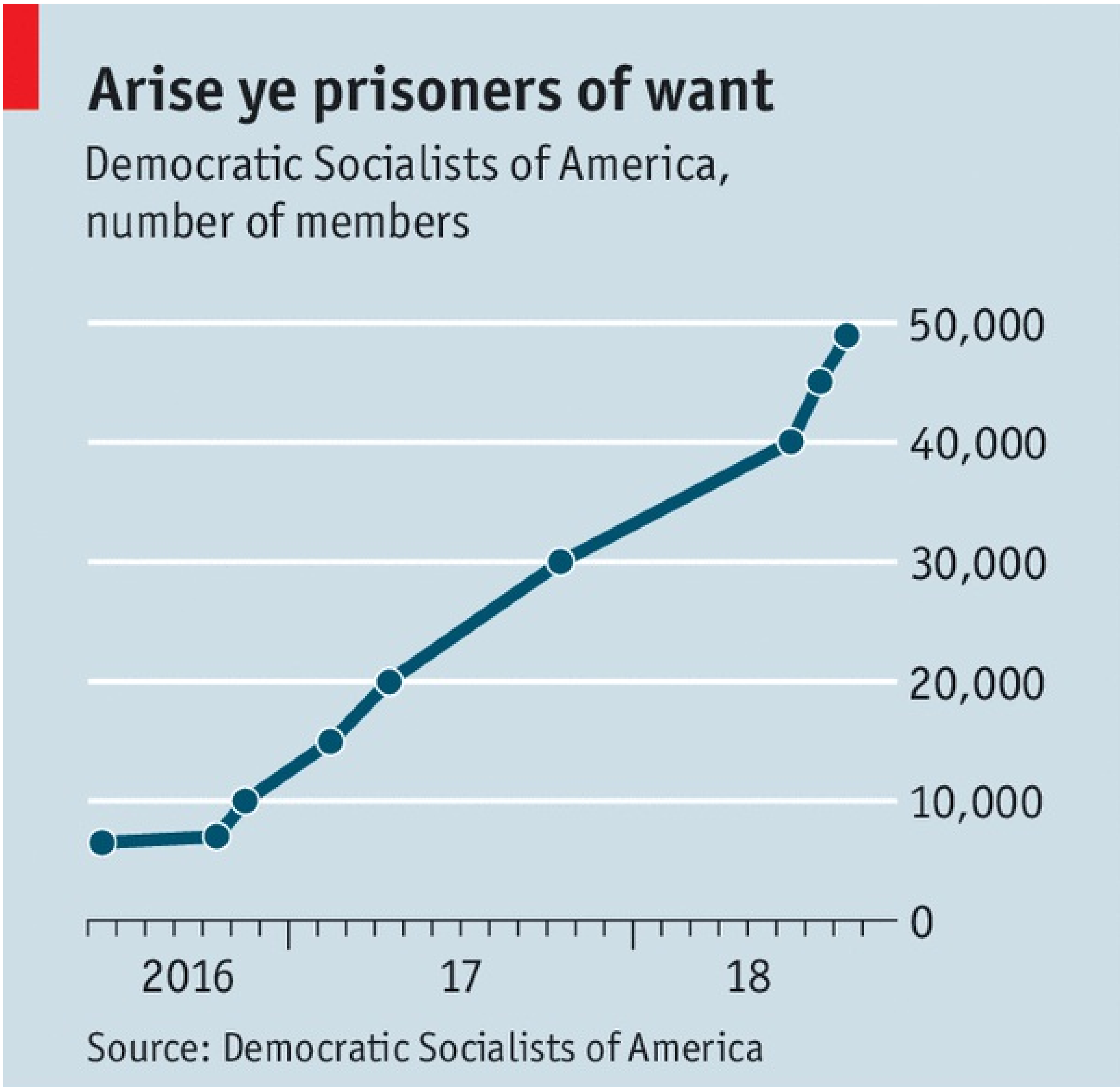
Aug 30th 2018 | BOZEMAN, MONTANA

BOZEMAN, MONTANA is the birthplace of Ryan Zinke, the federal secretary of the interior, and the home of Steve Daines, Montana's Republican junior senator, and Greg Gianforte, the state's reporter-thumping Republican congressman. But the public-comments part of Bozeman's city commission meeting on August 20th was dominated entirely by socialists. They did not sing the Internationale, or demand public ownership of the means of production. Instead, the ten members of the Bozeman Democratic Socialists of America (DSA) thanked the commission for raising city workers' minimum wage to $13 an hour, and urged them to raise it to $15 over the next two years.

Republicans are using such people to stoke outrage. Newt Gingrich, eternally eager to pitch any disagreement as an eschatological conflict, warns that socialists are “demons” whom the Democrats are “unleashing to win elections”. Alexandria Ocasio-Cortez, a DSA member likely to win election to Congress in November, has joined Nancy Pelosi in the right’s bogeyman pantheon (a Republican mailing called her “mini-Maduro”, referring to Nicolás Maduro, the tyranical president of Venezuela). Looking past the label, however, American socialists are more progressive Democrats than Castros in waiting—and their rise poses more of a challenge to the Democratic Party than to capitalism.

Still, socialism is having a moment in America unlike any since, perhaps, 1912, when Eugene Debs, the socialist candidate, won 6% of the popular vote. Between the DSA’s founding in 1982 and the election of 2016, its membership hovered at a relatively constant 6,000—the same people, says Maurice Isserman, a professor at Hamilton College and charter DSA member, “just getting greyer”. Since President Donald Trump’s election, however, its membership has risen more than eightfold, and may soon exceed 50,000 (see chart). DSA members have lost nearly all of the primaries they have contested, but two will almost certainly be elected to the next Congress: Ms Ocasio-Cortez and Rashida Tlaib, from Detroit. A recent Gallup poll showed that 57% of Democrats have positive views about socialism.

But the poll never defined “socialism”, so precisely what people were expressing support for remains unclear. For decades, the cold war defined it, at least for most Americans. They were capitalist and free, while socialism was a step removed, at best, from Soviet communism. Americans under 30 have no memory of the cold war. To them, socialism may be little more than a slur they have heard Republicans hurl at Democrats—particularly Barack Obama. They may well have reckoned that if supporting universal health care, more money for public education and policies to combat climate change are all socialist, then they are happy to be socialist too.



The Economist

During Mr Obama's presidency, political energy came from the Republican Party's right flank; under Mr Trump's it comes from the Democrats' left. The centre of American politics is having trouble holding. Jessie Kline, the 24-year-old vice-chairman of Bozeman's socialists, worked for mainstream Democrats, but joined the DSA because "nobody wanted to talk about the underlying cause of why people are poor…The establishment treats politics as a career. Morality and ethics never came into it."

Still, America is not about to undergo a socialist revolution. It is too ideologically diverse and fractious; individualism is wired too deeply into the country's political culture. Maria Svart, the DSA's national director, says that her group "doesn't see capitalism as compatible with freedom or justice or democracy", but good luck winning elections with that slogan (indeed, candidates endorsed by Democratic Party organs have won far more primaries than those endorsed by Our Revolution, which grew out of Bernie Sanders's campaign). In any event, democratic socialism is not revolutionary communism. Sara Innamorato, a DSA member who won her primary in May and will probably represent a heavily Democratic district of south-western Pennsylvania in the state legislature, says that "capitalism isn't working…but I don't think that capitalism and socialism are necessarily opposites. There are good lessons to be gained from both."

Even the platform of Bernie Sanders, the socialist who gave Hillary Clinton a run for her money in the 2016 Democratic primaries, left capitalism fundamentally intact, calling instead for a broader and more redistributive social safety-net. His supporters seem enamoured of Nordic-style social-welfare policies. But those countries are not socialist; they are free-market economies with high rates of taxation that finance generous public services. Indeed, the "socialist" part of those countries that Mr Sanders's fans like would be unaffordable without the dynamic capitalist part they dislike.

Perhaps the surest sign that American socialists are not revolutionaries is their willingness to work within the two-party system. Ms Innamorato and Summer Lee, another DSA-endorsed candidate for the Pennsylvania legislature, as well as Ms Ocasio-Cortez and Ms Tlaib, are all Democrats, as is Mr Sanders, for practical purposes (he is an independent but caucuses with Senate Democrats). Mr Sanders and Ms Ocasio-Cortez have campaigned for other Democrats. Mr Isserman contends that DSA members "are not utopian, and we certainly don't believe in Bolshevik-style revolution". He approvingly cites Michael Harrington, the DSA's founder, who said that the group should represent "the left wing of the possible".

Leftward, ho!

In that role, they are succeeding wildly. On August 28th Andrew Gillum, wielding an endorsement from Mr Sanders, pulled off a surprise victory in the Democratic primary race for governor in Florida—a state that has long preferred bland, centrist Democrats. Mr Gillum wants to see universal health care, a $15 minimum wage, a more compassionate immigration policy, corporate-tax hikes to fund public education, stricter gun-control laws and the legalisation of marijuana. Most of these positions were lefty pipe-dreams a decade ago. Today they are *de rigueur* for Democrats with presidential ambitions.

Some have gone further: Mr Sanders, as well as Cory Booker and Kirsten Gillebrand, senators from New Jersey and New York, respectively, have made favourable noises about a federal jobs guarantee. Mr Gillum thinks Mr Trump should be impeached. Such proposals are dead in the water, for now: Republicans control Congress and the White House. But that is not the point. These are political statements designed to signal support for a bold, activist government and an unwillingness to triangulate, or compromise with the voters who put Mr Trump in the White House.

Still, the DSA's apparent influence on the party makes some nervous. One longtime strategist frets that the distinction between democratic and Soviet-style socialism is "fairly fine for most voters, and it comes with a lot of baggage". Over the next couple of years, through debates that Democrats must hope will prove robust but not fracturing, the party will work out whether and how to carry that baggage.

A chronicle of deaths untold

Hurricane Maria was the most deadly storm in America since 1900

The final death toll in Puerto Rico was more than a hundred times the initial estimate

Aug 30th 2018

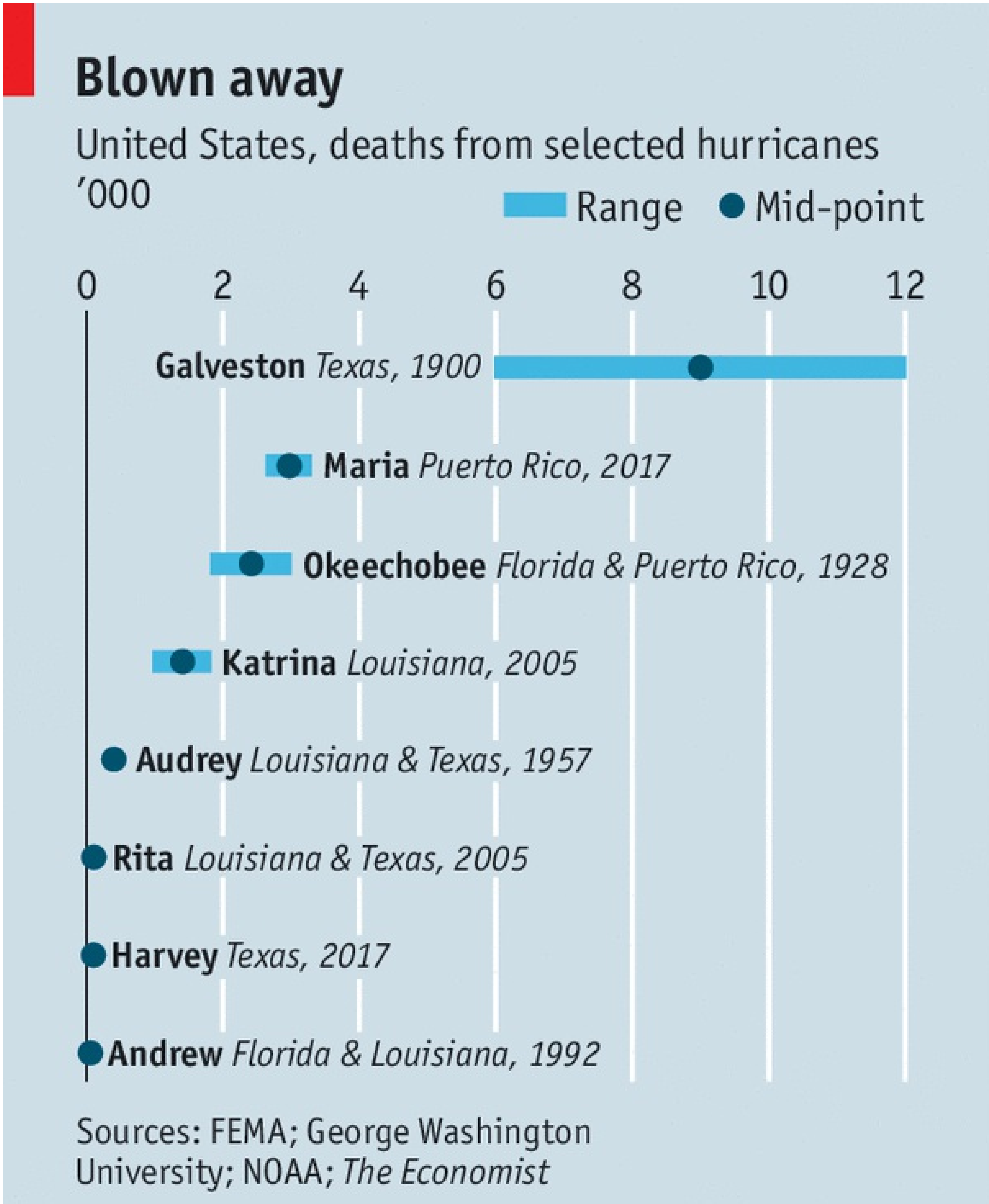
WITH vicious winds gusting at 120mph, the hurricane that made landfall in Puerto Rico on September 20th 2017 was expected to be deadly. Hurricane Maria wrought destruction across the island, cutting power, communications and drinking water to nearly every home. Yet most of the 3.3m islanders appeared to escape the worst fate: two weeks later, the official death toll reported by the island's government was just 16 people.

President Donald Trump made much of the low death count when he visited San Juan on October 3rd. "We've saved a lot of lives…If you look at a real catastrophe like Katrina and the hundreds that died…16 versus literally thousands of people…you can be very proud." Although the death toll rose slowly over the weeks that followed, from 16 to 64 deaths, it remained surprisingly low given the severity of the storm.

Suspicious that the true figure was higher, several others attempted a better guess. In December the *New York Times* analysed mortality reports and reckoned that the hurricane had killed as many as 1,052 people in the period to October 31st. A paper published in the *New England Journal of Medicine* in May surveyed hurricane survivors and calculated that anywhere between 793 and 8,498 people had perished.

The island's governor, Ricardo Rosselló, was suspicious of the official toll, too. It mostly counted direct deaths from flying debris and the like, overlooking deaths from power cuts and lack of water that led to medical complications. In February Mr Rosselló commissioned an independent report by epidemiologists at George Washington University to arrive at a more accurate count.

That report was released on August 28th, fully 342 days after the hurricane made landfall. The academics calculated a final figure based on the observed excess mortality over and above what might be expected in normal weather. In total they rest on a final death count of between 2,658 and 3,290. That would make Maria the worst hurricane to affect America for 118 years (see chart).



The Economist

It is absurd that the death toll of 64 remained official for so long. Although ascertaining good data on deaths after a natural disaster is difficult—the official death count from hurricane Katrina in 2005 is still disputed—the governor's office could have done a lot more to communicate the inherent uncertainty in the official count. After New Orleans was hit by Katrina, its mayor simply said the death toll would "shock the nation".

By contrast, the low number in Puerto Rico may well have lessened the urgency of relief efforts. A third of Americans said they donated money in the immediate aftermath, which is low by the country's generous standards. Meanwhile Puerto Rico is bankrupt, the economy will shrink 8% this year and the young and talented are leaving in droves. The number of tourists has halved. And the island is still waiting for around $80bn of federal funds to help its recovery.

Bee’s needs

The scourge of honey fraud

America’s taste for honey is nectar for con men

Aug 30th 2018 | NEW YORK

ACCORDING to the National Honey Board, per person consumption of the regurgitated nectar has doubled in America since the 1990s. As demand has increased, prices have followed. Domestic production has not. In 2016 American bees produced 73,000 tonnes of honey, or 35% less than they did 20 years ago. This has given honey-sellers an incentive to dilute it with cheaper things like corn, rice and beet syrup. According to the US Pharmacopeia’s Food Fraud Database, honey is now the third-favourite food target for adulteration, behind milk and olive oil.

The mismatch between domestic production and demand means America imports a lot of honey (203,000 tonnes of it in 2017). Most once came from Argentina, Brazil, Canada, Mexico and Uruguay, but now nearly half comes from Asia. High tariffs are imposed on Chinese honey, disguised versions of which drizzle into America via China’s neighbours.

Although there are tests to screen honey for things that do not belong in it, Elemental Analysis Isotope Ratio Mass Spectrometry, the most common method, is over 25 years old. As honey fraudsters have become more sophisticated, the technology to catch them has too. A newer test that uses nuclear magnetic resonance is more effective, according to Norberto Garcia, chairman of the United States Pharmacopeia Expert Panel on Honey Quality and Authenticity. In addition to screening for over 40 unnatural substances, it can spot the geographical origin and botanical source (clover, heather, hawthorn, etc). “Honey fraud”, cautions Mr Garcia, “is a threat to national food security.”

The Food and Drug Administration (FDA) is alert to the scourge of honey fraud, and has published guidelines which require any additives to honey to be listed as ingredients. But they are not legally enforceable. One problem is that the FDA’s definition of honey is rudimentary. It describes honey as “a thick, sweet, syrupy substance that bees make as food from the nectar of plants or secretions of living parts of plants and store in honeycombs.” This somewhat insults bees, who take great care to deposit, dehydrate and allow their honey to ripen in the honeycomb, a process which is important to its taste. Fraudsters often harvest prematurely, leaving the liquid with a high water content. Nor does this definition take a clear position on whether something sold as honey should be free of additives.

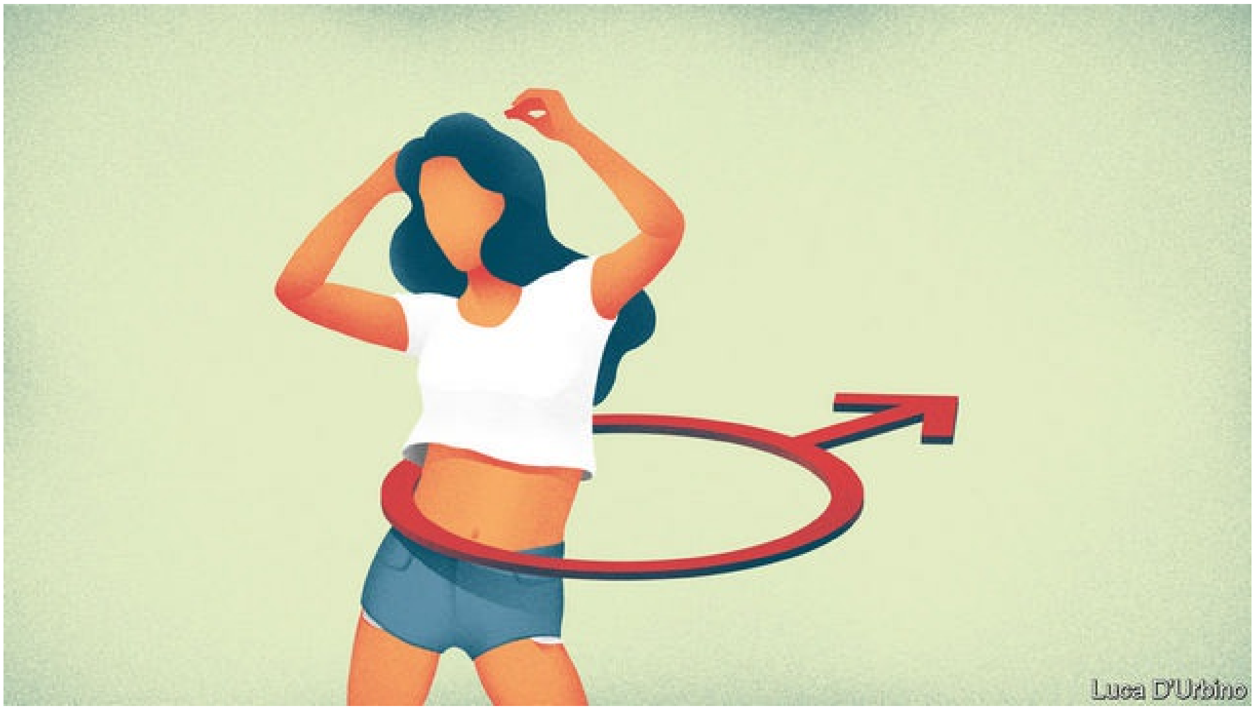
In addition to producing honey, bees have found more lucrative work, pollinating one-third of the crops grown in America. “Most of the fruits and vegetables we eat wouldn’t be here if it weren’t for them,” said Gene Brandi, a beekeeper in northern California. A 40-year veteran of the bee business, Mr Brandi now makes more money from renting his bees out as pollinators than he does from selling the honey they produce. In February and March, when California’s almond trees are blooming, his bees, along with about 30bn others, are drafted to pollinate California’s 1.3m acres of almond trees.

This apian fiesta involves up to 90% of the commercial bee population in America, leaving few bees to pollinate everything else that requires their attention, a source of controversy in agricultural circles. Still, Mr Brandi can earn $180-200 per bee colony, or quadruple what he did just over a decade ago. Other crops like raspberries, blackberries, cherries, cantaloupes and apples aren’t as lucrative to pollinate, but they beat the $2 per lb he gets for honey. Longer winters, drier summers and diseases like varroosis have made it harder for bees to survive. But man can only imitate what these most industrious creatures do; they can’t bee bettered.

Trans parenting

Why are so many teenage girls appearing in gender clinics?

A new paper suggests this may be partly a social phenomenon



Aug 30th 2018

JANETTE MILLER wasn't exactly surprised when her daughter came out as transgender five years ago. A feminist who rarely wears make-up or dresses, she brought Rachel up to disregard gender stereotypes (these are not their real names). As a child Rachel enjoyed rough-and-tumble play; as a teenager, she dated a girl. What shocked Ms Miller was her daughter's declaration that she wished to make her body more masculine by taking testosterone and having a mastectomy. "She had never once said, 'I feel like a boy'," says Ms Miller. "She loved being a girl."

After Ms Miller started to research what a medical transition entailed, she told Rachel that "it was fine for her to identify however she wanted", but she would not permit her to take testosterone, some of the effects of which are irreversible, or have "top surgery" until she was 18. They fought for months. Rachel says it felt "almost like a life-or-death situation."

Typically, adolescents first show symptoms of gender dysphoria, the clinical term for the distress caused by the feeling that one's body does not match one's gender, in childhood. But in the past decade clinics in Western countries have reported that a growing number of teenagers have started experiencing gender dysphoria during or after puberty. And whereas these young adults used to be predominantly male, now they are more likely to be female. In 2009, 41% of the adolescents referred to Britain's Gender Identity Development Service were female; in 2017, 69% were.

Lisa Littman, an assistant professor of behavioural and social sciences at Brown University, was curious about what was causing these changes. She had come across reports from parents on online forums describing a new pattern of behaviour: adolescents without a history of childhood gender dysphoria were announcing they were transgender after a period of immersing themselves in niche websites or after similar announcements from friends. Her study suggests that these children may be grappling with what she calls "rapid-onset gender dysphoria".

For the study, Ms Littman recruited 256 parents of children whose symptoms of gender dysphoria suddenly appeared for the first time in adolescence. These parents—Ms Miller among them—took part anonymously in an online, 90-question survey. Ms Littman's findings suggest that a process of "social and peer contagion" may play a role. According to the parents surveyed, 87% of children came out as transgender after spending more time online, after "cluster outbreaks" of gender dysphoria in friend groups, or both. (In a third of the friendship groups, half or more of the individuals came out as transgender; by contrast, just 0.7% of Americans aged between 18 and 24 are transgender.) Most children who came out became more popular as a result. Rachel, Ms Miller's daughter, says that when she told her friends, all of whom she had met online, they congratulated her: "It was, like, welcome home."

Ms Littman thinks that some adolescents may embrace the idea that they are transgender as a way of coping with symptoms of a different, underlying issue. Almost two-thirds of the children had one or more diagnoses of a psychiatric or developmental disorder preceding the onset of gender dysphoria; nearly half had self-harmed or experienced some trauma. This is consistent with other studies of gender dysphoria when it sets in during puberty. Some people distract themselves from emotional pain by drinking, taking drugs, cutting or starving themselves. Ms Littman suggests that, for some, gender dysphoria may also be in this category.

The study has attracted heavy criticism. Some is reasonable. Though it is a solid first attempt to describe a recently observed phenomenon, it is qualitative rather than quantitative, and relies solely on interviews with parents, not children. Ms Littman posted links to her survey on three websites where parents and clinicians had described the abrupt appearance of adolescent gender dysphoria: 4thWaveNow, Transgender Trend and youthtranscriticalprofessionals. Referring to these sites as "anti-trans", Diane Ehrensaft, the director of mental health at a gender clinic in San Francisco, has written that "this would be like recruiting from Klan or alt-right sites to demonstrate that blacks really are an inferior race". Ms Littman replies that 88% of the parents in her study said transgender people deserve the same rights as others, which is in line with national opinion. Similar methodology is frequently used in social research, particularly into children.

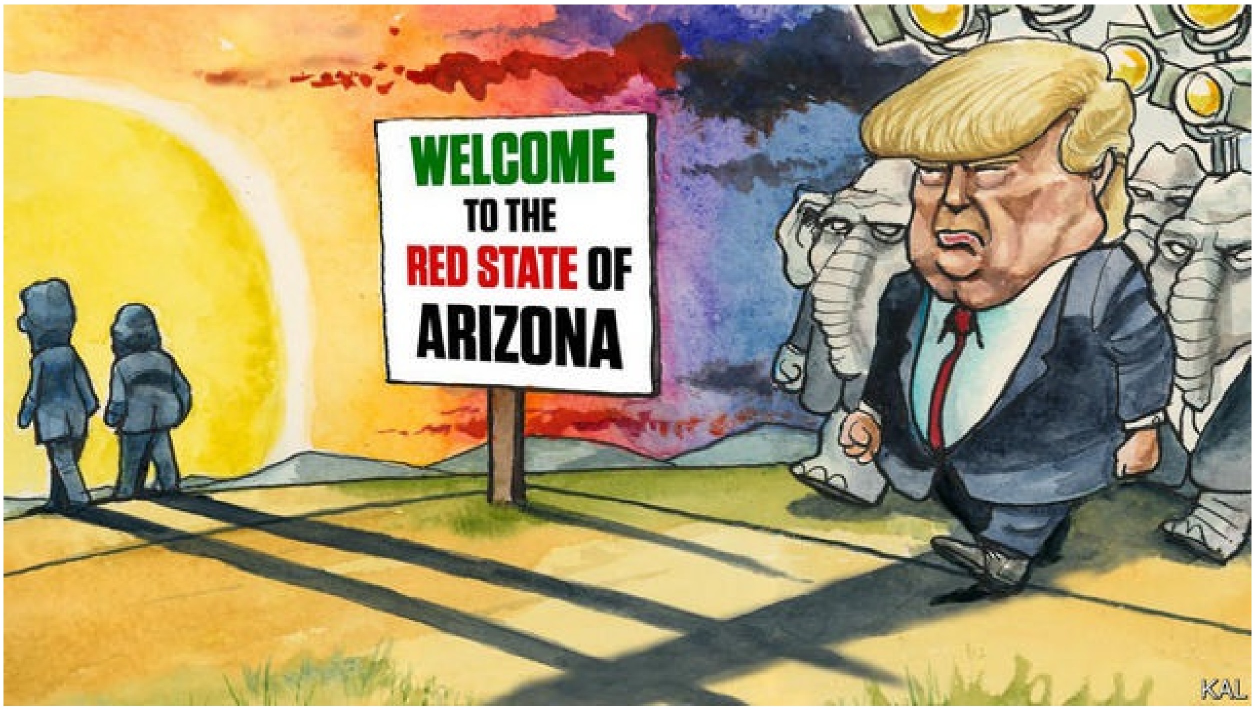
The reaction to publication of the study has gone beyond what might be expected in a regular academic dispute. Brown removed from its website a press release advertising her research, noting that PLOS ONE, the journal in which the study was published, was seeking "further expert assessment". In a later statement, the university said: "There is an added obligation for vigilance in research design and analysis any time there are implications for the health of the communities at the centre of research and study." Parents and academics have in turn attacked Brown for caving to pressure from trans activists.

Squashing research risks injuring the health of an unknown number of troubled adolescent girls. Rachel, now 21, believes she latched on to a trans identity as a way of coping with on-off depression and being sexually abused as a child. After receiving therapy, her gender dysphoria disappeared. Had her mother affirmed her gender identity as a 16-year-old, as several gender therapists urged, Rachel would have embarked on a medical transition that she turned out not to want after all.

Lexington

Arizona, and the Republican Party, after John McCain

The departure of both of Arizona's senators will weaken their party and country



Aug 30th 2018

AS REPUBLICAN voters turned out in Phoenix on August 28th to nominate a successor to Senator Jeff Flake, Arizona's capital was festooned with memorials to his colleague John McCain. On the rocky knolls that scatter the sprawling, low-rise city, American flags drooped at half-staff. Billboards gave thanks for Mr McCain's service. The state capitol building was being readied to receive his body, ahead of its journey to Washington, DC. The leading contenders to replace Mr Flake, Martha McSally and Kelli Ward, issued pre-primary statements on his dead confrere. The departures of the two senators melded together.

This was appropriate. Almost alone among their more spineless colleagues, Mr Flake and Mr McCain were outspoken defenders of free trade, workable immigration reform, balanced budgets and the rule of law against the ravages of President Donald Trump. It made them representative of the pre-Trump Republican Party. And if the primary contest that played out this week is a guide, their exit is another marker in its demise.

The victor, Ms McSally, a former fighter pilot and member of the House of Representatives, holds similar views to the departing senators. Yet to fend off Ms Ward, an immigration obsessive, conspiracy theorist and Trump acolyte, she veered to the right on immigration and swallowed her erstwhile differences with the president entirely. Ms McSally likes to portray herself as a plain-speaking military type. Yet at a ceremony in mid-August to mark the signing of a military-spending bill named in Mr McCain's honour, she carefully followed the president's petulant lead and omitted to mention the dying senator. It was a "disgraceful" display, said his daughter Meghan.

To be sure, even before Mr Trump's takeover of their party, few Republicans dared speak sensibly about immigration in a primary contest. In 2010 Mr McCain helped fend off a challenger by wearily vowing to "complete the danged fence!" And the issue is at least pertinent to Arizona, which has 370 miles of border with Mexico and a history of illegal immigration. Yet the extent to which Ms McSally was drawn into mud-wrestling with her weaker Republican opponents on the issue was unexpected and dispiriting. And it was damaging to her prospects given how the state is changing. The many independent voters she now needs do not share the Republicans' border fixation. In a state whose growing suburbs and non-white population look a lot like California 20 years ago, they may even be shifting to the left.

They certainly dislike Mr Trump. The president won Arizona by only three points, much less than his recent Republican predecessors (including Mr McCain, during his presidential run in 2008). And his ratings in the state have since plummeted, especially among college-educated whites, an important swing group. This leaves Ms McSally in a tough fight for a Senate seat that her party last lost in 1988. Opinion polls put her Democratic opponent, Kyrsten Sinema, comfortably ahead. They also suggest the Democrats could win five of the state's nine House districts.

This does not mean the Republicans face a California-style collapse in Arizona. Its Hispanic population, around a third of the total, may be similar to California's two decades ago, but its white population is larger and more conservative than California's was. It is also being topped up by pensioners from the Midwest, drawn by cheap housing and constant sunshine. In Ms Sinema, an able moderate, the Democrats also have an exceptional candidate. And they have a helpful House-district map. These are one-off advantages that could produce a few Democratic wins, then reversion to Republican control. Arizonans may be as worried about health care as immigration; they are not lefties yet.

The Republicans are in trouble nonetheless. Their vulnerability in Arizona and other formerly reliable western states, such as Nevada, is the inescapable flipside of the course Mr Trump has launched them on. The racially divisive immigration-aversion that has won them support in the rustbelt is costing them in the sunbelt. That would be even more obvious had Ms Ward won the Arizona primary. And if she had not faced competition on the populist right from Joe Arpaio, a former sheriff and convict pardoned by Mr Trump, she could have done. Though vastly outspent by Ms McSally, the two populists won almost half the vote.

This was also despite antics that many non-partisans would consider repugnant. A few days before Mr McCain's death, Ms Ward suggested that the release of a statement announcing the cessation of his medical treatment was intended to distract attention from her campaign. She suspected it was aimed in particular at a bus trip she had planned with a group of right-wing nuts, including Mike Cernovich, who is best-known for claiming Hillary Clinton was involved in a non-existent child sex cult operating from a Washington pizzeria. It is safe to assume any distraction caused by Mr McCain was inadvertent. Yet Ms Ward and her whacko pals illustrate another reason to fear for his party's future.

Mad as hell

The historian Richard Hofstadter famously diagnosed a "paranoid style" of American politics liable to arise wherever "the normal political processes of bargain and compromise" break down. He had in mind the rise of another uncompromising Arizonan Republican, Barry Goldwater, whose Senate seat Mr McCain occupied. Yet the psychosis and breakdown he described are even truer of Mr Trump's politics and the proliferation of hucksters, conspiracy theorists and strange ideologues it has ushered into American public life. Non-aligned voters may find the character of the president's party as off-putting as any of its policies.

Principled Republicans do, too. "We weaken our greatness when we confuse our patriotism with tribal rivalries," wrote Mr McCain in a farewell letter. "We weaken it when we hide behind walls, rather than tear them down." So much for the danged fence he claimed to want. He will be missed.

The Americas

- **Nicaragua: Ortega holds on** [Thu, 30 Aug 21:30]
  Daniel Ortega tightens his grip on Nicaragua. But an economic slump could eventually weaken the president’s power.
- **Natural disasters: Getting over Maria** [Thu, 30 Aug 21:30]
  Getting over Hurricane Maria. Some people and businesses have given up on disaster-prone Dominica.
- **Cuba: Where the rubber hits the road** [Thu, 30 Aug 21:30]
  The many uses of condoms in Cuba. They’re good for fishing, too.
- **Ecuador: The power of the purge** [Thu, 30 Aug 21:30]
  Julio César Trujillo is Ecuador’s second-most powerful man. An elderly lawyer shakes up the country’s institutions.

Unloved but unbudgeable

Daniel Ortega tightens his grip on Nicaragua

But an economic slump could eventually weaken the president's power

Aug 30th 2018 | MANAGUA

TWO months ago Monimbó, a neighbourhood of Masaya, south-east of Managua, was in turmoil. Opponents of Nicaragua's authoritarian president, Daniel Ortega, had taken over the city. Roadblocks guarded by masked men defended it from government forces. The opposition's short-lived rule was the peak of a widespread uprising against Mr Ortega, in which perhaps 320 people died. Monimbó was the first place to rise up against the Somoza dictatorship, which Mr Ortega overthrew in 1979. In July this year it was the last to fall as his paramilitary forces retook Masaya.

Now the neighbourhood seems calm. Street sweepers, who have been back at work for a fortnight, clear up rubbish while the police look on. Young men, who led the fight, "have all left", says a shopkeeper. Most have joined the 23,000 Nicaraguans who have sought asylum in Costa Rica.

The four-month rebellion and the government's suppression of it have wrecked Nicaragua's economy but left the autocrat firmly in power, at least for now. The economy had been one of the strongest in Central America, with annual growth of 5%. This year GDP is expected to shrink by nearly 6%. In the three months to June the formal workforce shrank by a tenth. Tourism, which accounts for 5% of GDP, has plummeted. On a recent Friday stray dogs outnumbered tourists on the promenades in Granada, a lakeside resort. Some $1bn in capital, the equivalent of 8% of GDP, has left the country, weakening the banks.

Despite the slump, the challenge to Mr Ortega's rule has ebbed. It began in April as a protest against cuts to pensions, which the government soon reversed. It quickly became an expression of anger at his subversion of democracy since 2007, when he returned to power after a 17-year absence. He rigged elections, disbanded opposition parties and scrapped presidential term limits. Last year Mr Ortega named his wife, Rosario Murillo, who runs the government day to day, as his vice-president. Many of Nicaragua's leading businessmen, a pillar of support for the ostensibly left-wing president, backed the protesters' call to hold an election next year rather than in 2021. Momentum seemed to be with the protesters.

The turning point

That changed after paramilitary troops killed 16 peaceful protesters in a massacre on May 30th, Nicaragua's Mothers' Day. The private sector lost its nerve; Mr Ortega did not. Armed groups loyal to the regime wrested control of university campuses and towns back from dissidents. Gangs invaded properties owned by the regime's critics. The army looked on.

The government is hunting down its opponents. They face "exile, jail or death", say its spokesmen. During the unrest "Citizens' Power Councils", Cuban-style local spy networks, took notes on troublemakers. Now police are sending some to clandestine prisons where they are tortured. The government has sacked 135 medical staff who treated wounded dissidents. Only the most committed protesters attend the sporadic demonstrations that still take place. "I used to go to all of them," says one dissident. "But now I just feel numb."

Despair could become anger again as the economic situation worsens. The regime's blighted image will discourage investors. Many talented Nicaraguans have left. Venezuela, which has given $4bn in aid over ten years, has stopped providing the money because its own economy is collapsing. In July Nicaragua's government passed a budget that reduces spending by nearly 10%, double the cut that took place after the global financial crisis. It will cancel projects like building roads, which will lead to job losses in construction. It will have to reinstate unpopular cuts to pensions, but that will not be enough to close a huge deficit in the pension system.

It is desperate for cash. It has raised short-term loans to provide liquidity to banks and plans to issue new bonds, though it is unclear whether foreign investors will buy them. Mr Ortega may try to replace Venezuelan support with financial aid from Russia or China, whose communist government Nicaragua does not recognise. Without outside help, he will have difficulty continuing to supply his poor supporters with benefits such as microloans in return for their votes.

The middle class has turned definitively against him. One resident of Managua says that Mr Ortega's younger children are no longer spotted in the capital's bars and supermarkets. He may take comfort from Venezuela's president, Nicolás Maduro, who has kept power even though the economy has shrunk by 40% since 2013. Like him, Mr Ortega is unloved, and for the time being unbudgeable.

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Natural disasters

Getting over Hurricane Maria

Some people and businesses have given up on disaster-prone Dominica

Aug 30th 2018

LAST September two category-five hurricanes battered the Caribbean. First came Irma, which hit a cluster of islands in the region's north-east and then Florida. Maria arrived two weeks later, hammering Dominica, an island state with a population of 74,000, on September 18th, and Puerto Rico two days later. Between them, the hurricanes caused colossal damage. In Puerto Rico alone, more than 3,000 people may have died in the six months since Maria struck.

In Dominica, Maria killed 65 people during the storm and its immediate aftermath. It damaged nearly every building, and destroyed a quarter of them. The house occupied by the prime minister, Roosevelt Skerrit, lost its roof. Maria felled the rainforest and knocked out the electricity, telecoms and water supplies. Landslides and fallen trees blocked roads.

There are now signs of recovery. Roads are clear, the mountainsides are green again and Roseau, the capital, is bustling. Most Dominicans replaced the blue tarpaulins that covered their houses after the storm with permanent roofs. Reconstruction should help the economy. The IMF expects GDP to shrink by 16% this year but to grow by 12% in 2019.

But normality has not returned. Much of the island has no electricity. Telephone land lines work only in Roseau and Portsmouth, the second-largest city. Although the hills are green again, the new growth is mainly vines around the skeletons of trees. After Hurricane David struck in 1979, it took woods two decades to recover.

This time, Dominica intends to become the world's "first climate-resilient nation". A "climate-resilient execution agency" is leading the rebuilding. Overseas donors have pledged $400m to it. But hurricanes are not the only disasters the island faces. It has nine potentially active volcanoes, including Morne Canot, which overlooks Roseau. Like the rest of the Caribbean, Dominica is vulnerable to earthquakes. Homeowners have secured houses against hurricanes by putting up concrete roofs, but these can be deadly in earthquakes.

Some people have given up on the disaster-prone island. Several thousand people have moved away. Pensioners from the Windrush generation, who moved to Britain in the 1950s and then returned to Dominica, have now gone back to Britain.

Dominica has lost the Ross University School of Medicine, an American-owned medical school, which brought 1,650 students to Portsmouth. This is a big blow. Ross was the main institution in a private-university sector that accounted for around 8% of GDP, perhaps double that counting the services the students used. After Maria, Ross's students moved to a cruise ship moored off St Kitts and to Tennessee. In August the university announced that its new home would be Barbados, which has better air links and plusher facilities.

This leaves Dominica with a narrowly based economy. Banana exports, which brought in a third of foreign earnings a generation ago, dwindled to nothing since 2008, when the EU ended privileged access to its market.

Dominica’s main manufacturing plant, which made soap and toothpaste, closed after Tropical Storm Erika struck three years ago. With few white-sand beaches, Dominica does not attract many tourists apart from nature lovers and cruise-ship passengers. Mr Skerritt, the world’s youngest head of government when he took office in 2004 at the age of 31, wants to build an international airport.

The money pledged by foreign governments for reconstruction has been slow to arrive. Unlike most other victims of Irma and Maria, Dominica does not have formal political links to a richer country. It has so far paid for the work mainly from the sale of passports to foreigners. A Dominican passport offers visa-free travel to 136 countries, including Britain and Europe’s Schengen area. The government charges $100,000 or more to people from countries whose passports are less widely welcomed. Proceeds from the “citizenship by investment” scheme account for half the government’s revenue. They have paid for job-creation schemes and the construction of three hotels in Portsmouth. But Schengen-area countries could crack down on countries that try to game their visa systems by selling passports. Not all the disasters that Dominica faces are natural ones.

Where the rubber hits the road

The many uses of condoms in Cuba

They're good for fishing, too

Aug 30th 2018 | HAVANA

CHILDREN in Havana use them as slingshots. At birthday parties and concerts they are makeshift balloons. Women use them to secure their ponytails. Drivers use lubricated ones to shine the dashboards of their vintage Chevys. Revellers sneak them into nightclubs, filled with rum. Fishermen use inflated ones as floats. Winemakers stretch them over the necks of large glass bottles, which they use instead of oak casks. An erect one means fermentation is still producing carbon dioxide; a deflated one means that the process is complete.

Condoms have lots of uses in communist Cuba, where many essential goods are in short supply. Islanders claim, implausibly, that during the "special period" of hardship that followed the collapse of the Soviet Union in 1991, people used them as pizza toppings.

Cubans are ingenious in their use of condoms in part because they are cheap. Subsidised by the government, a pack of three costs ten pesos (four cents). The subsidy is one manifestation of the government's keenness on family planning and sexual health. Cartoons shown before some film screenings emphasise the importance of safe sex (there is no commercial advertising). Nightclubs that attract mainly gay men show videos promoting safe sex, a way of avoiding trouble from officialdom. HIV infection rates in Cuba are among the lowest in the Americas, though they nearly doubled between 2010 and 2016 for reasons that are unclear. Cuba's birth rate of 1.6 per woman is well below that needed to keep the population from shrinking.

Other forms of birth control, such as the pill and injectable contraceptives, are hard to find, so people rely on condoms. That does not mean they are popular. Moments and Vigor, mostly made in India, Malaysia and Indonesia, are the most readily available brands. "Their scent is unforgettable, and not in a good way," says a young woman in Havana. When friends or relatives go abroad she asks them to bring back Durex, an American make, specifically "the ones in the purple box".

But even Moments can be hard to find. In 2012 a shipment of several million arrived bearing labels with expiry dates in the same year. After testing some, the supplier realised they had been mislabelled and would be good until 2014. Because Cuba could not afford to waste so much stock, the government relabelled the boxes by hand. That took nearly two years, at which point the sell-by date had come and gone. The data do not show that Cubans had more children as a result of this supply glitch. So they probably caught fewer fish.

The power of the purge

Julio César Trujillo is Ecuador’s second-most powerful man

An elderly lawyer shakes up the country’s institutions

Aug 30th 2018 | QUITO

IN 1984 Julio César Trujillo ran for president in Ecuador. He did not do well, winning less than 5% of the vote. Now, as head of the Citizens’ Participation and Social Control Council (CPCCS), Mr Trujillo holds a job that makes him almost as powerful as the country’s current president, Lenín Moreno. “I don’t know whether to thank God for not having won the presidency because I would have ended up just being one of those many presidents Ecuador has had,” says the 87-year-old lawyer. From an office in Quito decorated with an Amazonian spear, two machetes and a rope whip with opossum-shaped handle, he has led a purge of officials appointed by Ecuador’s leftist former president, Rafael Correa, who governed for ten years until 2017 and now lives in Belgium. Mr Trujillo sees the work as restoring democratic institutions that Mr Correa had weakened. “Where I’ve seen rights and liberties under threat, I’ve offered to help,” he says.

Mr Correa created the CPCCS in 2008 to consolidate his influence over those institutions. Formally, its members were appointed by the electoral council, which he controlled. Among the bodies whose leaders the CPCCS had the power to choose were the electoral council itself, the banking supervisor, the attorney-general, the ombudsman and the judicial council, which in turn sacked independent-minded judges and appointed ones who would do the president's bidding. Mr Moreno and Mr Correa were allies, but the two fell out last year after Mr Moreno's vice-president, Jorge Glas, a protégé of Mr Correa, was accused and then convicted of accepting bribes from Odebrecht, a Brazilian construction firm. Mr Moreno held a referendum in February this year in which voters reinstated presidential term limits and authorised congress to appoint a new CPCCS.

In nominating Mr Trujillo to be its chief, Mr Moreno sought to give the revamped council credibility that the old one lacked. Mr Trujillo began his political career as a conservative, but became a gadfly of the establishment through his work with environmental and social movements. He advised Yasunidos, a grassroots movement which in 2014 collected 750,000 signatures to hold a referendum to stop oil development in a rainforest. The electoral council and constitutional court blocked the vote. Without Mr Trujillo, the new CPCCS would have "lacked the moral capacity to cut Gordian knots", says León Roldós, a former Ecuadorean vice-president. Congress confirmed the choice.

Mr Trujillo's task has been to reverse the work of Mr Correa's CPCCS. In its new incarnation, the CPCCS has replaced the five members of the judicial council with supporters of judicial independence. Marcelo Merlo, a respected former government auditor, has succeeded Gustavo Jalkh, Mr Correa's man, as the council's chief. Carlos Ochoa, who as the "communications superintendent" sought to muzzle the media, has been removed from that job. Congress is discussing a law that would abolish it.

The CPCCS has sacked the five members of the electoral council; four were *correistas*. Its new chief, Gustavo Vega, is a non-partisan academic, though some observers grumble that he and his colleagues lack expertise in elections. The CPCCS showed its independence from Mr Moreno by rejecting his first batch of three candidates to head the competition authority, saying they had conflicts of interest.

On August 23rd Mr Trujillo’s council made its boldest decision yet, voting to remove the nine constitutional-court judges, three of whom are being investigated for money-laundering. This is contentious, even among people who support his house-cleaning. The referendum did not include the constitutional court among the bodies that fall under the purview of the CPCCS, points out Mauricio Alarcón, a human-rights lawyer. Mr Trujillo retorts that the referendum gave the council “extraordinary” powers to remove officials who obeyed Mr Correa rather than the law.

Mr Trujillo will be vindicated if the new officials act with the independence that Ecuadoreans expect. Early signs are promising. The new ombudswoman, Gina Benavides, challenged successfully in court the government’s decision to require Venezuelans fleeing their crisis-ridden country to carry passports, a measure designed to restrict their entry to Ecuador. Courts and prosecutors are pursuing alleged wrongdoing by members of the former government, including Mr Correa, who is being investigated in connection with the kidnapping of an opposition politician.

The real test will come when today’s office-holders commit crimes that require prosecution. The CPCCS will remain powerful, perhaps too powerful. Starting next year its members will be elected, which is better than the former way of choosing them. But candidates may not campaign, so voters will know little about them. Mr Trujillo thinks the CPCCS should dissolve once Ecuador has consolidated its democracy. He hopes to retire at the end of his term next year. But he’ll be back, he says, if “I have to confront abuses of power”.

Asia

- **Singapore’s schools: Can do even better** [Thu, 30 Aug 21:30]
  It has the world’s best schools, but Singapore wants better. The government wants pupils not just to ace exams, but also to be creative.
- **Australian politics: Age of healing** [Thu, 30 Aug 21:30]
  Australia’s new prime minister tries to end divisions in his party. He is courting the right-wing rebels who toppled his predecessor.
- **Human rights in Myanmar: Worse than even imagined** [Thu, 30 Aug 21:30]
  The UN accuses the Burmese army of genocide. A new report details its pogrom against Rohingya Muslims.
- **Politics in Thailand: Dotting their i’s** [Thu, 30 Aug 21:30]
  Thailand’s military junta may at last be ready to call an election. Its plans to rig it are nearly all in place.
- **Foreign aid for India: Help not wanted** [Thu, 30 Aug 21:30]
  India’s government turns down disaster relief. But a flood-hit state says it would welcome foreign aid.
- **Banyan: Crazy rich omission** [Thu, 30 Aug 21:30]
  For a different take on “Crazy Rich Asians”, cross the Pacific. For plenty of Asians, the film is more of an affront than a triumph.

Room for improvement

It has the world's best schools, but Singapore wants better

The government wants pupils not just to ace exams, but also to be creative

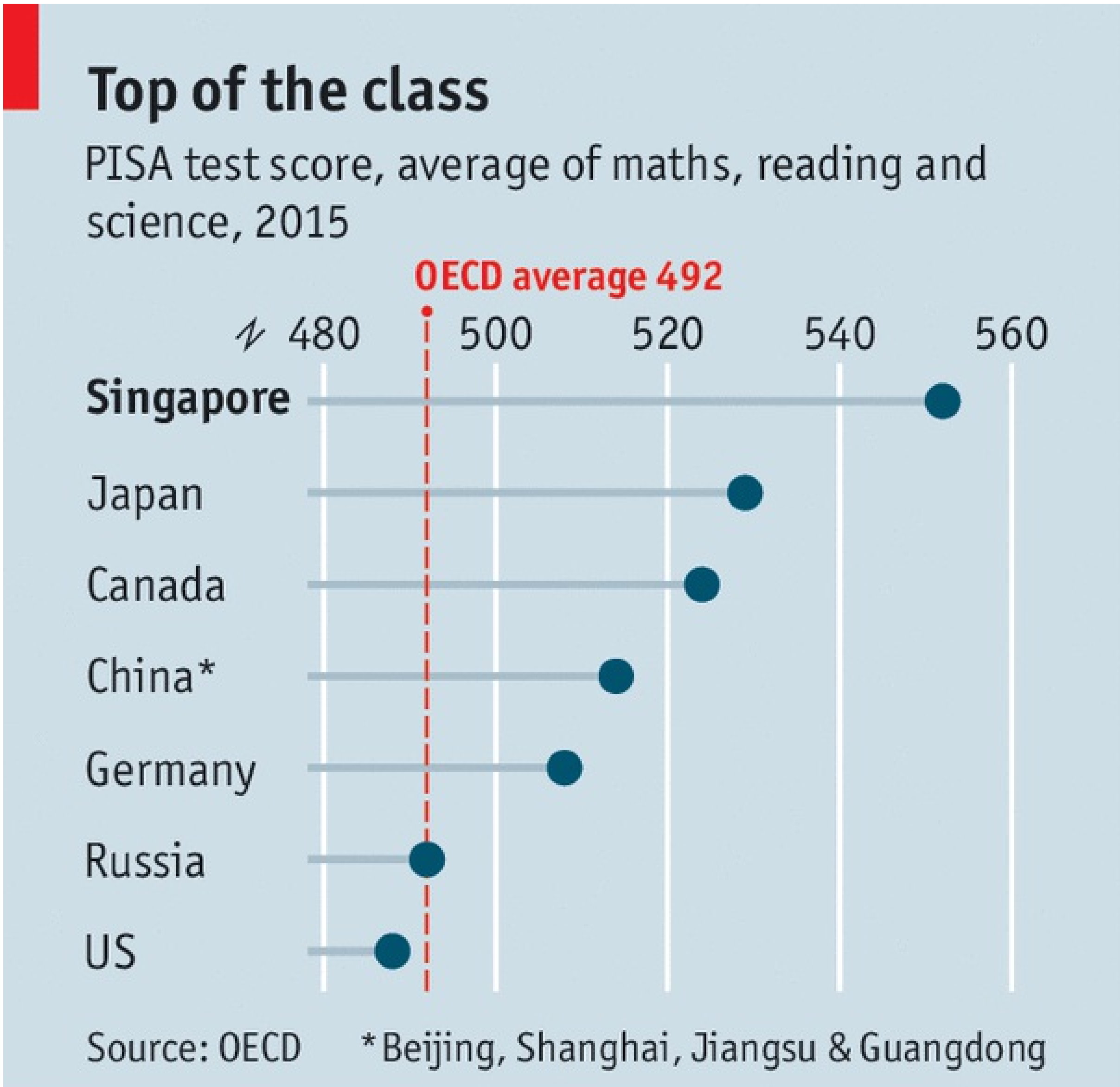
Aug 30th 2018 | SINGAPORE

THE library at Woodgrove Primary School has been turned into a "MakerSpace". After regular lessons end at around 2pm, pupils sign up for sessions like 3D design, stop-motion film-making and coding for robots. Instructors leave the children to it once they have explained how things work. The overall message is that it's OK to fail, says a teacher. On a Thursday afternoon just after the summer break, one young boy stops to explain that these sessions make a nice change: if he wasn't here, he would only be studying at home.

Singapore's schools have long held a reputation for didactic teaching, rote learning and academic brilliance. Their pupils lead the rankings in the OECD's Programme for International Student Assessment (PISA), a triennial test of 15-year-olds around the world, and the Trends in International Mathematics and Science Study, which measures ten-and 14-year-olds.

But decades of economic growth have changed priorities. Andreas Schleicher of the OECD reckons Singaporean education is going through “a silent revolution almost entirely unnoticed in the West”. Politicians now hope to marry good exam results with the promotion of skills that will help pupils work in the city’s growing service sector, and even to lead contented lives. “It’s not just about teaching how to be smart, but how to be a better human being,” enthuses Heng Swee Keat, the country’s finance minister, who was in charge of education in 2011-15.

Unlike most revolutions, this one is a gradual, long-term project. The most noticeable changes so far have been to reduce pressure on children taking exams. In 2012 the government abolished league tables for secondary schools, which it felt skewed teachers’ priorities. It also stopped publishing the names of top scorers and widened the criteria used for entry to the best secondary schools. From 2021 primary-school leavers will no longer receive a precise score, instead getting a broad grade.



The Economist

More significant changes lurk beneath the surface. The education ministry has published a fuzzy-sounding list of “21st Century Competencies” (including “self-awareness” and “responsible decision-making”) that it wants every pupil to acquire. Wong Siew Hoong, director-general of the ministry of education, says they inform almost everything his department does. Exam questions, for instance, have been reframed to be more open-ended, to encourage critical thinking as well as knowledge of a subject. Teacher appraisals measure not just academic performance but also the social development of pupils.

Teaching methods are changing, too. All teachers get 100 hours of training a year. They learn new pedagogical techniques, which encourage group work and discussion between teacher and pupils. As Yan Song, a pupil at Deyi Secondary School who moved from China mid-way through his education, puts it, in Singapore they focus “on how you behave as a human being.” In China, in contrast, “you just study from day to night.”

The final change has been to align the classroom with the workplace. By 2023 almost all schools will have “applied learning” programmes in subjects like computing, robotics and electronics, but also drama and sports. The emphasis in all of them is on practising in “real-world” environments; there are no exams. At Deyi Secondary School, broadcast journalism is used as a way to improve communication skills, for instance. The ministry of education has also hired 100 career-guidance officials. Many previously worked in industry. They keep tabs on labour shortages and work with schools to inform children about their options, often trying to push them beyond “iron rice bowl” careers like banking, the civil service and medicine.

Persuading parents that there is more to life than exam results and a job in a high-status industry is hard. The ministry of education works with parent-support groups and online influencers, organises seminars and is active on social media to get the message out. Tay Geok Lian, a career-guidance official, says some parents, particularly richer ones, are indeed beginning to look beyond the usual professions.

But some habits are hard to change. Many children receive after-school tutoring. Jacqueline Chua, who runs Paideia Learning Academy, a tutoring centre in a leafy part of town, says parents are no less keen on her services. “The system drives behaviour,” she explains. “Kids are stressed because their parents are stressed… And that’s because they understand what’s before them.” The primary-school leaving exam, taken at 11 or 12, is a critical pressure point. Pupils who excel end up in the best, most selective schools, and can expect a future of foreign study and top government jobs. Those who do badly go into vocational streams. The government has no plans to end selection.

The direction of travel is nonetheless clear. Officials say they see no reason why results should slip in the quest to foster more well-rounded pupils.

Educationalists from around the world have long sought to replicate Singapore's success. Many are in awe of the quality of teacher training, the tightly-focused lessons and the government's long-term planning. With such strong fundamentals, the Singaporean system is in a good position to reform. As Mr Heng, the finance minister, notes, "If you want to connect the dots, you have to have the dots in the first place."

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Age of healing

Australia’s new prime minister tries to end divisions in his party

He is courting the right-wing rebels who toppled his predecessor

Aug 30th 2018 | SYDNEY

“THE age of bitterness has come to a close,” Scott Morrison, Australia’s prime minister, declared on August 27th, three days after a feud within the right-of-centre Liberal Party toppled his predecessor, Malcolm Turnbull. Mr Morrison, the former treasurer, became prime minister almost by default, after a hard-right faction within the party launched a failed bid for the leadership. He has assembled a “new generation team” (consisting mainly of ageing white males) and promises to “begin the process of healing”.

Mr Morrison’s cure involves offering several important cabinet positions to the losing band of restive conservatives. Peter Dutton, its leader, returns to his previous job as home-affairs minister, in which he will continue to champion the policy of detaining “boat people” in Pacific island processing centres (responsibility for legal immigration has been given to a different minister). Tony Abbott, a former party leader and prime minister who harried

Mr Turnbull from the backbenches, was awarded a token role as an adviser on indigenous affairs.

Mr Morrison has also bowed to the conservatives on climate change. He has split responsibility for energy and the environment, giving the former to Angus Taylor, a climate-change sceptic who denounces renewable energy. Mr Taylor is charged only with lowering power prices. There has been no talk of reducing emissions—the subject that sparked the rebellion against Mr Turnbull.

Polls show that voters are unimpressed at the turmoil. Mr Morrison must devise a platform to win them back before an election due by May. A clue to his plans comes from the creation of a ministry for "congestion-busting" and population growth. It was awarded to Alan Tudge, another supporter of Mr Dutton's. He says his job will be to make high rates of immigration palatable by improving infrastructure. But many fear that hostility to immigration will be the undercurrent of the election campaign.

Worse than imagined

The UN accuses the Burmese army of genocide

A new report details its pogrom against Rohingya Muslims

Aug 30th 2018 | Yangon

A YEAR ago insurgents armed mostly with makeshift weapons attacked a series of police posts in Myanmar's Rakhine state, killing a dozen security personnel. In response, the Burmese army led a pogrom against the Rohingyas, a downtrodden Muslim minority in whose name the insurgents had launched the attacks. More than 700,000 fled to nearby Bangladesh to escape the violence. But the scale of the atrocities has been hard to confirm, since the Burmese authorities have restricted access to the affected area. This week, however, the UN's Human Rights Council published an authoritative report, which shows that the abuses were, if anything, worse than has been suspected.

The received wisdom that the army's rampage claimed 10,000 lives is probably an underestimate, the report argues. "People were killed or injured by gunshot, targeted or indiscriminate, often while fleeing…Others were killed in arson attacks, burned to death in their own houses…Rape and other forms of sexual violence were perpetrated on a massive scale…Children were killed in front of their parents…At least 392 villages were partially or totally destroyed."

Most damningly, the report says there is evidence that the violence was premeditated. For years, it points out, the army has abetted the persecution of Rohingyas, whom the authorities regard as illegal immigrants from Bangladesh. It deployed lots of extra troops to Rakhine shortly before the violence erupted. As the abuses escalated Min Aung Hlaing, the army chief, stated baldly that his troops were solving the "Bengali problem" once and for all. He and other senior generals, the report concludes, should be tried for genocide.

That will not be easy. The army does not admit that much bloodshed took place, and has punished only seven soldiers involved in one especially well documented massacre. The civilian government has no authority over military discipline, and anyway largely takes the army's side. The UN Security Council could refer Myanmar to the International Criminal Court, but two of its veto-wielding members, China and Russia, also defend the army's conduct. Even if they agreed to a referral, it is far from certain the generals would end up in the dock. "The problem is not to find somewhere to prosecute them but to get your hands on them," says Kevin Jon Heller of the University of Amsterdam.

So far the firmest response to the report has come from Facebook, a synonym for the internet in Myanmar and the means by which virulently anti-Muslim propaganda has spread throughout the country. It deleted the army chief's account the day the UN report was published and promised to store its data on him. Christopher Sidoti, one of the UN investigators, says that could be a formidable tool for justice: "Facebook is more helpful than the UN Security Council at the moment."

Dotting their i’s

Thailand’s military junta may at last be ready to call an election

Its plans to rig it are nearly all in place

Aug 30th 2018 | BANGKOK

SEPTEMBER will sizzle with political intrigue in Thailand. The prime minister, Prayuth Chan-ocha, has announced that his military government will shortly begin discussions with political parties about restoring democracy. Every year since his junta came to power in a coup in 2014, it has promised—and failed—to hold an election. This time it may actually keep its word. The tentative date is February 24th. Mr Prayuth has also said that he will declare in the coming month whether he intends to remain in politics, and if so which party he will join. This is in spite of the fact that he previously insisted that he would neither support any particular political tribe nor run for office himself.

The constitution enacted by the junta 16 months ago deliberately weakens big political parties, notably by introducing a new system of proportional representation for elections. A series of laws passed since then further constricts political life. All this will help to ensure that only a chaotic coalition emerges from an election, whenever it is held.

The intention is to thwart the political allies of Thaksin Shinawatra, a tycoon and former prime minister. The government overthrown by the junta in 2014 was led by his sister. Mr Thaksin himself was toppled by an earlier coup, in 2006. The conflict between Mr Thaksin's "red shirts" and the "yellow shirts" of conservative elites has defined Thai politics for almost two decades. Political groups linked to Mr Thaksin have won all six elections since 2001. The generals want to prevent that ever happening again.

In the meantime, the absurdly strict rules the junta introduced after seizing power remain in force. Political gatherings of more than five people are banned, making it difficult both to craft policy and gather support. Other regulations dictate when and how party figures can communicate with prospective voters. Politicians who complain about all this have even been sent to camps for "re-education". One former inmate says only public outcry discourages the generals from doing so more often. And in recent days a charismatic young billionaire, Thanathorn Juangroongruangkit, leader of Future Forward, a new party, was charged under the Computer Crime Act along with two other senior figures in the party. The junta's chief legal officer claims that in a Facebook Live video recorded in June Mr Thanathorn slandered the justice system. Five-year prison terms hang over the trio.

Bigwigs in Pheu Thai, the Thaksinite party, remain confident that they can win enough votes to control the government after an election. Even a vague law passed earlier this year that bars governments from introducing populist policies—seen as an attack on Pheu Thai's brand of politics—fazes them little.

Some wonder whether Pheu Thai's continuing popularity will prompt the government to engineer its dissolution before any election. That is what happened to Mr Thaksin's previous political vehicle, the Thai Rak Thai party, which was disbanded by a pliant court after the coup of 2006.

Another way to hobble Pheu Thai would be to suborn its membership. A group of politicians known as "The Three Friends", heavyweights once aligned with Mr Thaksin, have been travelling around the country encouraging Pheu Thai figures to switch sides. They want them to join the Palang Pracharat Party, a new pro-government outfit. Not that the friends' rallies should be considered political gatherings, of course. "As far as I know, they are not a party," the deputy prime minister, Prawit Wongsuwan, disingenuously averred in mid-August.

Mr Prayuth has been doing the rounds, too, holding cabinet meetings all over Thailand to woo prospective voters. Despite the ban on political meetings and the doubts about when or if the election will be held, many Thais are already exhausted by all the electioneering.

Help not wanted

India’s government turns down disaster relief

But a flood-hit state says it would welcome foreign aid

Aug 30th 2018

THIS week was supposed to be a time for celebration in the Indian state of Kerala, with feasts, dancing and boat races to mark the harvest festival of Onam. But as the waters recede from what may be the state’s worst floods in a century, few are feeling festive. More than a million people were displaced by the downpours. The state government would like to accept foreign aid to help speed reconstruction, but the central authorities are turning it away.

For more than a decade, successive national governments have declined foreign disaster relief as a matter of policy, choosing instead to advertise India’s self-sufficiency. But when the central government turned down a reported offer of $100m for Kerala from the United Arab Emirates (which hosts almost 1m expatriate workers from the state), many flood-victims were furious.

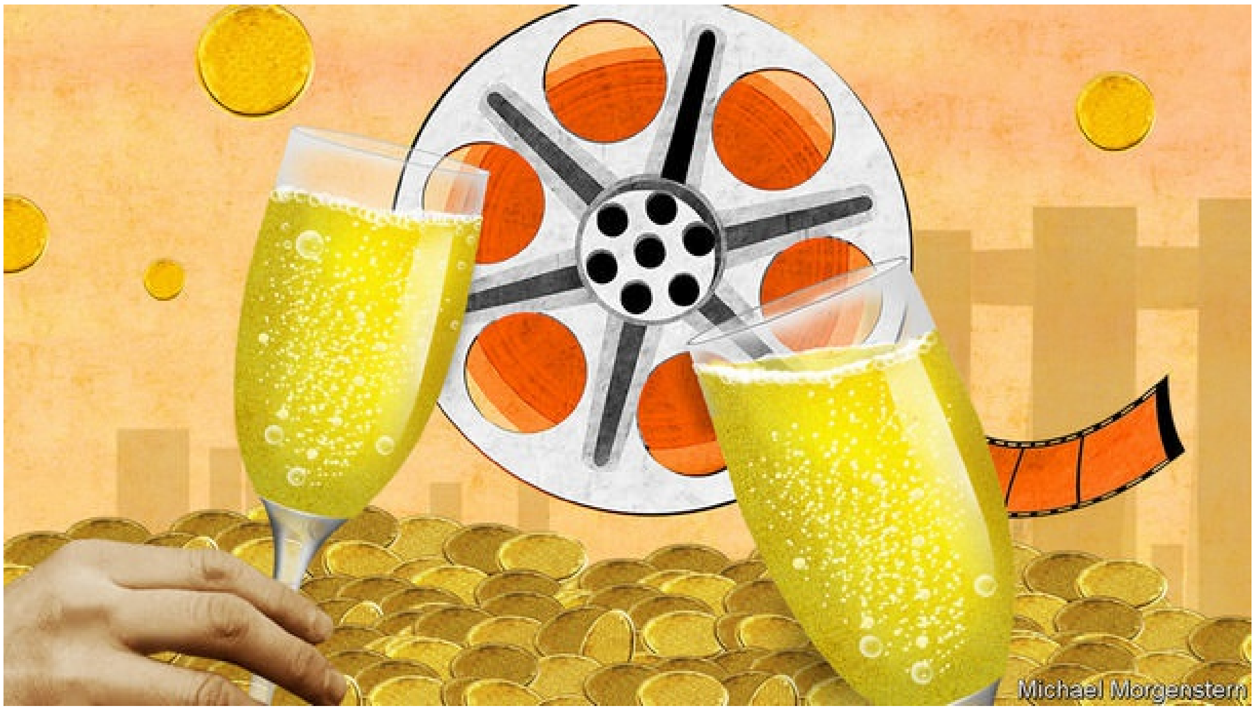
The anger stems in large part from a sense that Narendra Modi's government in Delhi is not doing enough to support Kerala. The state's finance minister, Thomas Isaac, claims that it asked for a 22bn-rupee ($312m) relief package from the central government, but has only been offered 6bn rupees. He argues it is only fair for the centre to compensate the state for the foreign aid it was too proud to accept. Shashi Tharoor, a politician from Kerala belonging to the opposition Congress party, wrote that it was "churlish and irresponsible" to turn down foreign aid when Kerala's needs "vastly exceed anything that the central government can provide".

Although it turns down hand-outs in emergencies, India is happy to accept foreign development aid. The World Bank says that the country received $2.7bn of it in 2016. But India's policy of refusing disaster relief is not unique. Chile turned down most outside help after an earthquake in 2010, as did America after Hurricane Katrina in 2005. The Democratic Republic of Congo went one step further earlier this year, boycotting an international conference to raise money for the war-torn country. Other countries show greater humility. Japan, where GDP per person is 20 times that of India, accepted outside help following an earthquake in 2011. This included 86,400 cans of tuna from the Maldives, which offered $50,000 for Kerala last week but was turned away.

Banyan

For a different take on "Crazy Rich Asians", cross the Pacific

For plenty of Asians, the film is more of an affront than a triumph



Sep 1st 2018

THIS week's column comes from the top of Singapore's Marina Bay Sands hotel and casino. Its author would not like his readers—not to mention *The Economist*'s bosses—to think this his usual perch. It is true that the "Skypark", a 340-metre-long curved platform set on three, 55-storey towers, is perhaps the most spectacular man-made vantage point in Asia. It is a bold monument to 21st-century Asian consumerism, all the more fitting for its tacky faux-Angkor columns and an infinity pool more crowded than a London lido in a heatwave.

It is also a fitting setting for the final, extravagant party scene—admittedly one of many—in "Crazy Rich Asians", an American film taking the world's cinemas by storm. The pool is given over to a troupe of synchronised nymphs. Fireworks race around the platform's rim. The champagne flows. And the girl gets her crazy rich guy. A column about "Crazy Rich Asians" could hardly be written from the usual garret.

In this Cinderella comedy with a nod to Jane Austen, the central character, Rachel Chu, is a Chinese-American economics professor from a modest background. She falls for a super-handsome fellow academic in New York, Nick Young, without knowing that he is a Singaporean aristocrat, heir to its oldest and wealthiest ethnic-Chinese business dynasty. She understands this only when he invites her to the city-state for the wedding of his best friend. The film is about how she negotiates the pratfalls of trying to make a good impression on Nick's family. Several of its members, including his mother and grandmother, do not take to her, either because they think she is a gold-digger or because Nick's marrying for love would be disastrous for a dynasty built on business and careful alliances. Spoiler alert: it all ends well.

In its scenes and costumes, the film is lavish. It is wealth porn, celebrating the luxury-branded materialism of Asia's super-rich even as it sends them up, often hilariously. It nails the interconnectedness of Asia's billionaire families in clever and funny ways. A photograph of Rachel and Nick in a New York café spreads across East Asia within seconds in an amusing social-media storm. One member of the Young clan later tries to place Rachel. Is she one of Thailand's peanut-packing Chus? Or the Taiwan-plastics Chus? ("Not exactly old money, but at least they are one of the most solid families in Taiwan.")

It may resemble an extended episode of "Lifestyles of the Rich and Famous", but the film has been heralded as a milestone for Hollywood, for one striking reason. Not a single central or even auxiliary character is played by a white actor. On the few occasions when white people do feature, they flash across the screen as extras: as plane passengers or, on a giant container ship chartered for an over-the-top bachelor party, as bikini-clad beauty queens for hire.

Asian-Americans, including among the cast, hail this as a breakthrough moment in American cinema. Not since "The Joy Luck Club" in 1993 have people of Asian descent telling a contemporary Asian story been given such commercial prominence. No white actor stars in this Asian-themed movie, as Matt Damon did in "The Great Wall", a mega-film aimed at Chinese audiences. The cast are not fighting their way across the stage as martial-arts supremos, nor do they feature as exotic sex objects. In her role as Rachel, Constance Wu, an American, told the *Guardian* that she was proud to have helped “amplify the voices of people who don’t feel heard”.

Yet seen from the perspective of Singaporeans, the film looks rather different. Granted, with Singapore as a backdrop, you can hardly expect a revolutionary message. Wealth is closely held in Asia, contributing to extreme inequalities, but this is not the film to highlight them. Singapore’s role in the screenplay, as a playground for Asia’s Maserati-and-Chanel set, aligns closely with the country’s carefully honed tourist image. Never mind that in real life the revellers are often the offspring of ethnic-Chinese dynasties who have made their wealth in less stable parts of South-East Asia, where anti-Chinese resentment has on occasion boiled over into pogroms. This is a feel-good movie.

It is also, at its heart, a highly conservative one. If there is a moral, it is that you can’t live only in love. The power of family ties and networks, and what that means in terms of the moral and material legacy you leave your children, are an ancient Asian tale, which the film rehashes (Nick’s mother’s engagement ring plays a big part). Individualism is frowned upon.

The *Straits Times*, Singapore’s main paper, which never expresses a view without glancing first at nanny, has evinced enormous pride over “Crazy Rich Asians”. It has run a light-hearted quiz about how to tell “old” money from “new”. It has even, with a measure of relief, reported on the reaction of Singapore’s real rich and famous. One high-roller had been nervous that the film would be too negative towards them, but was pleasantly surprised. Another socialite complained that some of the scenes lacked the wow factor of the parties she was used to.

The other Asians

What the paper has failed to note, however, is how the film ignores all Asians other than the Chinese kind. One-quarter of Singapore’s population is not ethnic-Chinese, but of Malay or Indian descent. Yet when Malays feature, it is as valet-parking attendants. Indonesians are masseuses. As for the pair of Sikh guards at the Young family mansion, their buffoonish performance is as excruciating as Mickey Rooney’s as the Japanese photographer living above

Audrey Hepburn in “Breakfast at Tiffany’s”. Brown bodies, writes one anonymous film-goer, were disembodied “footnotes”: mere openers of doors or cleaners of homes. “Crazy Rich Asians” is not just “money porn”, she goes on, it is also, to many South-East Asians, “othering porn”. What passes as a victory in Hollywood can look like a glaring failure in Singapore.

China

- **Falun Gong: The party’s scourge** [Thu, 30 Aug 21:30]
  Falun Gong still worries China, despite efforts to crush the sect. In China the movement sputters on. Abroad its profile grows.
- **Public opinion: A flood of complaints** [Thu, 30 Aug 21:30]
  Were officials to blame for the inundation of farms in China?. Despite censorship, public misgivings are evident.

The party’s scourge

Falun Gong still worries China, despite efforts to crush the sect

In China the movement sputters on. Abroad its profile grows

Aug 30th 2018 | LONDON AND VANCOUVER

TUCKED away in a corner on Gerrard Street, in the heart of London’s Chinatown, three middle-aged Chinese women sit on the ground, their legs tightly crossed, in silent meditation. A deafening loudspeaker behind them blasts out a stream of invective against the Chinese Communist Party. Before long, one of them gets up and starts handing out flyers to passers-by. But pedestrians from China who are approached by the woman grimace and dart away. Most do not even bother to glance at the meditators, who are adherents of Falun Gong, a spiritual practice which China banned in 1999 and calls an “evil cult”.

Such a brusque response should offer some solace to China’s government, which has been trying for nearly two decades to crush Falun Gong, a movement that once enjoyed widespread mainstream acceptance. The ruthless campaign, however, has significantly weakened, but not destroyed, the sect. Chinese officials still worry about its influence at home. Official lists of proscribed cults still put Falun Gong at the top. But it is the sect's activities abroad that are an even bigger, and growing, concern for the Communist Party.

Officials like to tar Falun Gong with the same brush as apocalyptic cults such as America's Branch Davidians and Aum Shinrikyo in Japan, but it shows no sign of the violent extremes associated with those sects. It is likely that the Chinese government overstates the comparison as a way of undermining the appeal of a movement that it sees not so much as a threat to society, but as a challenge to the party itself. As Carl Minzner of Fordham University puts it in a new book, Falun Gong has become "by far the most organised" among anti-Communist movements within the Chinese diaspora. Chinese dissidents in exile are prone to factious squabbles; they find it very hard to unite. Falun Gong shows little obvious sign of disunity.

Gong underground

It is difficult to assess how much of a following Falun Gong retains in China. So brutal has the government's campaign against it been—including the imprisonment of thousands of Falun Gong followers—that practitioners are extremely wary of proclaiming their beliefs openly. In the 1990s Falun Gong may have had millions of adherents. Some of them were party members and officials. Students and staff met on university campuses to take part in Falun Gong meditation. Massimo Introvigne of the Centre for Studies on New Religions, a think-tank in Italy, says that the current following in China is probably only about 5% of what it was then. Even so, the numbers remain large enough to alarm the government. Every few weeks Chinese-language media report on recent arrests of Falun Gong suspects. In May a woman from the southern province of Guizhou was sentenced to a year in prison for sending pro-Falun Gong messages to more than 2,000 people on WeChat, a social-media platform. In July three women in Beijing were each sentenced to between three and four years in jail for distributing the sect's literature at a market.

Overseas the movement, which has a large unofficial headquarters in hilly woodland in upstate New York, has been expanding its public profile (pictured are followers marching through Washington, DC, in June). In the early 2000s practitioners in America launched multi-language news media such as *Epoch Times*, a newspaper, and NTD, a television station. These have grown to rival China's state media in their reach abroad. In 2006 followers created a pro-Falun Gong cultural group called Shen Yun Performing Arts. It has put on shows of traditional Chinese dance and music (spiced up with anti-Communist themes) before capacity audiences at prestigious venues. Next year the troupe is due to perform in 81 cities in four continents. Overseas adherents have also been adept at lobbying Western politicians. In 2009 Canadian legislators set up a bipartisan "Friends of Falun Gong" association.

One of China's biggest anxieties about Falun Gong is that it is led by someone living outside China over whom it has no control: Li Hongzhi, a 67-year-old former government clerk in a grain-procurement office in north-eastern China. Mr Li founded Falun Gong in 1992. It was then no more than a quasi-Buddhist spiritual movement. Adherents would try to gain enlightenment by reading the works of "Master Li" (said to be able to walk through walls) and engaging in slow-motion exercise routines, often in groups in public. Mr Li fled to America a couple of years before the sect was banned, and remains active. In a speech in June to thousands of followers at a stadium in Washington, he praised practitioners in China for keeping their faith despite repression by the "evil" party.

It was only in response to the party's efforts to eradicate it that Falun Gong turned anti-Communist. In April 1999 thousands of followers protested outside Zhongnanhai, the party's headquarters in Beijing, about the arrest of Falun Gong activists in the nearby port of Tianjin. It was the biggest demonstration in the capital's heart since the pro-democracy movement of 1989. Although it had no political aim, it spooked the party. Chinese leaders felt threatened by what they saw as a "competing ideology", says Anastasia Lin, a Canadian human-rights advocate (and winner of the Miss World Canada pageant in 2015) who practises Falun Gong. Three months later China banned the sect. Thereafter, Mr Li began openly attacking the party.

Among Chinese diplomats based abroad, monitoring Falun Gong's activities and combating its influence is treated as an important duty. They put pressure on venues to cancel Shun Yun's performances (sometimes successfully) and not to allow speeches by Falun Gong adherents. In 2015 Chinese officials denied Ms Lin a visa to take part in a Miss World contest in China. Last year the Chinese embassy in London told a student society at Durham University not to allow her to speak in a public debate (she did anyway). A Falun Gong practitioner in Calgary, Canada, says she believes she has seen Chinese spies try to infiltrate the sect in her city. She says some of them are "pretty conspicuous", giving themselves away by not knowing the correct posture for meditating.

In recent years, from New York to Hong Kong, "anti-cult" stalls have become an increasingly common sight in public places where Falun Gong practitioners gather. They usually have a handful of staff, who distribute anti-Falun Gong literature and display photographs aimed at making adherents look unhinged. Organisers deny that they are agents of the Chinese government, but it is likely that the party encourages their efforts. As David Ownby of the University of Montreal puts it, China's campaign against Falun Gong is likely to be a never-ending war of attrition.

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A flood of complaints

Were officials to blame for the inundation of farms in China?

Despite censorship, public misgivings are evident

Aug 30th 2018 | SHOUGUANG

WHEN loudspeakers in Kouzi, a village in the eastern province of Shandong, blared out urgent warnings of floodwaters heading downriver towards them, residents were anxious, but they did not panic. They had been told it would be another day before the crest would reach them, and that the water would not cause extensive damage. They took precautions to protect their property as best they could and left as ordered. When they returned a day later they found their homes in chest-deep water and their farms wrecked. This was not only a natural disaster caused by unusually heavy rain during a typhoon, locals allege. It was also a man-made one.

For all the ever-tighter controls on public grumbling that have been imposed during the rule of Xi Jinping, flashes of discontent are occasionally visible. The flood on August 20th in and around Shouguang, the city that administers Kouzi village, has triggered one. The outcry is not so much about the number of casualties—13 people were killed in the Shouguang area, compared with an annual nationwide death toll from flooding that is often in the hundreds. Rather, it is about the possibility that the local government may have been partly to blame for the calamity, which caused damage estimated at 9.2bn yuan ($1.3bn). Residents of Beijing feel a particular connection: Shouguang produces many of the fresh vegetables sold in the capital.

Villagers in Kouzi clearly believe that the local authorities were at fault. "They released too much water all at once. They should have done it more slowly, or released the water in different places. Instead, it all came straight at us," says a 50-year-old villager, surnamed Li. Asked how she knows this, she replies that "everyone says so", both in Kouzi and online.

Officials admit that water discharged through the dams caused flooding in Shouguang. But they say the rain was heavier than forecast, and they had no choice but to open the sluices when they did. Retaining the water in the reservoirs could have caused the dams to collapse, they say. But rumours have been swirling online that dam managers initially allowed reservoirs to fill, hoping they could profit from selling the water to parched farms. They could have begun reducing levels sooner, netizens insist. This, they say, would have avoided the need for the sudden large release that flooded Shouguang.

"Water can keep a boat afloat, and can cause it to capsize," grumbled one user of Weibo, a Twitter-like service. The saying, used by Mao Zedong, is meant as a warning to unpopular governments that they can be overthrown by the people they rule. "Power grows out of the barrel of a gun," responded another, also quoting Mao. "Don't bother saying anything unless you have a gun," chimed in a third, who then alluded, with obvious sarcasm, to a favourite saying of President Xi: "Just carry on with your Chinese dream."

China's censors have not been idle. Some comments on the disaster have been scrubbed from the internet. State media have been ordered to tone down their coverage. *Guangming Daily*, a Communist Party mouthpiece, published an online article which accused the local government of "inertia and carelessness" in the issuing of warnings and the evacuation of residents. It was later deleted. The local authorities are also on guard. Police have been deployed at entrances to some of the hardest-hit villages.

In Kouzi, Ms Li declares a near-total loss. Her flat-screen television, fridge and washing machine have all been ruined. But more important to her and her neighbours is the loss of the greenhouses in which they had grown cucumbers, bitter melons, aubergines and peppers. In Beijing, this is a worry too. Residents fret about a possible ripple effect of the disaster in the prices of vegetables in the city’s markets.

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Middle East and Africa

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  Lebanon’s economy has long been sluggish. Now a crisis looms. But the country’s politicians are busy haggling over cabinet posts.
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- **Ponte City: A shaft of light** [Thu, 30 Aug 21:30]
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When the music stops

Lebanon’s economy has long been sluggish. Now a crisis looms

But the country’s politicians are busy haggling over cabinet posts

Aug 30th 2018 | BEIRUT

THE main feature of Beirut’s skyline is not minarets or church steeples, but construction cranes. From the roof of a posh downtown hotel you can see 17 of them, throwing up luxury apartments that cost up to $1m each. Wealthy Lebanese sip wine on their terraces and discuss investment opportunities. They rub shoulders with Gulf tourists drawn by Beirut’s libertine nightlife. Lebanon’s economy relies on tourism, construction and finance for growth. All three seem to be thriving.

That, however, is an illusion. The country is tipping into a property slump—and perhaps a banking crisis that threatens its currency. An economic crash could destabilise a country already swamped with refugees and plagued by sectarian divides. Trouble in the banking sector, which draws investors from around the region, might be felt beyond Lebanon’s borders.

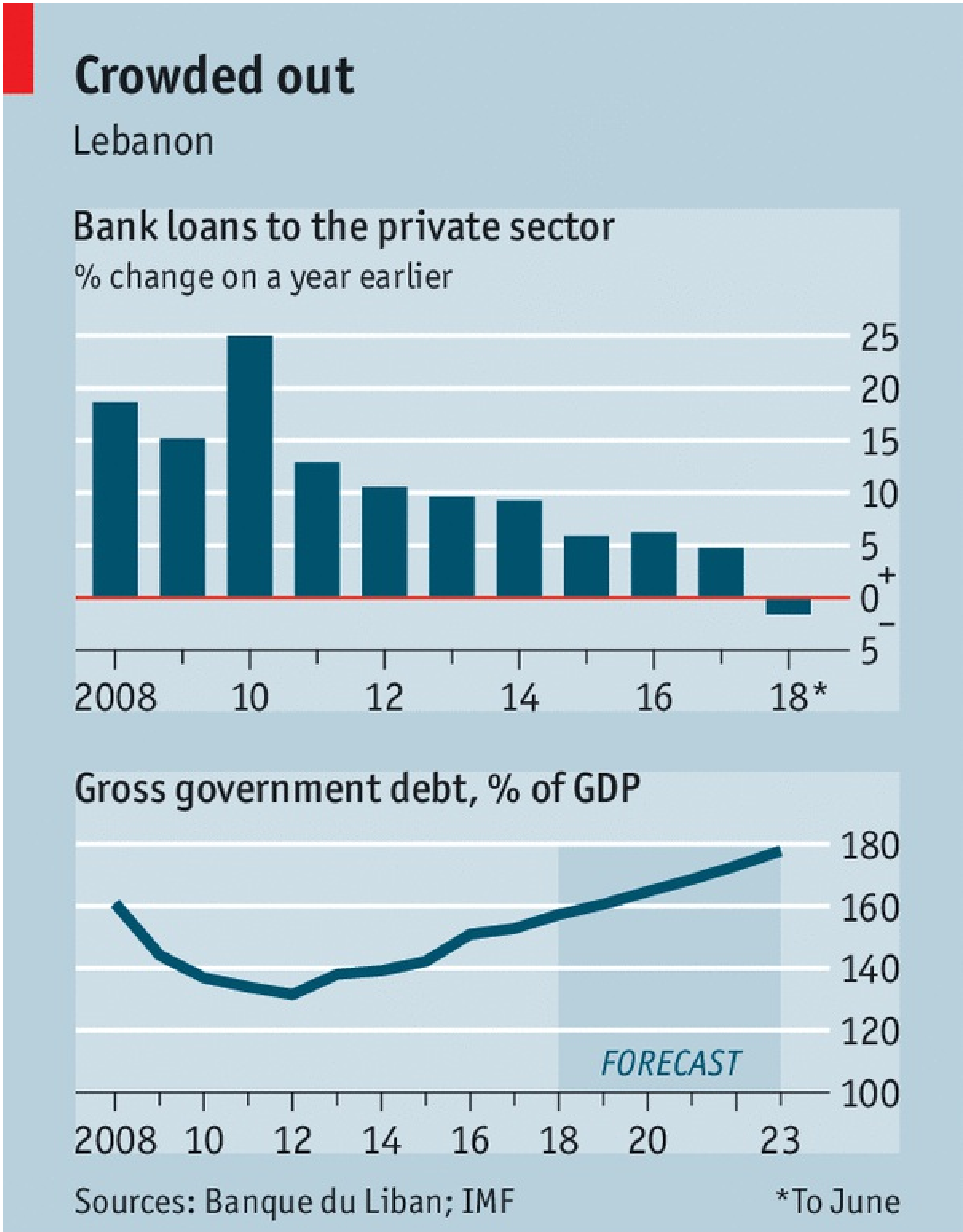
Start with tourism, which was bouncing back from a period of regional unrest. Arrivals hit a five-year high in 2017. But they are still below their peak of 2010 and the industry is fickle. In November Saudi Arabia briefly detained the prime minister, Saad Hariri, and forced him to resign (a move he later reversed). Hotel occupancy plunged by 14 percentage points within a month. Saudi visitors, who account for the biggest share of tourist spending, are down by 19% this year. Investment is sluggish. Kafalat, a firm that guarantees loans for small and medium enterprises, handled 117 tourism projects last year, a 6% drop from 2016. Annualised figures from the first half of 2018 show a further 18% decline.

More worrying is the construction industry, which accounts for nearly one in ten jobs. Despite the cranes dotting Beirut, construction is slowing. The number of permits issued in the first half of 2018 was 9% lower than in the same period last year. Property transactions dropped by 17% year on year in the first quarter.

Developers fear a deeper slump is coming. For years the central bank subsidised mortgages, offering 30-year loans with interest rates as low as 3%. In March it abruptly halted the scheme. Bankers say it was abused. Instead of buying houses, some borrowers put the principal into higher-interest savings accounts to turn a profit. Many young couples cannot afford unsubsidised loans, which carry rates of 8-9% and shorter repayment periods. Some have cancelled their weddings as a result.

From bad to worse

Lebanon’s economy was already struggling. Annual GDP growth was 8% in 2010, before neighbouring Syria plunged into civil war. Since then it has averaged less than 2%. The slowdown in the housing market will drag it down further. In Hamra, the commercial hub of west Beirut, electronics stores are almost empty despite deep discounts. Fewer new homeowners means less demand for refrigerators. Many shops have cut salaries or fired staff to get by. “This is the worst it’s been in 40 years. Everything is coming to a halt,” says Rafi Sabounjian, a small-business owner.



The Economist

On paper, at least, the banking sector looks solid. Commercial banks hold

$200bn in deposits, four times as much as Jordan, which has more people. The central bank (the Banque du Liban or BdL) sits on $44bn in assets, excluding gold, enough to cover more than two years of imports. Its governor, Riad Salamé, says everything is fine. He points to the months after Mr Hariri's detention, when the central bank spent $1bn to prop up the Lebanese pound, which is pegged at 1,500 to the dollar. Reserves recovered almost immediately.

But those numbers are misleading. In 2016 the BdL pioneered something called "the swap", a complicated scheme in which it borrows foreign-currency holdings from commercial banks. It uses the dollars to maintain the currency peg. The banks get eye-popping returns, raking in 40% for a one-year loan. With no economic growth, the swap works only if it can attract ever-larger sums. "It's a pure pyramid scheme," says Jean Tawile, a banker and adviser to Kataeb, a political party.

The BdL does not publish its net reserves. Toufic Gaspard, its former head of research, wagers that "swapped" deposits are worth $65bn—meaning net assets are already negative. Fearing a devaluation, banks are increasingly desperate to attract foreign currency. Interest rates even for short-term deposits are at their highest level in nearly a decade. High rates mean small firms cannot obtain credit. A decade ago commercial lending in Lebanon grew by 15-20% annually. This year it is shrinking.

The currency peg has been a pillar of the economy since 1997. Receipts are printed in dollars and pounds; shoppers use the two interchangeably. This is starting to look unsustainable. Devaluation would be painful for a country that imports so heavily. It would be good for exporters—but Lebanon hardly has any. Last year it exported $2.8bn worth of goods, about half as much as Iceland. The current-account deficit is more than 20% of GDP.

Lebanese politicians made a fortune from the banking boom. Of its 20 biggest commercial banks, 18 are wholly or partly owned by politicians or well-connected families. Now they seem oblivious to the looming crash. Instead they float fanciful schemes for growth. Some hope Lebanon will become a hub for rebuilding post-war Syria. That plan faces many obstacles, not least that nobody knows who will foot the estimated $200bn bill for reconstruction.

Foreign donors pledged $12bn in aid at a conference in Paris in April. But most of this is loans, not grants, and Lebanon can ill afford more debt. The IMF expects its debt-to-GDP ratio, currently about 150%, to hit 180% in five years. By then debt service will burn through three-fifths of government revenue, leaving almost nothing for capital expenditures (already quite low).

In May voters went to the polls for a long-delayed parliamentary election. Mr Hariri took a beating, losing 13 seats, 40% of his total. Still, he will probably remain prime minister—if he ever forms a government. Instead of discussing reforms, lawmakers are haggling over cabinet posts, which they use to disperse spoils. With the economy heading for a crash, there may not be much to hand out.

Where loyalty trumps sect

Shias are doing better in Saudi Arabia

As long as they don’t cross the crown prince

Aug 30th 2018 | AWAMIYAH

LAST year Saudi Arabia’s young and powerful crown prince, Muhammad bin Salman, pulverised Awamiyah, a rebellious Shia town near the eastern coast. Throughout the summer Saudi forces shelled its 400-year-old neighbourhoods and erected siege walls to trap some 200 gunmen. But in February, when the rebels stopped shooting, he sent in his engineers, diggers and cranes to clear up the damage. Six months on, new roads, shopping centres and a small hospital are rising from the ruins of the levelled town. A new highway, stretching across Eastern Province, runs past Awamiyah, which had been largely isolated. By next March the $64m facelift will be complete.

Prince Muhammad hopes the reconstruction will send multiple messages. In exchange for absolute loyalty, he is offering to treat his 2m-3m Shia subjects much like his 18m Sunnis. He has curbed the religious police, who enforced

Sunni supremacy and derided Shias as *kuffar* (infidels). He has also appointed Saudi Arabia's first Shia cabinet minister (albeit without a portfolio). The board of Neom, a planned $500bn high-tech city, has a Shia member, as does the national football team. Anti-Shia vitriol has been removed from school textbooks and television networks. "We're going to be an integral part of the kingdom as full citizens for the first time," says a well-connected Shia businessman. He predicts that Riyadh, the capital, will have its first Shia mosque within three years.

Awamiyah's reconstruction is also meant to entice Shia Arabs in the region. "We can rebuild impoverished southern Iraq too," says a Saudi official, referring to the Shia portion of the country. Previous Saudi rulers backed Iraq's Sunni minority, but Prince Muhammad has courted its Shia hoping to lure them away from Iran's ayatollahs. He has hosted Shia clerics from Iraq, plans to send planes full of Shia pilgrims to the country's holy cities, and dangle billions in investment to revive industry in the south. While Iran pulls at the Shias' religious sinews, Saudi Arabia appeals to their sense of Arab nationalism—and suspicion of Persians. Shiism flourished in the Arab world a thousand years before Iran, says a Saudi prince involved in the effort. (Iran only converted to Shiism under the Safavids in the 16th century.) "We used to use Islam to resist nationalism," he says. "Now we do the reverse."

Well-to-do Shias praise Prince Muhammad for ridding Awamiyah of a slum infested by gun-toting criminals, drug-dealers and a Shia cult, called the Shirazis, which appealed to landless peasants in Eastern Province. Some Shirazis took up arms and called for the death of the Al Sauds after their rabble-rousing preacher, Nimr al-Nimr, was executed in 2016.

But Awamiyah's redevelopment also has critics. Bulldozers have carved thoroughfares through a honeycomb of ancient alleyways, used as hiding places by the Shirazis. The old souk has been demolished, replaced by shops in an open plaza. Palm groves have been levelled. Entering Awamiyah now feels like entering Palestinian towns in the Israeli-occupied West Bank. Residents and visitors must pass through multiple checkpoints cut into the siege walls. Armoured cars patrol the town. "The price of integration is a loss of identity," says a man living nearby.

Others don't think the position of Saudi Shias has improved much under

Prince Muhammad. There are still no Shia members of the top religious authority. No Shia judges sit on national courts. Nor are there Shia police officers or ambassadors. Meanwhile, Saudi Arabia’s war on Yemen’s Houthis, a group of Shia rebels, stirs sectarian tensions.

The previous Saudi king, Abdullah, launched a dialogue with Shia leaders in the kingdom. But Prince Muhammad is uncompromising. All of his changes have come by decree. He refuses to talk to Awamiyah’s rebels, insisting they turn themselves in. In August the royal prosecutor called for the first time for a Saudi woman to be sentenced to death for the crime of protesting. She is Shia. That disloyalty will be harshly punished is another message the crown prince hopes to send, to Sunnis and Shias alike.

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A deadly virus in an already dangerous place

Battling Ebola in a war zone in Congo

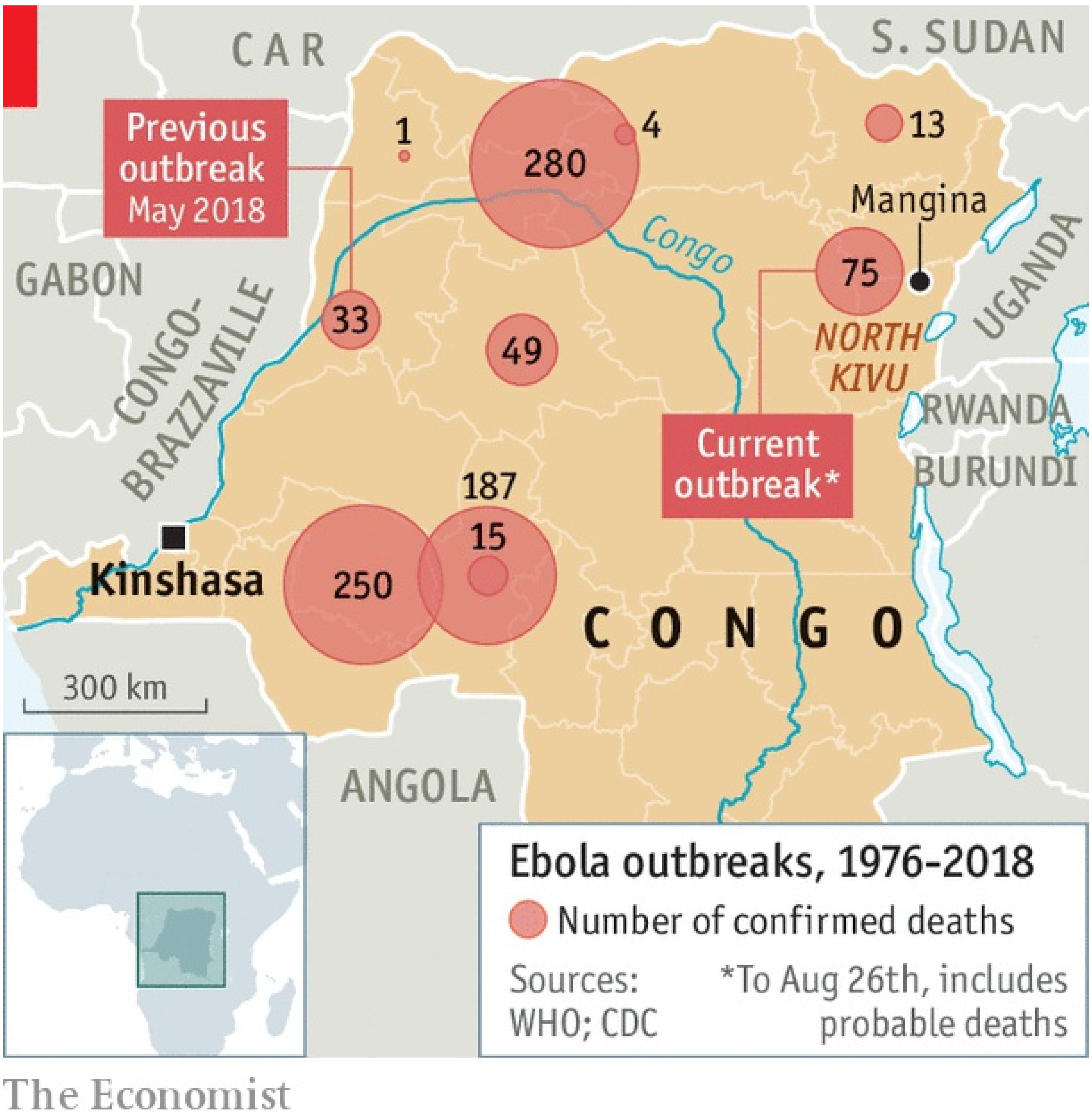
Health workers are finding it hard to outrun a deadly virus

Aug 30th 2018 | MANGINA

A ROW of health workers in blue gowns and face masks sit at tables outside the tin-roofed bungalow that was home to Kambale Vincent, one of 75 people who have died from Ebola in the Democratic Republic of Congo this month. His widow, a hunched, 60-year-old in a black cardigan, pulls her arm out of her sleeve and winces as a needle pierces her skin. She is receiving an experimental Ebola vaccine, fresh from trials in west Africa, that is being offered to anyone who may have touched her late husband.

Getting vaccines to the centre of this outbreak, the scrubby village of Mangina in the North Kivu province of Eastern Congo, is no easy task. The area is in infested with about 40 armed militias, most of which have been hiding in the forests since the end of a war in 2003 that claimed the lives of between 1m and 5m people.

Just a day after the outbreak was declared on August 1st, machete-toting militiamen sprang out of the bush and abducted 16 people in a field around 30 kilometres from Mangina. In broad daylight they dragged ten men, four women and two teenage boys—who were walking back from a day's farming—into their forest hideout. Fourteen of the villagers' hacked-up bodies were found in shallow scrubland graves five day later. The two boys were probably taken as recruits.



The attacks have been blamed on the Allied Democratic Forces (ADF), a group of Islamist ideologues originally from Uganda. In recent years the anti-government rebels have gone from attacks on the Congolese army and UN peacekeeping troops, to indiscriminately abducting citizens. Each time they strike, frightened families rush through the porous border into Uganda nearby—exactly the kind of hurried, untraceable movement that makes it harder to contain the Ebola virus.

“We have a toxic mix of factors,” says Mike Ryan, of the World Health Organisation (WHO), which is trying to get 9,300 vaccinations to those who need them. “We are dealing with security problems, a weak health system and disease. We have to balance access with security all the time.”

Health workers risk more than exposure to a virus. Médecins Sans Frontières, an international charity running the Ebola treatment centre in Mangina, had four of its staff abducted by the ADF in 2013. Though one escaped after 13 months, the rest have not been seen since.

Other factors may also have contributed to the spread of the disease, including a strike by local nurses who were not paid for three months. The virus may have reached Mangina as early as May 11th when a man with Ebola-like symptoms died in the local clinic. But the first deaths were reported only in late July. Josephine Kahambu, a nurse, alerted the officials in the capital, Kinshasa, after two men with bloodshot eyes, diarrhoea and fevers came to her clinic. Although she was on strike she decided to see to them and recognised signs of the deadly virus.

This particularly deadly strain of the disease, known as “Zaire Ebola”, has killed 78% of those it has touched. It is transmitted through bodily fluids and can be passed on with as little as a sweaty handshake. Thankfully some lessons learned in the west African outbreak, which killed 11,310 people between 2014 and 2016, seem to be helping. Instead of barking at frightened villagers through a megaphone about how they should protect themselves from infection, workers from the WHO talked to the village chief. “The chief is more listened-to than we are,” says Frizzia Safari, a Congolese doctor. “We talk to him and then he talks to the people.”

If nurses can prick enough arms quickly then it may be possible to halt this outbreak before it spreads much further. But they are finding it difficult to outrun the virus because of poor roads and the threat of attack from armed rebels. So new cases keep cropping up each day.

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A shaft of light

The revival of Ponte is a potent symbol of Johannesburg’s renewal

From yuppie icon to slum and back

Aug 30th 2018 | JOHANNESBURG

IN 1976 Africa’s most glamorous residence opened in downtown Johannesburg. Ponte City, a cylindrical brutalist skyscraper stretching 54 storeys, was built for yuppies who had flocked to the city, often from Europe. It was reserved for the wealthy—three-storey penthouses had wine cellars, saunas and jacuzzis— and for whites. The only black residents were servants, in whose quarters windows had to be at least six feet off the ground, lest they see into whites’ rooms.

Almost as soon as it opened, however, Ponte City began its decline. In 1976 the suppression of an uprising in Soweto, a black township on the outskirts of Johannesburg, ushered in sanctions and boycotts, crimping South Africa’s economy. Whites fled inner cities for the suburbs because of rising crime in the 1980s. In moved blacks, and to a lesser extent coloureds and Indians, fleeing townships. Migrants from the rest of Africa soon joined. The share of blacks in Johannesburg's inner-city increased from 20% in 1983 to 85% by 1993. This mixing, known as "greying," was illegal. The city cut off services to the Ponte building and landlords cared little for maintenance.

By the 1990s Ponte was a vertical slum. The 11th and 12th floors were stripped bare and turned into drug dens and brothels. There was no waste collection, so residents threw rubbish into the cylinder's inner core. At its peak the detritus reached the 14th floor. Dead bodies were later found among the rubbish. "My mum used to tell us to work hard at school or you'll end up in Ponte like the rest of the failures," recalls Bijou Dibu, who grew up in nearby Hillbrow.

Today, however, living in Ponte is becoming a mark of success. The Kempston Group, which owns the building, cleared and renovated the tower from 2008 to 2012. For the first time since 1976, it is fully, and legally, occupied.

Rents start at R3,200 ($223) a month, and there is a waiting list. Three of the top-floor flats are available for daring tourists via Airbnb. The inaugural jazz evening at the top-floor bar was held on August 25th.

The revival of Ponte is often lumped in with the gentrification taking place in parts of inner-city Johannesburg. This is most notable in Maboneng, where hipsters gather at a market on Sundays to coo over minimalist lampshades.

There are some enterprising artsy types, including a few from Europe, in Ponte City. But if it is undergoing gentrification it is by people selling avocados in supermarkets rather than eating them in cafés. Its residents are overwhelmingly black and working-class. They may not be able to afford to move to suburbs, but they can spend a little more on rent to live in a building with 24-hour security. That counts for a lot when the surrounding areas are dangerous. Hillbrow has a murder rate of more than 70 people per 100,000, akin to some of the most violent cities in Mexico. When you are on the 54th floor, that can seem a long way away.

Europe

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- **Russia and sanctions: A thickening web** [Thu, 30 Aug 21:30]
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- **Serbia and Kosovo: Pandora’s box** [Thu, 30 Aug 21:30]
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Gearing up for a fight

Tensions rise between Italy and the EU

Migrants and the economy are the flashpoints

Aug 30th 2018 | ROME

AS ITALIANS trickled back to the cities from holidays on the coast and in the sun-baked countryside, the scene was set this week for what promises to be a difficult autumn. Over both the enduring problem of what to do about migrants arriving from north Africa and the even older problem of Italy's dangerously anaemic economy, clashes with the EU are looming.

In the latest flexing of his muscles, Italy's interior minister and leader of the Northern League, the pugnacious Matteo Salvini, kept more than a hundred asylum-seekers cooped up on one of Italy's coast-guard vessels, the *Ubaldo Diciotti*, for almost a week as he demanded EU agreement on a policy for the redistribution of migrants. After a meeting in Brussels ended without progress, the Italian Catholic church helped to broker a deal. Most of the asylum-seekers entered Italy under its auspices; 20 each went to Ireland and, somewhat improbably, to Albania.

But this is only a temporary and partial climb-down. Mr Salvini and his political soulmate, Viktor Orban, the prime minister of Hungary, made clear during a meeting in Italy this week that they plan to build an EU-wide, anti-immigration front for the European elections next year (though they are at odds over the sharing of migrants). They plan to challenge the centrist alliance that France's president, Emmanuel Macron, is trying to forge, and which they depict as pro-immigration. Mr Salvini said they were at a "historic turning point" in Europe. With traditional conservatives increasingly clashing with hardline populists, he may well be right.

Still, Mr Salvini is in a more complicated situation than might at first appear. He is allied to another populist party, the Five Star Movement (M5S), that spans the political spectrum. How long will the M5S allow itself to be dragged along in his wake? Roberto Fico, its lower-house Speaker, criticised Mr Salvini's handling of the *Ubaldo Diciotti* affair, but was slapped down by the M5S's leader, Luigi Di Maio, who, like Mr Salvini, is a deputy prime minister. The incident highlighted the possibility of a split in the ideologically heterogeneous M5S which, as one of its lawmakers speculated, Mr Salvini may be trying to promote. Such a split would give him an opportunity to bring the right wing of the M5S into his already fast-growing League.

The dispute over immigration forms part of the Italian government's broader challenge to the established EU order. On August 27th, Mr Di Maio threatened to withhold Italy's contribution to the EU's next seven-year budget if its demands over migration were not met. The next day he hinted that Italy's own budget for 2019, due to be unveiled in September, could involve running a deficit of more than 3%, the limit imposed by euro-zone rules.

That rattled capital markets, not least because Mr Di Maio also said that he intends to introduce immediately three expensive measures that had previously been expected to be phased in gradually: income support for the poor and unemployed; lower rates of income tax; and the rollback of a pension reform.

A big deficit would add to Italy's already sky-high public debt-to-GDP ratio of around 130%, eroding investors' confidence in its ability to meet its obligations. Unsurprisingly, the risk premium on Italy’s benchmark bonds has more than doubled since before the formation of the government, raising the cost of state borrowing and weakening the balance-sheets of Italian banks. Mr Di Maio is playing a risky game. But what is the prize?

Unleashing demons

The most banal, and likely, answer is that he is ramping up tension with Brussels to help secure the greatest possible freedom to pump cash into the economy and stimulate growth. But his bluster inevitably kindles suspicions that the League and the M5S, neither of which is committed to euro membership, may be plotting to extricate Italy from the shared currency, if not the EU. A third possible explanation is that Mr Di Maio, whose party is nominally the senior partner in the coalition government, is trying to regain the initiative by outbidding Mr Salvini in the extravagance of his threats and demands.

The danger is that, in so doing, he will create unrealistic expectations in a country where a large share of the population feels it has been left to deal with immigration alone and where almost everyone has accepted the alibi long put forward by governments of left and right alike: that Italy’s distressingly low growth is not because of their own failure to introduce structural reforms, but entirely because of the European Commission’s stinginess.

A thickening web

America’s escalating Russian sanctions

Despite Donald Trump, Russia is being hit harder and harder

Aug 30th 2018 | MOSCOW

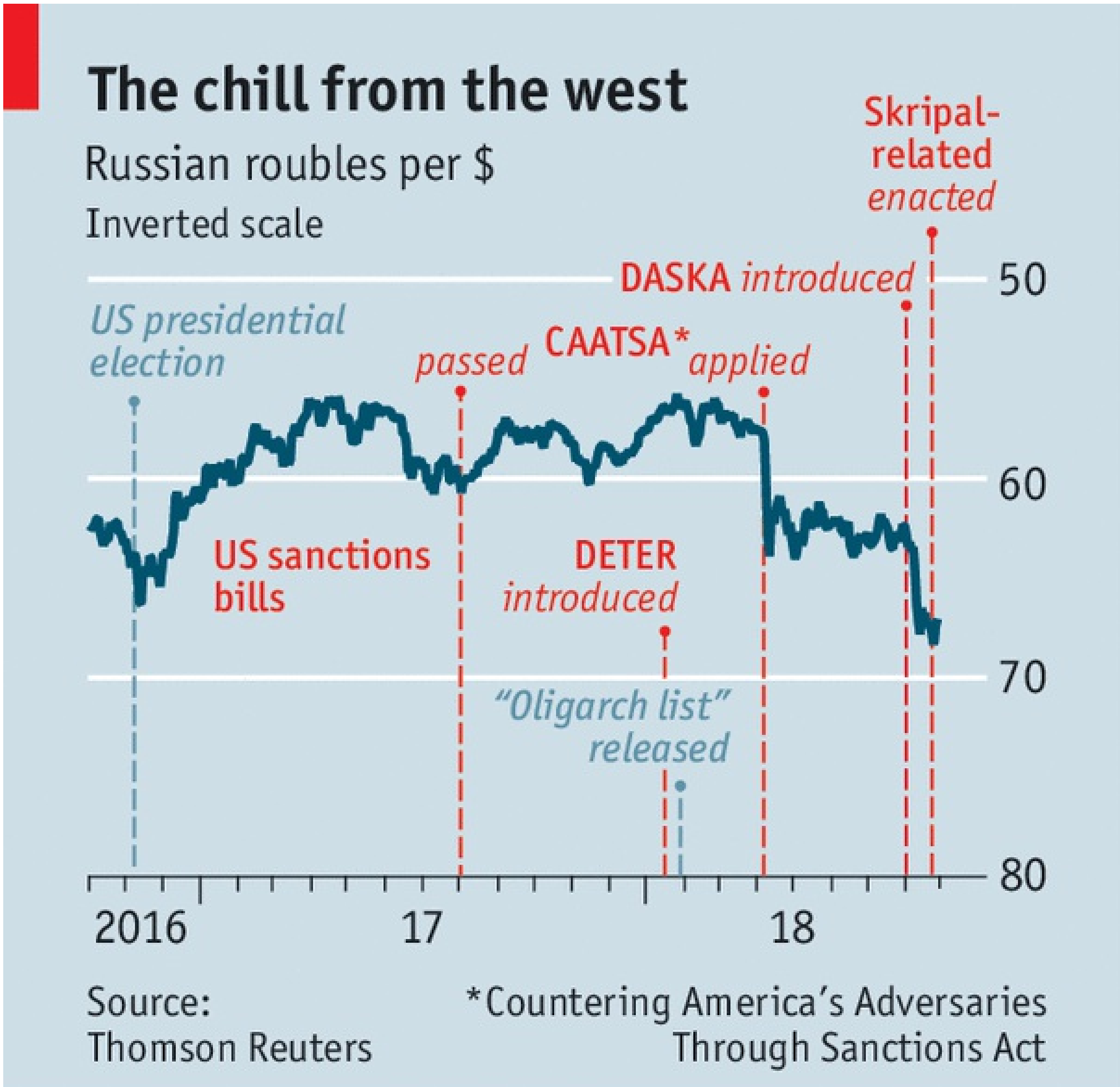
BARELY a week seems to pass without news of fresh Western sanctions against Russia. Sergei Elkin, one of Russia’s most popular cartoonists, recently captured the mood with a caricature of a hapless-looking Vladimir Putin holding a cell phone to his ear. “To hear more information about new sanctions, press one,” read the caption.

In August alone, America has slapped penalties on Russian shipping firms accused of trading oil with North Korea; imposed restrictions on the arms trade in connection with the poisoning of ex-Russian spy Sergei Skripal in Salisbury; and begun congressional hearings on two new pieces of legislation designed to punish Russia for its interference in elections. Further Skripal-linked measures may follow in three months’ time.

Markets have been scrambling to digest their impact. The greatest threat to

Russia's economy comes from the two proposed bills, the Defending Elections from Threats by Establishing Redlines Act of 2018 (DETER) and the Defending American Security from Kremlin Aggression Act (DASKA). Senator Lindsey Graham, one of DASKA's six bipartisan co-sponsors, called it the "sanctions bill from Hell". When details of its contents made their way into the Russian press in early August, the rouble slid to two-year lows (see chart) and the share prices of Russian state banks began falling.

Investors see several reasons to worry. Chief among them are proposed bans on trading new Russian government debt and limits on the operations of state banks. With state-owned lenders accounting for over 60% of the sector, bans on just a few could force a "restructuring of the financial system," argues Natalia Orlova, chief economist of Alfa-Bank, Russia's largest private lender. This would be painful, but stop short of the abyss: America cannot impose Iranian-style sanctions—such as banning the purchase of Russian oil and gas—without harmful effects on the global economy.



The Economist

The Russian authorities, meanwhile, have been taking prudent steps to prepare. "They have both insulated and isolated the economy," says Chris Weafer of Macro-Advisory, a consultancy. The Russian central bank has dumped or disguised ownership of four-fifths of its holdings of American government debt, following sanctions imposed in April. The government has been funnelling extra revenues from rising oil prices into refilling its National Welfare Fund and building up reserves. And a weaker rouble actually helps exporters, though at the cost of higher inflation.

Yet no policy moves, short of withdrawing Russian forces from eastern Ukraine, can lift the sanctions-created uncertainty that dampens investment and messes up budget planning. Compared with a year earlier, foreign direct investment fell by more than 50% in the first half of 2018. “When the risk is debt, you can build scenarios,” says Ms Orlova. “But when the risk is sanctions, it’s impossible to know.” Many see the peril increasing as America’s midterm elections approach.

The irony is that the risk of new sanctions now emanates not only from Mr Putin, but from Mr Trump as well. His subservience to Mr Putin at a July summit in Helsinki spurred senators to draft the DASKA bill, says Andrew Weiss of the Carnegie Endowment for International Peace. “[The bills] are born out of a deep distrust of the president when it comes to Russia,” a senior senate aide concurs. Even if Russia behaves this autumn, tweets from Mr Trump could well spur their passage.

Pandora’s box

The leaders of Kosovo and Serbia talk about swapping land

Their real plan may be to swap Serbian recognition of Kosovo for Serbian autonomy within it

Aug 30th 2018 | PRESEVO AND MITROVICA

THE end of the Yugoslav wars 20 years ago left hundreds of thousands of people in states they did not regard as their own. Tough, said the peacemakers: redrawing borders would only lead to more conflict. As a result, some 120,000 Serbs remain in ethnic Albanian-dominated Kosovo; some 60,000 ethnic Albanians live in the Presevo valley in Serbia.

Some local leaders have long been keen on a swap, but until recently the EU and America have discouraged the idea. That has changed. Federica Mogherini is said to want an agreement on Serbian recognition of Kosovo by the end of her term as the EU’s high representative for foreign affairs next year, and a land swap could be one way of getting one. America no longer opposes the idea, according to a remark by John Bolton, the national security adviser, on August 24th. Perhaps that is thanks to Trumpian enthuiasm for doing deals, and for nationalism. Serb and Kosovar officials are also keen to hurry things along before European parliamentary elections next May, because they may herald a more populist, anti-enlargement Commission.

For more than a month, Hashim Thaci, Kosovo's president, and Aleksandar Vucic, his Serbian opposite number, have been making ambiguous statements about a possible deal. The obvious swap is of Kosovo's Serbian-inhabited north for Serbia's Presevo valley, but locals are divided about whether it should, or will, happen.

The Economist

Many analysts believe that Mr Thaci and Mr Vucic actually have no intention of changing borders, but are preparing for a deal on a form of Serbian autonomy within Kosovo in exchange for recognition. Though both sides will hate the deal, at least their leaders will be able to say that they preserved precious territory.

But if the borders are indeed redrawn here, what about those of Macedonia, a few miles away, where a quarter of the population is Albanian? And what about Bosnia, where Milorad Dodik, the local Serb leader who wants independence from Bosnia, says—using deliberately ambiguous language—that the region's Serbs should mark out what is theirs and what is their neighbours'? Asked about the risk of conflict, Shaip Kamberi, the Albanian mayor of Bujanovac in the Presevo valley says: "It is not us opening Pandora's Box. We are the box!"

All the young prudes

Naked Europe covers up

The home continent of public nakedness is growing more body-shy

Aug 30th 2018 | TORNIO AND AMSTERDAM

“NAKED, we are equal,” proclaims Ida Karkiainen. The Swedish MP is addressing a packed hall at the 17th International Sauna Congress in Tornio, Finland. She draws a round of applause from the crowd, a mix of sauna entrepreneurs and enthusiasts from Europe and Japan, along with a few North Americans. It is important, Ms Karkiainen continues, that both sexes sit nude in the sauna together. After all, political and business deals are often made in the swirling steam, and one would not want such an important venue of power to exclude men.

It is hard to imagine such a speech being made by a politician anywhere outside Europe. Beginning in the late 19th century, ideas about freedom, equality, health, sexuality and public space came together to create a distinctly European enthusiasm for going unclothed. In Scandinavia the focus was the sauna. In Mediterranean countries it was the beach. In Germany it was everywhere: the country’s *Freikörperkultur* (“free body culture”, or FKK) encourages stripping off while gardening, playing sports or taking lunch breaks in the park.

Yet Europe’s taste for bare skin is in retreat. Nudist beaches and resorts, topless sunbathing and nude unisex saunas are declining. Football teams report that players are unwilling to remove their underwear to shower after matches. In recent years, commentators across the continent have remarked on a new prudishness.

The retreat of nudity has unpredictable political overtones. During Germany’s election campaign in 2017, Gregor Gysi, the leader of the Left party, lamented the conservative turn represented by the decline of FKK, which had been strongest in the former East Germany. In the Netherlands, the issue is more often invoked on the right. In 2016 Mark Rutte, the centre-right prime minister, worried about a future in which nude beaches have vanished because the country has “surrendered to the wishes of a cultural minority”—by which he meant Muslims.

But while immigration plays a role in Europe’s increasing modesty, other factors are more important. The rise of social media has made young people more body-conscious, reluctant to display anything less than perfect abs. Smartphones with cameras make risqué undress riskier. The #MeToo movement has forced a reassessment of even fully clothed interactions between the sexes, let alone naked ones. And the increasing ubiquity of online pornography is making it difficult to de-sexualise the naked body, a prerequisite for nudist beaches and unisex saunas.

Today, nudists complain, it is more difficult to separate nakedness from sex. French nudists say their movement’s younger members are overwhelmingly men; women are leery of being leered at. “Parts of Cap d’Agde have been completely sexualised,” says Wim Fisscher, owner of Adam and Eve, the last nude beach restaurant in the Dutch town of Zandvoort. He has had to turn away Dutch sadomasochists who turned up with leash and collar. Toplessness on European beaches is dwindling. In 1984 a survey found that 43% of French women under 50 sunbathed bare-breasted. By 2017 that had fallen to 22%, and arguments over beachwear centred not on whether bottoms-only suits covered too little but on whether the long-sleeved “burkinis” worn by some Muslim women covered too much.“On the one hand young people nowadays watch the craziest sorts of porn, and on the other they find it harder to take their own clothes off,” observes Mr Fisscher. In the late 1980s there were seven nude restaurants in Zandvoort. He estimates that the average age of his patrons has risen to about 50.

If any space is more embarrassing for non-European tourists than a French nude beach, it is a German or Dutch sauna. They are unisex and naked by default. All bodies, thin, fat, young or old, are treated non-judgmentally. The one thing that will earn a disapproving stare is wearing clothing, because such modesty implies an inappropriate level of sexual consciousness.

The latest German innovation is the *aufguss* (“infusion”) sauna, in which nude audiences enjoy Las Vegas-style performances by muscular, towel-swirling emcees who infuse the steam with herbal aromas. The paradigmatic Dutch sauna might be Zuiver (“Pure”), a spa complex outside Amsterdam whose name subliminally links nakedness with the country’s nothing-to-hide Calvinist morality.

Sweating, the details

Yet in 2011 Zuiver introduced swimwear days, currently three per week. Most Dutch saunas now have clothing-optional hours. Fear of unwanted photos is not a problem: mobile phones must be handed in at the door. But sauna owners say that with mores changing, they need to appeal to potential clients who are more bashful, whether because they are young or from conservative immigrant backgrounds.

There are pockets of Europe where social nudity is getting a second wind. Jesce Walz, an architecture student researching saunas, notes a wave of hip new public ones in Finland, where they were once mainly found in private homes. In Sweden, more mixed-sex saunas are opening. French nudists say urban get-togethers such as nude bowling nights are packed, though overwhelmingly with men.

But the vision of nakedness as a demonstration of freedom and equality seems to be faring less well. Nudity has been central to European culture since the Greeks first sculpted Hermes. That will not change. What may be vanishing, though, is a particular 20th-century European dream, for which all one needs is a patch of Mediterranean coast or a Scandinavian forest and the willingness to strip off.

Life in the centrifuge

Lessons for the EU from the Austro-Hungarian Empire

What Europe can learn from the collapse of the Habsburg empire a century ago

Aug 30th 2018

A GOLDEN late-summer light filters through the windows of the Café Landtmann. Bow-tied waiters move among towering hot-house plants. Officials huddle around a table. They are fretting about fragmentation: Europe’s north is peeling away from its south; easterners feel like second-class citizens; outside powers are trying to divide and rule. This might be a scene from the final days of the Austro-Hungarian empire in 1918. In fact it is today, 100 years later. For once more the spectre of European fragmentation haunts Vienna.

It haunts other capitals, too. In Berlin, Angela Merkel urges her ministers to read “The Sleepwalkers”, an account of the political failures that led to the first world war. Political Brussels is rediscovering Stefan Zweig’s tales of post-Habsburg Austria. In Rome a populist government is preparing to battle the EU institutions over budget rules and to seed a new nationalist block in the European Parliament. Emmanuel Macron, France's liberal hope, is losing his sheen; his proposals for euro-zone reform have been diluted. Autocracy is gaining ground in Warsaw and Budapest. Meanwhile China, Russia, Turkey and America are interfering ever more in European affairs. The geopolitical centrifuge is spinning European states away from each other, like dancers at a ball.

Vienna is the pivot. Austria is two months into its six-month presidency of the EU Council under Sebastian Kurz, the darling of the continent's conservatives. To his critics he has cosied up to the far right by bringing them into his government, and indulged Islamophobia. To his fans, he is the smooth diplomat staking out a middle ground between liberalism and nationalism and building bridges between east and west. He will host Europe's leaders in Salzburg on September 20th and get them talking about the things pulling Europe apart: Brexit, the next EU budget, trade and immigration. "We need to get everyone on board again," says Alexander Schallenberg, the co-ordinator of Austria's presidency.

It is also in Vienna that the memories of the old Habsburg multinational order reside. "Our history shows how quickly things can change for the worse," cautions one Austrian intellectual. The empire once run from here had a larger budget and more power than today's EU, not least its own army and tax-raising powers, but both stand as triumphs of liberalism over nationalism. Ten languages were once spoken in the Habsburg parliament. Following its annexation of Bosnia, the empire was the first western European state to recognise Islam.

Like the EU, the Habsburg empire seemed to suspend history. Germans, Hungarians, Slavs and sizeable Muslim and Jewish populations mingled in cosmopolitan cities like Vienna and Prague, Trieste and Lviv. Paul Lendvai, a Hungarian-Austrian writer born in Budapest in 1929 recalls: "My father always said peace was not having to show your passport." The old order's full value became clear only after it collapsed, when the dark energy of them-and-us took hold and the region succumbed to petty hatreds, economic disintegration and the whims of outside powers.

One lesson above all lives on: do not take the loyalty of a multinational block for granted. The Habsburgs charmed their subjects by giving them relative freedom, material benefits and protection under the law from the whims of local barons. “They created a situation where ordinary people could see their own interests in institutions of empire,” explains Pieter Judson, a leading historian of the empire. But when tough times came with the start of the war, he explains, it turned out that these loyalties had been contingent: “The state didn’t provide what it promised to provide. There was no food and no fuel. Men went to the front, women to the factories and children were left on the streets. Loyal nations—the Ukrainians, the Serbs, the Czechs—were persecuted without foundation.” When the empire was dissolved after its defeat, it was not greatly mourned.

Today’s EU is even weaker, fears Mr Judson: built on good living but without deeper roots. His home country, America, is a multinational, federal state that survives on common feeling. “But as an American living in Europe I feel that the stakes of belonging to the EU are not understood at all.”

Hearts and minds

European leaders can learn from the weaknesses of Austria-Hungary. Europe’s citizens today may have no affection for the bureaucracy, but like the subjects of the old empire they will tolerate it for as long as it generates wealth and preserves their freedoms. Yet complex institutions, second-rate European commissioners, wasteful policies like the common agricultural one and incompetent national governments across much of the continent all undermine that goal. To survive, the liberal European order, of which the EU is a pillar, must become leaner and more capable. Margrethe Vestager and Cecilia Malmström, the European commissioners taking on the digital giants and forging massive new trade deals for the union, are two of the better examples.

But the fate of Austria-Hungary also showed that multinational units cannot survive times of hardship without a sense of common purpose. Thanks to the rise of English, budget airlines, the internet and university exchanges, today’s young Europeans live much more “European” lives than previous generations. But politics is not keeping up. Nurturing a clearer European identity is not just a romantic goal; it is the only way to make the project sustainable in the long term, hard though history shows this to be.

So Europe’s leaders must face the balancing act that defeated their Viennese predecessors. They must show the pragmatism needed to keep their union afloat in the short term, while cultivating the vision needed to build common feeling in the long term. Mr Lendvai sums up the landscape: “Social democracy is a shambles; liberals are arguing with each other; Christian Democrats are losing their Christian feeling.” They’d better get their act together, he reckons: “For the ghosts of the past are coming back.”

Britain

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- **High-tech farming: Harwell, we have a problem** [Thu, 30 Aug 21:30]
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- **Bagehot: Steeled in war** [Thu, 30 Aug 21:30]
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A new furrow

How Brexit could change the face of rural Britain

The government is drawing up a plan to replace the Common Agricultural Policy

Aug 30th 2018 | USK VALLEY

IT HAS been a testing year for Britain's 150,000 or so farmers. A summer heatwave scorched the broccoli and cauliflower crops. Before that, freezing conditions held up sowing, and scythed through the lambing season. On Pant-y-Beiliau farm, in Wales's Usk Valley, the Trumper family was anticipating a bumper year from their flock of a thousand ewes. In the end they lost about 5% of their newborns to the knackermen. But the extremes of weather are something that Maurice Trumper, born on his farm in the 1920s, has learned to live with. Brexit is different.

In most sectors of the economy, the government is doing its best to maintain continuity after Britain leaves the European Union next March. But in agriculture, it promises big changes. Michael Gove, the secretary for the environment, food and rural affairs, has pledged a shake-up regardless of whatever deal the government eventually reaches with Brussels.

Under the EU's Common Agricultural Policy (CAP), British farmers receive subsidies worth about £3.1bn ($4bn) a year. After Brexit those payments will end. The Treasury has promised to pay farmers the equivalent of the CAP subsidies until the end of the parliament, due in 2022. After that, the payments will be phased out and replaced by a new system that the government is drawing up. Its design will determine the future of British farming, and the face of the countryside.

Agriculture makes up only about 0.5% of Britain's economy. But it employs almost half a million people, or 1.5% of the working population, a figure which rises to 4.1% in Wales and 5.7% in Northern Ireland. It supports other industries, contributing most of the raw materials for the food and drink business, for instance. And perhaps no industry has a greater physical impact on the country. Nearly three-quarters of British land is used for farming.

Under the CAP, most subsidies are given out according to the acreage of a farm, in what are known as direct payments. The rest are allocated for the work that farmers do to look after the environment. British farmers have long argued that the system is unjust and inefficient, rewarding rich landowners for the size of their holdings and failing properly to recognise farmers' stewardship of the landscape. In 2016 the top 10% of recipients in England received 47% of CAP payments, while the bottom 20% got just 2%.

So the government is seizing the opportunity that Brexit presents to flip the formula. In future, subsidies will be awarded for delivering "public goods". The most important of these, Mr Gove says, is "environmental protection and enhancement", such as planting woods, restoring peat bogs or maintaining hedgerows. Mr Gove has won plaudits from environmentalists for his apparent devotion to their cause; he calls himself a "romantic" about the countryside. He has promised to flesh out his ideas in an agriculture bill later this year.

Although the CAP is unpopular, fiddling with the system provokes nervousness. The subsidies make up 61% of farm income in England; in Wales and Northern Ireland the figure is over 80%. Small, upland livestock farms tend to be particularly reliant on the subsidies. Mr Trumper says that his 500-acre farm receives about £36,000 a year in CAP payments: “We are totally dependent on that to survive.”

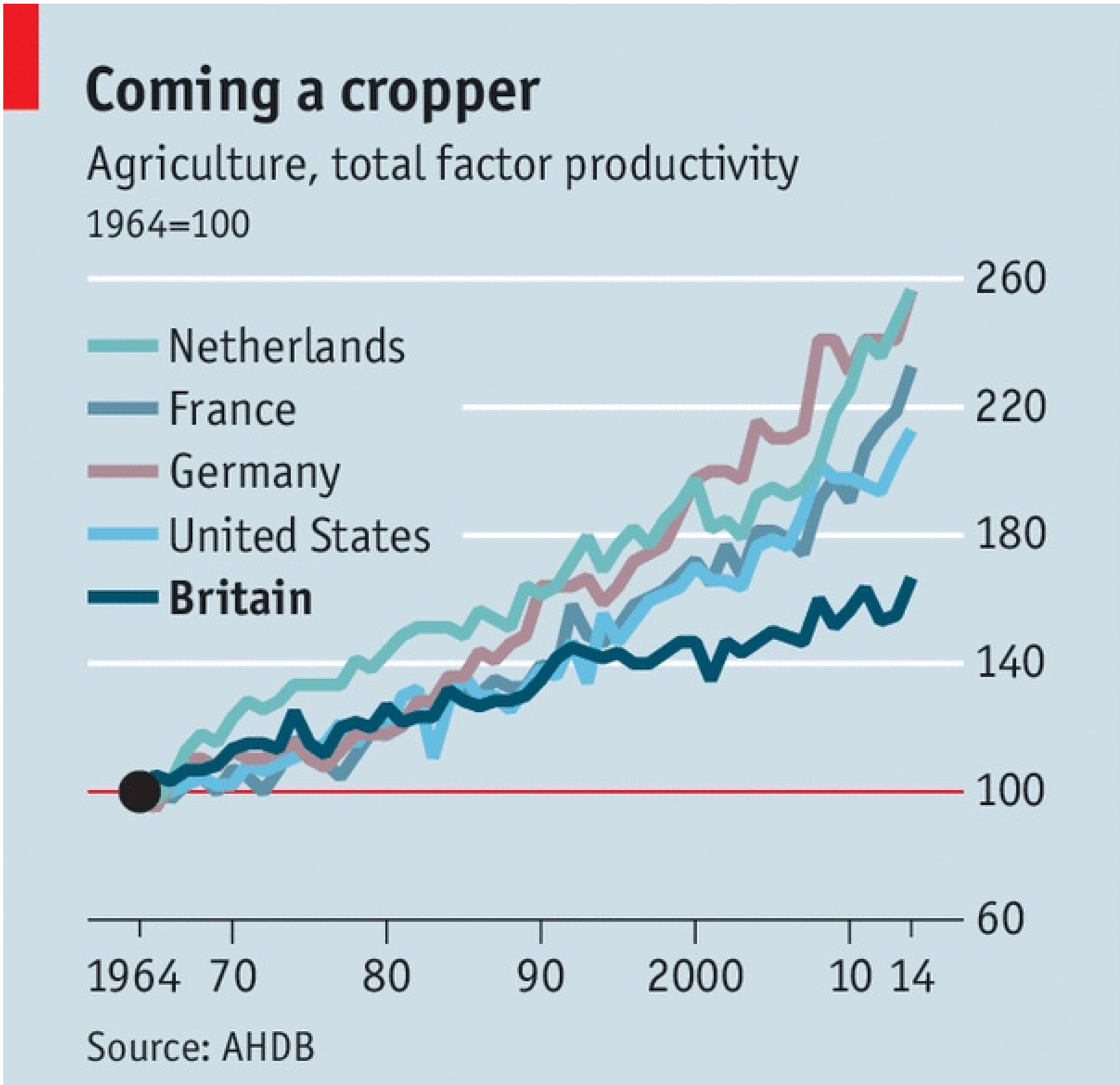
The government has modelled the consequences of removing direct payments from lowland sheep and cattle farms. The results are bracing. In 2015-17 19% of such farms made a loss even with the subsidy; without it, the figure would have risen to 53%. Across all farms, 16% made a loss; without direct payments the figure would have been 42%. Ministers have yet to reveal the details of the system that will replace direct payments. But it seems that farmers will face a choice: either seek government payments for creating public goods, or focus on efficiency in order to survive without subsidies. One government adviser says farmers will have five years or so to shape up. Those that don’t “will come a cropper and go bankrupt.”

Some farmers are excited by the prospect of being paid for their maintenance of the countryside. Yet small farms may not have the wherewithal to compete for the payments that Mr Gove has in mind. Many voted for Brexit as a protest against the bureaucracy involved in applying for EU subsidies. The replacement system may be no less cumbersome. Nor is it clear that there is much more scope for diversification. Two-thirds of farmers have already gone into other lines of business, such as solar energy and bed-and-breakfast; a quarter make more money from this than farming.

What of improving efficiency? The country has some highly efficient, large farms, such as the cereal farms in East Anglia. Seven per cent of England’s farms produce 55% of its agricultural output. But there is a long tail of smaller, less productive ones. Almost half the country’s farms are less than 20 hectares. Sheep and cattle farms, which make up nearly a third of the total, are the least profitable. Proponents of change argue that in places like Wales, farms will have to merge, or at least co-operate more closely to lower their costs.

Mr Gove has also talked up the potential of technology. On small farms, like that of Gary Ryan in Monmouthshire, gizmos like Moocall, a sensor stuck on a cow’s tail to alert a farmer before calving, improve efficiency. Government aides point to the Netherlands, a country of only 17m people that is nevertheless the world’s second-largest agricultural exporter, thanks to heavy investment in technology such as drones and high-tech greenhouses. In

Britain, there is plenty of potential for improvement: the top quarter of farms are twice as productive as the bottom quarter. The country lags behind others countries in agricultural productivity (see chart).



The Economist

Yet British farmers have little time to get up to speed. Tom Hind of the Agriculture and Horticulture Development Board, an industry body, says that productivity growth has been so sluggish that "this is like turning around a supertanker." He argues that Britain is good at agri-science, but not at applying it to farming—though there are growing attempts to do this, sometimes with European help (see article).

Back in the Usk Valley, farmers wait to learn their fate. Agricultural policy has been devolved to the governments of Scotland, Wales and Northern Ireland, which might choose to continue directly propping up farms if they do not like the look of Mr Gove's new system. As one Welsh official says, the local coal and steel industries were virtually wiped out in the 1980s. In some areas farming, "a social anchor to communities", is all they have left.

Harwell, we have a problem

Farmers adapt NASA’s Mars rover to count chickens

Space technology finds an earthy, earthly purpose

Aug 30th 2018

BREEDING chickens on a large scale isn’t rocket science. It is much harder. The birds are bad at regulating their body temperature, and the big sheds they are kept in can get stuffy. Flickering lights and loud noises make them anxious. And ammonia from the faeces of birds crammed tightly together often produces unedifying “hock burns”. All of which means they require constant monitoring to ensure they are gaining weight. But babysitting chickens is time-consuming. A single worker can hope to weigh only a small sample by hand each week. Remotely monitored scales can help but, even when wheeled back and forth on pulleys, they suffer from blind spots.

Now an answer to these problems has come from a surprising place: Mars. Thrive Multi Visual, an agritech startup from Shropshire, is devising a chicken-weighing robot based on the rover developed by NASA to explore the red planet. The company plans to kit out the vehicle with cameras that can weigh chickens by sight alone. Thermal-imaging gear and other gadgets will monitor indicators such as body-heat and humidity. An indoor GPS system, also adapted from space technology, will allow the robot to drive itself around and self-charge, while sensors will prevent it from running over laggards that are slow to strut out of its way. If it works, the chicken rover will greatly reduce the work involved in looking after the birds—handy for farmers fearing labour shortages after Brexit.

Thrive MV is one of seven companies supported by the European Space Agency's Business Incubation Centre UK, just outside Harwell, an Oxfordshire village. Twenty such centres have been set up across Europe since 2000 to nurture young tech firms devising down-to-earth uses for space technology. In Britain each company receives technical support from ESA scientists for a year, as well as help with networking and cheap office space in Harwell, which is now home to around 80 space-related companies. The centre, which was set up in 2011, saw its 60th company graduate in August.

A surprising number of the firms are applying space technology to farming. Agritech startups comprise more than half the current cohort in Harwell. These include HayBSee, which is making autonomous drones that can detect unhealthy patches in crop fields and kill weeds. Another, GroundData, makes solar-powered sensors that gather data about potato plants. Beyond agriculture, techies are using space gear to make snazzy bike bells, spot doctored photographs and find bed bugs in hotel rooms.

There are several reasons why so many farming startups are repurposing space hardware. One is that farmers are slow to adopt new technology, leaving gaps for enterprising geeks to exploit. The sector suffers especially from paltry data collection. Another is that space technology is very robust and designed to withstand toxic substances, making it ideal for life on farms, says Claire Lewis, chief executive of Thrive MV. She believes that agriculture is nowhere near as "tech-enabled" as it should be. Could her company and its fellow "incubatees" tame this final, farming frontier?

Corbyn's conundrum

Pressure grows on Labour to back a referendum on a Brexit deal

As polls shift towards Remain, campaigners urge Jeremy Corbyn to change his line

Aug 30th 2018

EVEN as Brexit negotiations are being speeded up, talk of missed deadlines and a possible no-deal outcome seems to grow. That strengthens the groups such as People's Vote and Best for Britain that are campaigning for a referendum on any Brexit deal, with an option to remain in the European Union instead. Polls on whether people want another vote are inconclusive and often heavily dependent on the question's wording. But if Parliament cannot agree to a deal and the alternative becomes to leave without one, most voters seem to prefer a new referendum.

Campaigners are focusing their efforts on Labour and its leader, Jeremy Corbyn. He is a long-standing Eurosceptic. Labour's position is to respect the result of the 2016 referendum but demand a Brexit that passes six tests, notably to protect jobs and the economy. On this basis it seems sure to oppose any deal that Theresa May brings back from Brussels. If Parliament defeats this, Mr Corbyn wants a general election, not another referendum. The party worries that supporting another referendum might cost it Leave voters, by seeming to align too closely with a Remain-backing establishment. Complicating its position are fears that the real ambition of anti-Brexit (and anti-Corbyn) Labour MPs now is to start a new centrist party.

Yet some senior Labour figures are more equivocal. Both John McDonnell, the shadow chancellor, and Sir Keir Starmer, the shadow Brexit secretary, have been careful not to rule out a referendum in any circumstances. A parliamentary rejection of a deal may not trigger an election, and an election might not change the dynamics of Brexit. Hence the case for another vote, which is now endorsed by many of Labour’s leading trade-union backers. Several unions support moves to persuade the Labour conference in late September to call for a new referendum.

One reason for this is the perception that public opinion is shifting. Recent surveys by YouGov, a pollster, seem to support this. Peter Kellner, a former president of YouGov, concludes from the latest evidence that what was a 52-48% Leave majority in June 2016 has switched to a 53-47% Remain one. He says the shift against Brexit is most marked in Labour seats, especially in the north, which voted strongly for Leave. This has led some campaigners to argue that Mr Corbyn’s fuzzy position on Brexit could deprive him of as many as 4m new votes. Labour insiders dismiss such claims. Brexit is widely identified with the Tories in any event. And they think any shift in public opinion is too small to justify a stronger pro-Remain position.

A report due out next week from NatCen Social Research, based on continuing surveys of the same panel of voters, suggests that the public mood is indeed changing. Concerns about immigration, a huge issue in June 2016, have receded. Fully 60% of respondents would accept free movement of EU citizens in exchange for keeping trade as free as now. At the same time the panel has become markedly more pessimistic about the economic consequences of Brexit, with 51% expecting to be worse off as a result. The researchers find that this new pessimism has been decisive in shifting both some previous Leave voters, and most of those who abstained in June 2016, towards Remain.

Mrs May's Chequers proposal, which emerged after most of the NatCen research was conducted, may have accelerated this shift. As Sir John Curtice of Strathclyde University, who supervised the study, notes, Chequers is hugely unpopular with Leave voters, who see it as too soft. Yet at the same time Mrs May gets little credit for it from Remainers. And voters from both sides fault her for incompetent handling of the Brexit negotiations. Demographic change also counts, as young people are overwhelmingly anti-Brexit.

All this should create openings for the opposition. Yet no matter how much the party tries to shift the debate to other issues, Mr Corbyn's perceived ambiguity over the EU and a possible fresh referendum continues to be a problem for Labour. And that is why the party's conference in September, the last before Brexit is due to happen, is likely to see fierce fighting over the issue.

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Total recall?

Ian Paisley’s suspension gives voters the chance to force an election

Under new powers, the MP will face an election if 10% of voters demand it

Aug 30th 2018 | BALLYMENA

“GET him out! Get him out!” calls a middle-aged woman hurrying along a damp Ballymena street in North Antrim. “He’s a muppet!” Ian Paisley, the local Democratic Unionist MP, may be used to this sort of criticism from nationalist opponents. But he now finds himself under fire from both sides of Northern Ireland’s political divide. “I always vote DUP,” says the woman, “but I think he has done wrong—absolutely.”

Her judgment is in line with the House of Commons, which voted in July to impose an unusually severe penalty on Mr Paisley for failing to declare two family holidays to Sri Lanka, paid for by the Sri Lankan government. The trips, which took place in 2013, featured business-class air travel, swanky hotels and helicopter flights, in a package worth at least £50,000 ($65,000). Later, Mr Paisley pressed the British government to oppose a move by the United Nations to investigate human-rights violations in Sri Lanka.

The Commons standards committee, finding him guilty of misconduct in breaking rules on lobbying, recommended his suspension from the House for 30 sitting days, the stiffest penalty imposed since records began in 1949. It will begin when Parliament returns on September 4th. Mr Paisley has also been suspended by his party, pending its own investigation.

His punishment opens the possibility that Mr Paisley may face an electoral contest. Under a recall procedure established in 2015, following a scandal over MPs' expenses, if an MP is suspended then a by-election can be triggered if 10% of voters in the constituency call for one. Mr Paisley's suspension presents the first time that voters have had such an opportunity since the power was introduced. Three offices have been opened in North Antrim where voters can register their support for a recall. Sinn Fein, the main nationalist party, is urging its followers to call for a contest.

North Antrim has long been a stronghold for the DUP, and for the Paisley family in particular. The incumbent's father, also called Ian Paisley, held the seat for 40 years before bequeathing it to his son in 2010. The younger Mr Paisley took it over with a large majority. He would be the favourite to win a by-election, should his opponents muster the signatures needed. He has vowed to run as an independent in the unlikely event that the DUP deselects him.

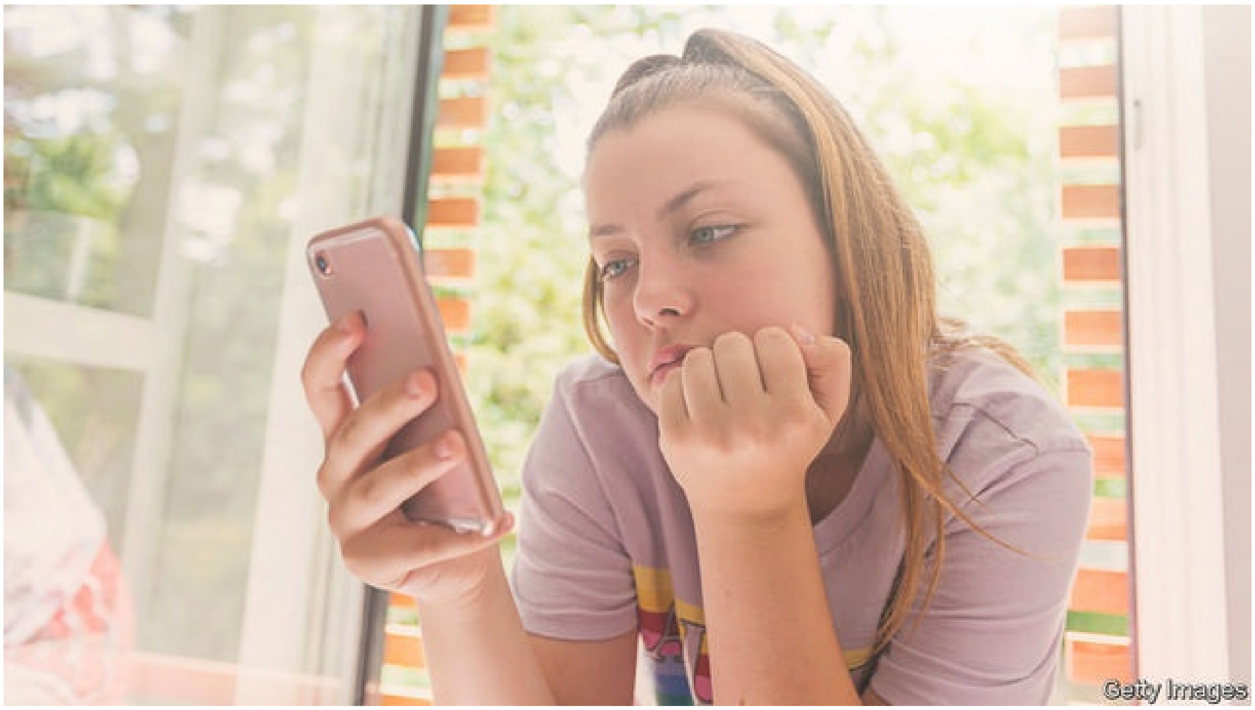
It is not Mr Paisley's first time in hot water. In 2008 he resigned as a minister in the Belfast Assembly, saying that months of "unfounded allegations" that he had lobbied for a local property developer had proved "a distraction". In Westminster he has distinguished himself as one of the highest expenses claimants among MPs. He has said he is "repulsed" by gay people and used the word "chinky" as a synonym for Chinese. He has been fined for contempt of court, and for driving without insurance. None of this has been held against him in North Antrim, where his majority last year increased to more than 20,000.

"It was just a bit of bad luck for him—nothing too bad, I don't think. Why wouldn't you take a bit of comfort if you're offered it?" says one voter in Ballymena. Others have had enough. "What was he thinking of, sitting on a first-class flight with his children behind him? Did he think Sri Lanka was paying for it because of his good looks?" asks a unionist. Still, Mr Paisley will survive any attempt to dislodge him, reckons one Catholic man. “I think he’s too strong in Ballymena,” he shrugs. “I think people will stand by him no matter what. His loyal voters will still vote for him—the Paisley name.”

Sometimes it's hard

The puzzle of Britain's unhappy girls

A happiness gap has opened up between boys and girls. Are social media to blame?

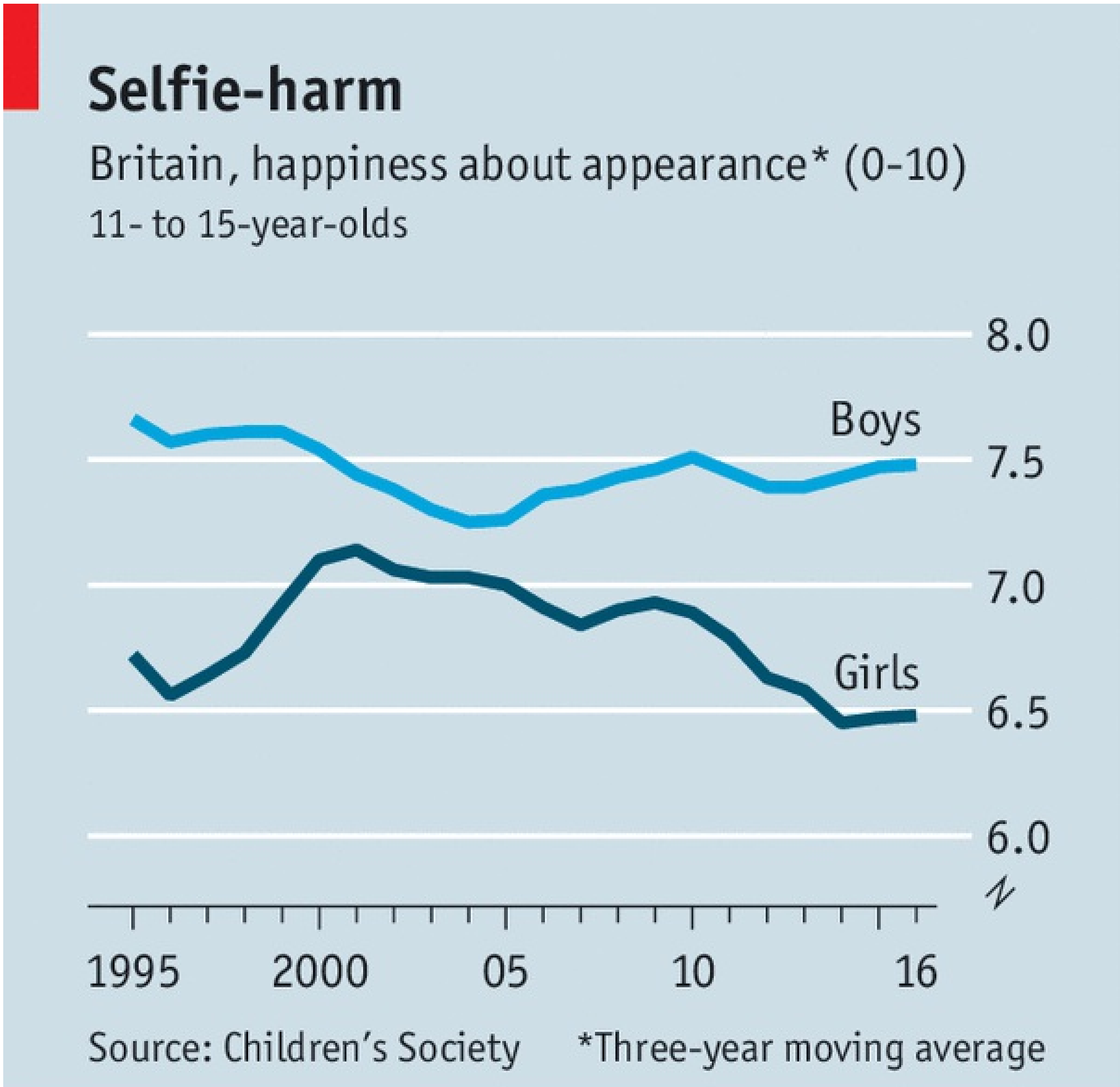


Aug 30th 2018

ON MANY measures, from exam results to interest in science jobs, boys and girls in Britain are becoming more similar. But on one they are drifting apart. According to a report published on August 29th by the Children's Society, a charity, girls have become increasingly unhappy in recent years. Measured on a ten-point scale of self-reported happiness, the average score for girls aged 11-15 fell from 8.2 in 2010 to 7.8 in 2016. Boys remained chirpy, their score hardly moving from 8.3 to 8.2.

Girls have always been a bit sadder than boys. But in the late 1990s they began to cheer up, almost catching up with boys in 2010. The reversal in this trend has various causes, including the fact that boys are feeling better about their school work, an area where girls have long been more confident. But the most dramatic change is that girls are worrying a lot more than they used to about their appearance. Here, the gap between boys and girls is the widest in 20 years (see chart).

What is to blame? The rise of social media is one suspect. What is shared online amplifies gender stereotypes, reckons Richard Crellin of the Children's Society. The effect may have been to bring them back to where they stood in the 1990s. Girls in schools where images or videos of other people's bodies are shared a lot are unhappier with their appearance than those in schools where this is rare. For boys, the opposite seems to be the case: a greater circulation of such images actually increases their happiness with their looks.



The Economist

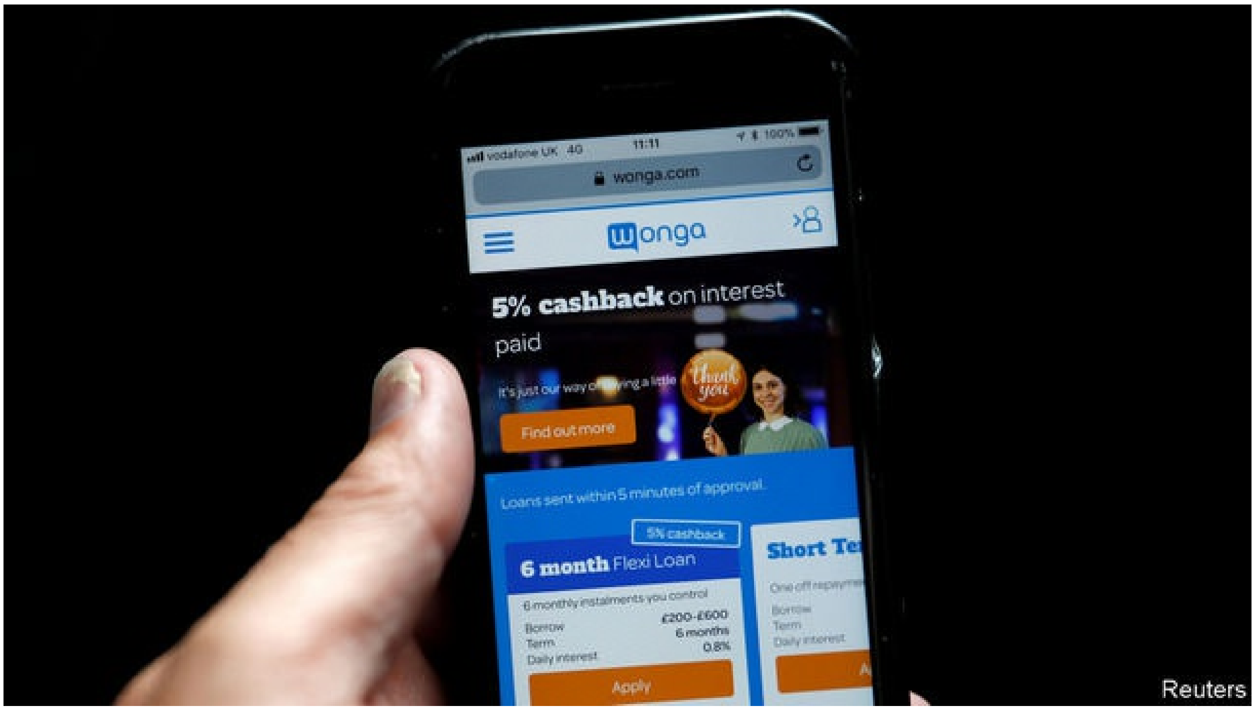
Britain's gender gap in child happiness is not unique. In most European countries teenage boys are a bit cheerier than girls, according to the World Health Organisation. But the growing despondency of British girls may have worsened the country's already poor standing in international comparisons of childhood happiness. In one such survey in 2010, England ranked 30th out of 39 countries in Europe and North America.

Alarmingly, the Children's Society found that one in five 14-year-old British girls had self-harmed in the past year, as had one in ten boys. This was the first time children had been asked the question, so it is unclear whether the problem is on the rise. The researchers found, however, that a tendency to self-harm was linked more closely to children's self-reported unhappiness than it was to a 20-item measure of emotional and behavioural difficulties that is currently used to spot mental-health troubles. That suggests a way to begin to tackle the problem: to find out how children are feeling, ask them.

Out of credit

Wonga’s woes spell the end of the payday-loan era

But as short-term lenders go under, Britain’s debt problem is growing



Aug 30th 2018

UPDATE Aug 30: *Shortly after this article was published Wonga said it was putting itself into administration.*

THE death of Kane Sparham-Price came to symbolise all that was wrong with Britain’s “payday lenders”. The 18-year-old, who suffered from mental illness, hanged himself. A coroner’s report in 2014 noted that on the day he died, Wonga, a provider of short-term, high-cost credit, had taken from him part-payment for a debt, emptying his bank account and leaving him in “absolute destitution”. Small wonder that many Britons welcomed the news this week that Wonga was apparently nearing collapse, seeing it as a sign that the country had kicked its reliance on such lenders. Yet focusing on Wonga’s woes misses the bigger picture. Britain’s household finances look increasingly shaky.

Regulatory changes introduced by the Financial Conduct Authority (FCA), which came into force from 2014, have undermined Wonga and other lenders' business models. The new rules include limiting the daily interest rate, including fees, to 0.8% of the amount borrowed, where daily rates of over 10% were once common. The FCA also limited the total amount that borrowers could pay in interest and fees. All this has made much payday lending unprofitable. Although it is perhaps the most notorious lender, Wonga is not the only one struggling. Our analysis suggests that the FCA's reforms have reduced the number of firms operating in the payday-loan market by more than 90%.

Britons who enjoyed the speed with which they could get credit may bemoan the demise of the payday-loan business. Many took out short-term loans with no problem. Yet, overall, households are probably better off for the industry's demise. Many lenders' business models relied on "sweatbox lending", in which debtors were encouraged to take out new loans again and again when they entered or neared default, says Joseph Spooner of the London School of Economics.

What of the most common objection to toughening rules on payday lenders—that it would force borrowers to turn to loan sharks, who charged even more? Research from the FCA "found no evidence that consumers who have been turned down for [high-cost credit] are more likely to have subsequently used illegal moneylenders." Meanwhile, over 60% of those rejected for high-cost loans after the reforms ultimately say that they are better off as a result.

A smaller payday-loan market is likely to lead to fewer cases where minor debt problems morph into crises, and thus to fewer tragic stories like that of Kane Sparham-Price. But the reforms do little to address the root causes of indebtedness. And here things are looking worse.

In the past two years, both the labour market and the welfare state have squeezed many Britons. Real wages have not grown. Since April 2016 the government has frozen most working-age welfare benefits in cash terms, as higher inflation has eroded their purchasing power. Britons have thus dipped into their savings in order to keep spending.

Though there is no perfect measure, it appears that financial distress has risen. A survey from the Bank of England points to a rising share of Britons who are "very concerned about debt". The number of people turning to StepChange, a debt charity, for help fell after the financial crisis of 2008-09 but has since increased again. Last year 620,000 people contacted the charity, more than ever before. The rate of personal insolvencies started going up in 2016. In the second quarter of 2018 the pace of increase quickened. Those in financial distress are likely to cut back sharply on spending, which is bad for the economy. They are also more likely to fall into physical or mental ill-health.

The government has promised to help "just-about-managing" families. Yet its measures to aid people in debt are limited. Ministers have proposed a statutory "breathing space", whereby a person with debt troubles could get legal protection from creditors for six weeks. That would increase demand for debt-advice services, points out John Fairhurst of PayPlan, a debt-management firm. Yet so far the government has said little about the extra funding for such services that would surely be necessary. Meanwhile, it seems unwilling to unfreeze welfare benefits. Wonga's passing would mark the end of a grim chapter in British economic history, but it is far from the end of the country's personal-debt troubles.

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Doing the Brexit shimmy

Britain’s belated charm offensive in Africa

A post-Brexit Britain will have to work harder to win more trade in the continent

Aug 30th 2018 | CAPE TOWN AND LONDON

JUST as actors should never work with animals, so politicians should probably never dance, at least in public. Nelson Mandela could carry it off. But Theresa May’s attempt at a boogie with some pupils at a school in Cape Town at the start of a three-day tour of the continent merely looked awkward —much like Britain’s wider relationship with Africa these days.

The prime minister’s visit this week to South Africa, Nigeria and Kenya, with 29 business people in tow, was another attempt to shore up Britain’s position in the post-Brexit world. With long-standing links to many sub-Saharan countries—a legacy, often, of colonial rule—if “Global Britain” can’t prosper in Africa then the outlook more generally will be pretty bleak. Thus one of Mrs May’s first announcements was that Britain had succeeded in rolling over the current trade deal that the European Union has with Mozambique and the South African Customs Union (comprising South Africa, Botswana, Lesotho, Namibia and eSwatini, formerly known as Swaziland) to Britain when it leaves the EU.

To strengthen Britain's hand in Africa, Mrs May promised a further £4bn ($5.2bn) in support for the continent. Most of this will be channelled through CDC, the government's overseas investment arm, reflecting a shift in priorities away from spending on poverty reduction and towards creating more businesses. The prime minister also promised more help in areas where Britain has acknowledged strengths. In both Kenya and Nigeria, British armed forces have been involved in combating Islamist insurgencies.

As Lord Boateng, a former high commissioner to South Africa, pointed out, Britain is "late to the party". In the past decade, other countries have been more proactive in extending their influence in Africa. This is partly reflected in the number of diplomatic missions that countries maintain on the continent. Britain has 31, and is due to open two new ones in Niger and Chad. But Germany has 39, China 46 and America 49. France says it has 42 in Sub-Saharan Africa alone. In July, India announced that it would open 18 new embassies. Turkey had just 12 in 2009; now it boasts 39.

"We have been visibly absent, and the Africans notice this," argues Nicholas Westcott, head of the Royal African Society, a British organisation which promotes the continent. More than in most places, personal connections matter. Whereas Mrs May's trip was the first by a British prime minister to Africa since 2011 (excepting David Cameron's dash to Nelson Mandela's funeral in 2013), Emmanuel Macron has already visited eight African countries in his year and a bit as France's president. China's top leaders have made 79 trips to Africa since 2007. Britain has churned through six Africa ministers since 2012, to the exasperation of African diplomats.

All this adds up. Mrs May's arrival made little impression in South Africa, where politicians are busy preparing for a China-Africa jamboree in Beijing. Africa's trade with Britain is worth $36bn, a fifth the value of its trade with China and a tenth that of its trade with the EU. Britain still carries heft only in terms of aid, where it is more generous than almost anyone, and direct investment, where it lies just behind America (and aims to overtake it by 2022, Mrs May said).

Furthermore, the prime minister declined to fix Africans' particular bugbear with Britain: the cost and difficulty of getting a visa to work, study or just go on holiday there. In South Africa Mrs May talked about "the partnerships and ideas that will bring benefits for generations to come". That may ring hollow to the young Africans who have been turned away by the Home Office. The number of African students in Britain has fallen from 17,815 in 2012-13 to 13,990 in 2016-17. As one observer puts it, Britain puts on a smiling face but slams the door.

Bagehot

Britain’s new generation of soldier-statesmen

Politicians steeled in war are well placed to unite a divided country

Aug 30th 2018

WHENEVER it has been confronted with crisis in the past, Britain has summoned up leaders worthy of the challenge. Yet today it faces the crisis of Brexit without any leaders who deserve the name. Theresa May has dithered where she should have been decisive and been decisive where she should have dithered. Jeremy Corbyn has been on the wrong side of most of the serious arguments in post-war history. As for Boris Johnson, the man most likely to try to unseat the prime minister before the next election, he is regarded by his friends and enemies alike as shallow, showboating and self-serving.

Britain suffers from more than just a shortage of leaders. It suffers from a growing problem of trust in leadership in general. The country long ago turned against professional politicians such as Tony Blair and David Cameron, who slithered from Oxbridge to the cabinet while barely making contact with the public. But its brief flirtation with conviction politicians is beginning to sour, thanks to anti-Semitism on the far left and swivel-eyed incompetence on the Brexit right.

The death of John McCain, America's great soldier-statesman, is a reminder that Britain has another model of leadership to turn to: politicians who experienced the real world in the sharpest way possible before going into politics, but who are temperamentally sceptical of political dogma. Politics was defined by soldier-statesmen for much of the post-war era. Clement Attlee and Harold Macmillan both served in the first world war, and Edward Heath and James Callaghan in the second. This tradition faded in peacetime but is now being renewed, after a succession of wars in the Balkans, Iraq and Afghanistan.

Soldier-statesmen are easiest to find on the Conservative side. Tom Tugendhat served in the Territorial Army in Iraq and Afghanistan, and ended up as military assistant to the chief of the defence staff. Adam Holloway, a captain in the Grenadier Guards, claims that he liberated one of Saddam Hussein's lavatory brushes from his palace in Baghdad. James Heappey was a major in the Rifles. Johnny Mercer was the captain of a commando regiment. Rory Stewart served briefly in the Black Watch and eventually pursued a Lawrence of Arabia career which involved working in Iraq and Afghanistan. (He denies rumours that he followed his father into the intelligence services.) The Labour Party also has a couple of veterans. Clive Lewis served briefly as a reservist in Afghanistan. Dan Jarvis had a distinguished career as a paratrooper, forging an elite unit of Afghans to take on the Taliban.

Military service has helped to turbo-charge the political careers of the rising Tory stars. Mr Tugendhat was selected to represent the safe seat of Tonbridge and Malling, despite never having fought an election. Two years after being elected he defeated a well-entrenched incumbent for the chairmanship of the Foreign Affairs Select Committee. Mr Mercer won Plymouth Moor View, which the party hierarchy had dismissed as unwinnable. The picture on the left is more complicated, given Mr Corbyn's hostility to the armed forces. But Mr Jarvis has nevertheless shone and would make a first-rate future leader.

There are encouraging signs that these soldier-statesmen can offer a solution to the country's crisis of faith in leadership. They can tackle the problem of cynicism by advocating values such as service, duty and country. Language that rings hollow in the mouths of career politicians can sound noble and inspiring in those of men like Mr Mercer who have seen their best friends shot in front of them. They can deal with the problem of partisanship by instinctively reaching across party lines. Mr Tugendhat points out that he has a personal bond with Mr Jarvis, with whom he served in Afghanistan, that transcends political divisions ("We did something that is unusual in modern life and that is very bonding"). He also points out that fighting in a real war puts political wars in their proper perspective.

There are objections to the idea that soldier-statesmen can fix Britain's leadership problem. Does the political system need another excuse to promote men over women? And does Brexit Britain really need a dose of militarism? These objections are weaker than they sound. The Tory party can martial two rising female stars with military backgrounds: Penny Mordaunt, the development secretary, is a Royal Navy reservist, and Ruth Davidson, the leader of the Scottish Conservatives, was in the Territorial Army. Moreover, soldiers are less likely to resort to war than civilians, precisely because they know its cost. The politician who is keenest on roaring like a lion is Gavin Williamson, the defence secretary, who spent his early career selling fireplaces. By contrast a real hero like Mr Mercer has devoted himself to fighting for better treatment for veterans, particularly those suffering from post-traumatic stress disorder, a common affliction among his friends.

The battle ahead

The most powerful argument in favour of soldier-politicians is that they are in a unique position to solve the biggest problem facing the country: the growing social divisions between the elite and the masses, the provinces and the capital, and, indeed, between Brexiteers and Remainers. This is not just because they have access to a language of patriotism that is denied to people who haven't risked their lives in combat. It is because they are probably the only members of the leadership class who have lived cheek by jowl, day in day out, with people from every class of society. The one-nation politics that dominated during the post-war boom was forged in battle. In his maiden speech in the House of Lords, at the height of the miners' strike, Macmillan described the miners as "the best men in the world, who beat the Kaiser and Hitler's armies and never gave in." Perhaps the battlefields of Afghanistan and Iraq will help to produce a new type of one-nation politics that can bring Britain back together after the shocks of the financial crisis and Brexit.

International

- **Loneliness: Alone in the crowd** [Thu, 30 Aug 21:30]
  Loneliness is a serious public-health problem. The lonely are not just sadder; they are unhealthier and die younger. What can be done?.

All the lonely people

Loneliness is a serious public-health problem

The lonely are not just sadder; they are unhealthier and die younger. What can be done?

Aug 30th 2018 | BLACKPOOL, GJØVIK, AND TOKYO

LONDON, says Tony Dennis, a 62-year-old security guard, is a city of "sociable loners". Residents want to get to know each other but have few ways to do so. Tonight, however, is different. Mr Dennis and a few dozen other locals are jousting at a monthly quiz put on by the Cares Family, a charity dedicated to curbing loneliness.

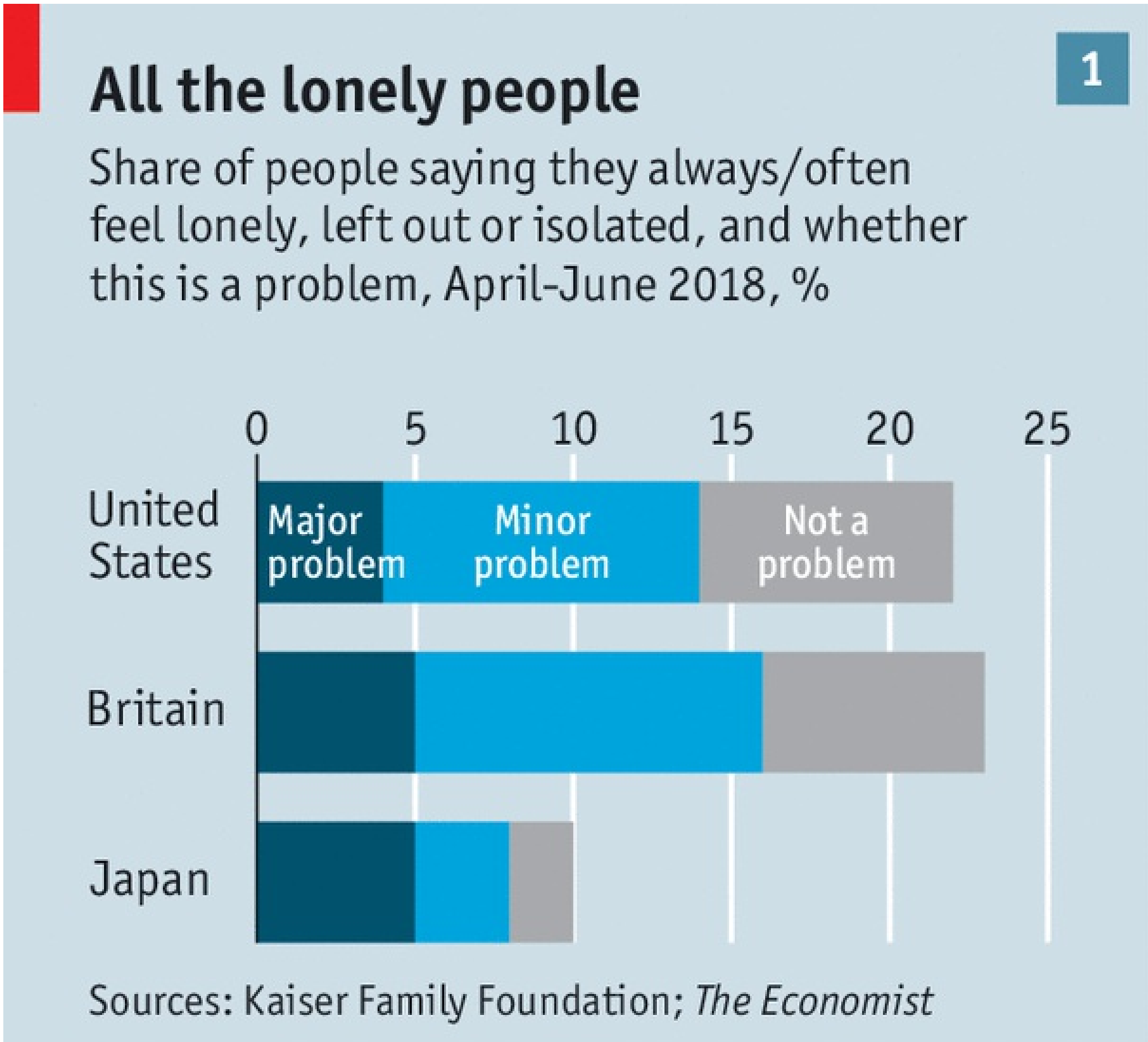
The competitors are a deliberate mix of older residents and young professionals new to the area. "Young people are increasingly feeling disconnected too," argues Alex Smith, the charity's 35-year-old founder. He hopes that nights like this will foster a sense of belonging.

Doctors and policymakers in the rich world are increasingly worried about loneliness. Campaigns to reduce it have been launched in Britain, Denmark and Australia. In Japan the government has surveyed *hikikomori*, or "people who shut themselves in their homes". Last year Vivek Murthy, a former surgeon-general of the United States, called loneliness an epidemic, likening its impact on health to obesity or smoking 15 cigarettes per day. In January Theresa May, the British prime minister, appointed a minister for loneliness.

That the problem exists is obvious; its nature and extent are not. Obesity can be measured on scales. But how to weigh an emotion? Researchers start by distinguishing several related conditions. Loneliness is not synonymous with social isolation (how often a person meets or speaks to friends and family) or with solitude (which implies a choice to be alone).

Instead researchers define loneliness as *perceived* social isolation, a feeling of not having the social contacts one would like. Of course, the objectively isolated are much more likely than the average person to feel lonely. But loneliness can also strike those with seemingly ample friends and family. Nor is loneliness always a bad thing. John Cacioppo, an American psychologist who died in March, called it a reflex honed by natural selection. Early humans would have been at a disadvantage if isolated from a group, he noted, so it makes sense for loneliness to stir a desire for company. Transient loneliness still serves that purpose today. The problem comes when it is prolonged.

To find out how many people feel this way, *The Economist* and the Kaiser Family Foundation (KFF), an American non-profit group focused on health, surveyed nationally representative samples of people in three rich countries.* The study found that 9% of adults in Japan, 22% in America and 23% in Britain always or often feel lonely, or lack companionship, or else feel left out or isolated (see chart 1).



The Economist

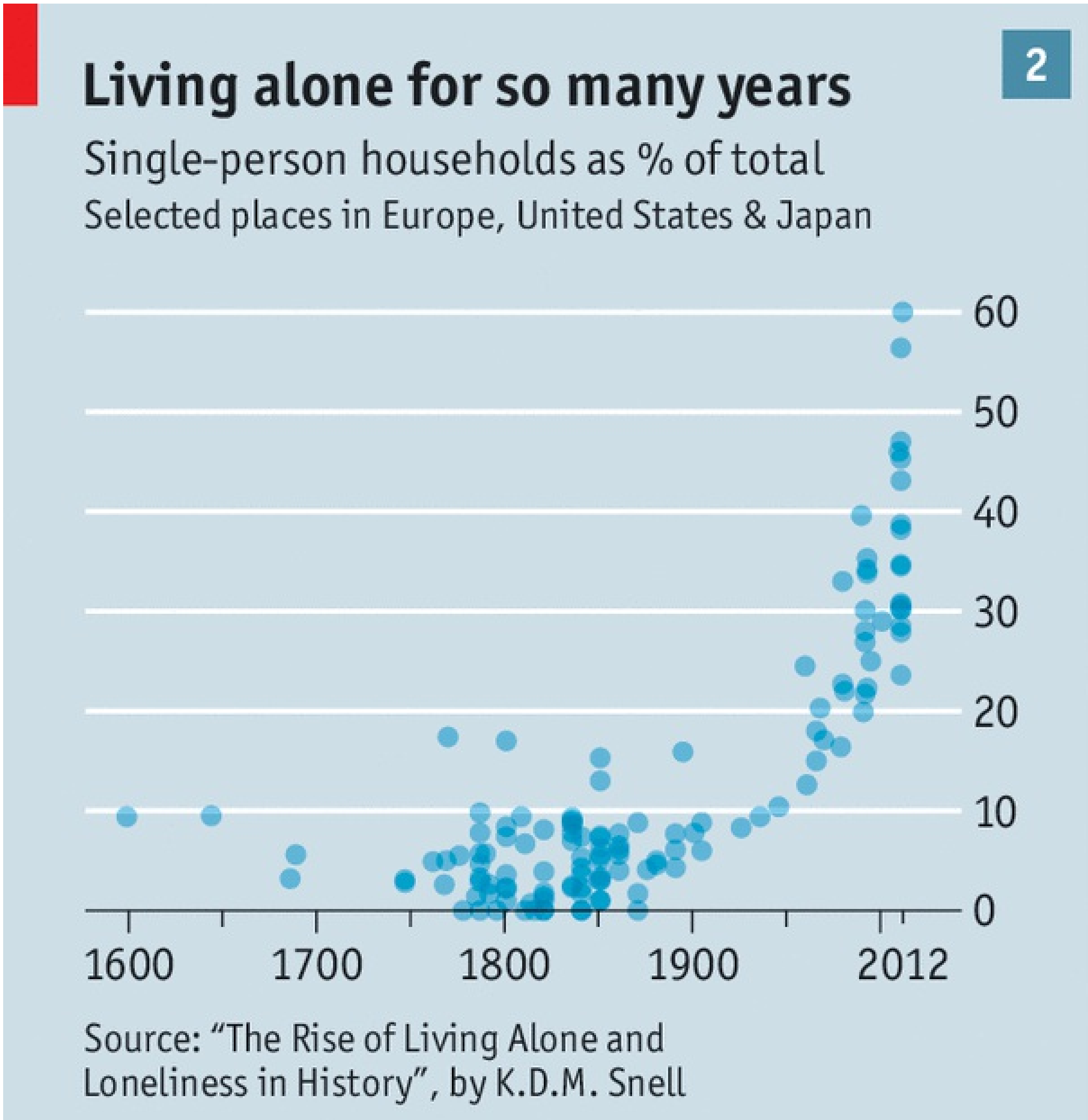
The findings complement academic research which uses standardised questionnaires to measure loneliness. One drawn up at the University of California, Los Angeles (UCLA), has 20 statements, such as "I have nobody to talk to", and "I find myself waiting for people to call or write". Responses are marked based on the extent to which people agree. Respondents with tallies above a threshold are classed as lonely.

A study published in 2010 using this scale estimated that 35% of Americans over 45 were lonely. Of these 45% had felt this way for at least six years; a further 32% for one to five years. In 2013 Britain's Office for National Statistics (ONS), by dint of asking a simple question, classed 25% of people aged 52 or over as “sometimes lonely” with an extra 9% “often lonely”.

Other evidence points to the extent of isolation. For 41% of Britons over 65, TV or a pet is their main source of company, according to Age UK, a charity. In Japan more than half a million people stay at home for at least six months at a time, making no contact with the outside world, according to a report by the government in 2016. Another government study reckons that 15% of Japanese regularly eat alone. A popular TV show is called “The Solitary Gourmet”.

Is your heart filled with pain?

Historical data about loneliness are scant. But isolation does seem to be increasing, so loneliness may be too. Consider the rise in solitary living (see chart 2). Before 1960 the share of solo households in America, Europe or Japan rarely rose above 10%. Today in cities such as Stockholm most households have just one member. Many people opt to live alone, as a mark of independence. But there are also many in rich countries who live solo because of, say, divorce or a spouse’s death.



The Economist

Isolation is increasing in other ways, too. From 1985 to 2009 the average size of an American's social network—defined by number of confidants—declined by more than one-third. Other studies suggest that fewer Americans join in social communities like church groups or sports teams.

The idea that loneliness is bad for your health is not new. One early job of the Royal Canadian Mounted Police in the Yukon region was to keep tabs on the well-being of gold prospectors who might go months without human contact.

Evidence points to the benign power of a social life. Suicides fall during football World Cups, for example, maybe because of the transient feeling of community.

But only recently has medicine studied the links between relationships and health. In 2015 a meta-analysis led by Julianne Holt-Lunstad of Brigham Young University, in Utah, synthesised 70 papers, through which 3.4m participants were followed over an average of seven years. She found that those classed as lonely had a 26% higher risk of dying, and those living alone a 32% higher chance, after accounting for differences in age and health status.

Smaller-scale studies have found correlations between loneliness and isolation, and a range of health problems, including heart attacks, strokes, cancers, eating disorders, drug abuse, sleep deprivation, depression, alcoholism and anxiety. Some research suggests that the lonely are more likely to suffer from cognitive decline and a quicker progress of Alzheimer's disease.

Researchers have three theories as to how loneliness may lead to ill health, says Nicole Valtorta of Newcastle University. The first covers behaviour. Lacking encouragement from family or friends, the lonely may slide into unhealthy habits. The second is biological. Loneliness may raise levels of stress, say, or impede sleep, and in turn harm the body. The third is psychological, since loneliness can augment depression or anxiety.

Or is it the other way round? Maybe sick people are more likely to be lonely. In the KFF/*Economist* survey six out of ten people who said they were lonely or socially isolated blamed specific causes such as poor mental or physical health. Three out of ten said their loneliness had made them think about harming themselves. Research led by Marko Elovainio of the University of Helsinki and colleagues, using the UK Biobank, a voluntary database of hundreds of thousands of people, suggests that the relationship runs both ways: loneliness leads to ill health, and vice versa.

Other studies show more about the causes of loneliness. A common theme is the lack of a partner. Analysis of the survey data found that married or cohabiting people were far less lonely. Having a partner seems especially important for older people, as generally they have fewer (but often closer) relationships than the young do.

Yet loneliness is not especially a phenomenon of the elderly. The polling found no clear link between age and loneliness in America or Britain—and in Japan younger people were in fact lonelier. Young adults, and the very old (over-85s, say) tend to have the highest shares of lonely people of any adult age-group. Other research suggests that, among the elderly, loneliness tends to have a specific cause, such as widowhood. In the young it is generally down to a gap in expectations between relationships they have and those they want.

Whatever their age, some groups are much more likely to be lonely. One is people with disabilities. Migrants are another. A study of Polish immigrants in the Netherlands published in 2017 found that they reported much higher rates of loneliness than Dutch-born people aged between 60 and 79 (though female migrants tended to cope better than their male peers). A survey by a Chinese trade union in 2010 concluded that "the defining aspect of the migrant experience" is loneliness.

Regions left behind by migrants, such as rural China, often have higher rates of loneliness, too. A study of older people in Anhui province in eastern China published in 2011 found that 78% reported "moderate to severe levels of loneliness", often as a result of younger relatives having moved. Similar trends are found in eastern Europe where younger people have left to find work elsewhere.

Loneliness is usually best explained as the result of individual factors such as disability, depression, widowhood or leaving home without your partner. Yet some commentators say larger forces, such as "neoliberalism", are at work.

Where do they all come from?

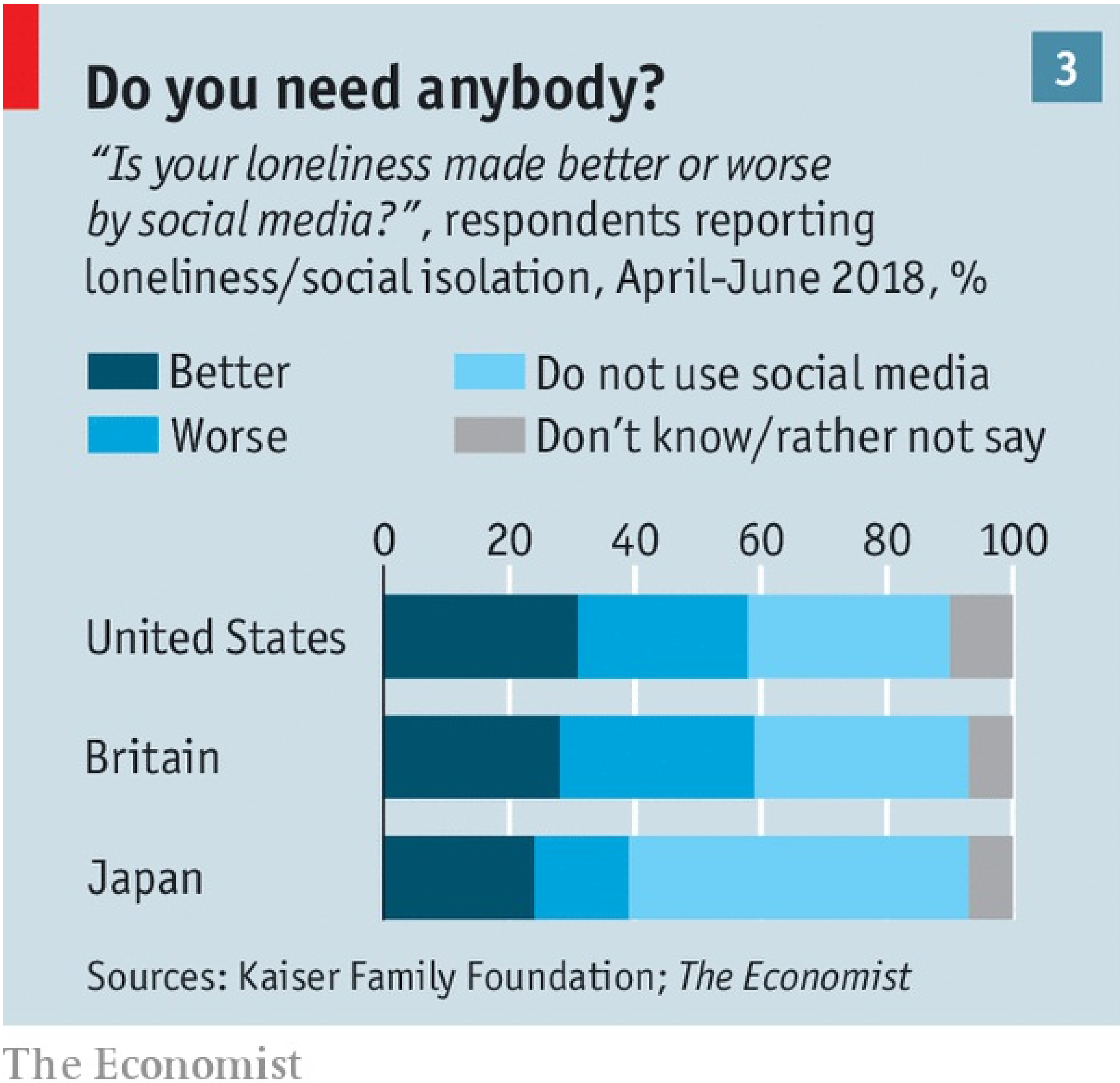
In fact, it is hard to prove that an abstract noun is creating a feeling. And research on rates of reported loneliness does not support the view that rich, individualistic societies are lonelier than others. A study published in 2015 by Thomas Hansen and Britt Slagvold of Oslo Metropolitan University, for example, found that "quite severe" loneliness ranged from 30-55% in southern and eastern Europe, versus 10-20% in western and northern Europe. “It is thus a paradox that older people are less lonely in more individualistic and less familistic cultures,” concluded the authors.

Their research pointed to two explanations. The most important is that southern and eastern European countries are generally poorer, with patchier welfare states. The second reason concerns culture. The authors argued that in countries where older people expect to live near and be cared for by younger relatives, the shock when that does not happen is greater.

Another villain in the contemporary debate is technology. Smartphones and social media are blamed for a rise in loneliness in young people. This is plausible. Data from the OECD club of mostly rich countries suggest that in nearly every member country the share of 15-year-olds saying that they feel lonely at school rose between 2003 and 2015.

The smartphone makes an easy scapegoat. A sharp drop in how often American teenagers go out without their parents began in 2009, around when mobile phones became ubiquitous. Rather than meet up as often in person, so the story goes, young people are connecting online.

But this need not make them lonelier. Snapchat and Instagram may help them feel more connected with friends. Of those who said they felt lonely in the KFF/*Economist* survey, roughly as many found social media helpful as thought it made them feel worse (see chart 3). Yet some psychologists say that scrolling through others’ carefully curated photos can make people feel they are missing out, and lonely. In a study of Americans aged 19 to 32, published in 2017, Brian Primack of the University of Pittsburgh, and colleagues, found that the quartile that used social media most often was more than twice as likely to report loneliness as the one using it least.



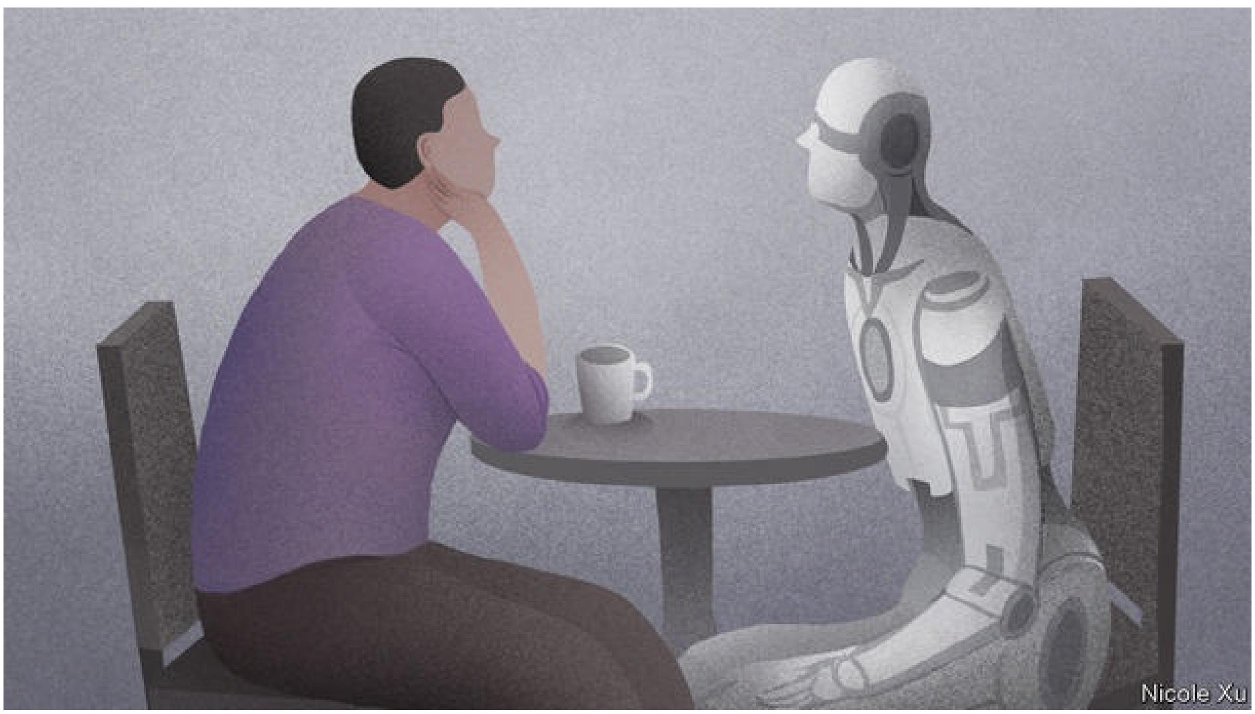
It is not clear whether it is heavy social-media use leading to loneliness, or vice versa. Other research shows that the correlation between social-media use and, say, depression is weak. The most rigorous recent study of British adolescents' social-media use, published by Andrew Przybylski and Netta Weinstein in 2017, found no link between "moderate" use and measures of well-being. They found evidence to support their "digital Goldilocks hypothesis": neither too little nor too much screen time is probably best.

Know the way I feel tonight

Others are sure that technology can reduce loneliness. On the top of a hill in

Gjøvik, a two-hour train-ride from Oslo, lives Per Rolid, an 85-year-old widowed farmer. One daughter lives nearby, but he admits feeling lonely. So he has agreed to take part in a trial of Komp, a device made by No Isolation, a startup founded in 2015. It consists of a basic computer screen, a bit like an etch-a-sketch. The screen rotates pictures sent by his grandchildren, and messages in large print from them and other kin.

No Isolation also makes AV1, a fetching robot in the form of a disembodied white head with cameras in its eye-sockets. It allows users, often out-of-school children with chronic diseases, to feel as if they are present in class. AV1 can be put on a desk so absent children can follow goings-on. If they want to ask a question, they can press a button on the AV1 app and the top of the robot's head lights up.



So-called "social robots", such as Paro, a cuddly robotic seal, have been used in Japan for some time. But they are becoming more sophisticated. Pepper, a human-ish robot made by a subsidiary of SoftBank, a Japanese conglomerate, can follow a person's gaze and adapt its behaviour in response to humans. Last year the council in Southend, an English seaside town, began deploying Pepper in care homes.

Other health-care providers are experimenting with virtual reality (VR). In America UC Health is conducting trials of VR therapy that allows users in care homes to have "bucket list" experiences, such as skiing in Colorado. In 2016, Liminal, an Australian VR firm, teamed up with Medibank, an insurance company, to build a virtual experience for lonely people who could not leave their hospital beds.

As technology becomes more human it may be able to do more and more to substitute for human relationships. In the meantime, services that offer human contact to the lonely will thrive. In Japan this manifests itself in agencies and apps that allow you to rent a family or a friend—a girlfriend for a singleton, a funeral mourner, or simply a companion to watch TV with.

Such products are not just Japanese quirks. One Caring Team, an American company, calls and checks in on lonely elderly relatives for a monthly fee. The Silver Line, a similar (but free) helpline, is run by a British charity. Launched in 2013 it takes nearly 500,000 calls a year. Its staff in their Blackpool headquarters are supported by volunteers across the country in the Silver Friend service, a regular, pre-arranged call between a volunteer and an old person.

Most conversations last about 15 minutes. Those contacting the helpline during your correspondent's visit started on a general topic—the weather, pets, what they did that morning. Their real reason for calling only emerged later, through an offhand comment. Often that referred to the need for a partner and the companionship that would bring. Others call in but barely talk, noted one Silver Line staff member.

For many, phone calls are no substitute for company. Nesterly, founded in 2016, is designed to make it easier for older singletons with spare rooms to rent them to young people who help in the house for a discount on rent. The platform has "stumbled into loneliness", notes Noelle Marcus, its co-founder. Users sign up to the platform and create a profile, then make a listing for their room. Last year the startup teamed up with the city of Boston, Massachusetts, to test the initiative across the city.

Similar schemes are run by Homeshare, a network of charities, operating in 16 countries, including Britain. Elsewhere policymakers are experimenting with incentives to encourage old and young to mix. In cities such as Lyon in France, Deventer in the Netherlands and Cleveland in Ohio, nursing homes or local authorities are offering students free or cheap rent in exchange for helping out with housework.

That so many startups want to "disrupt" loneliness helps. But most of the burden will be shouldered by health systems. Some firms are trying to tackle the problem at root. Last year CareMore, an American health-care provider owned by Anthem, an insurer, launched a dedicated scheme. "We're trying to reframe loneliness as a treatable medical condition," explains Sachin Jain, its president.

All by myself

This means, first, screening its 150,000 patients for loneliness. Those at risk are asked if they want to enroll in a "Togetherness Programme". This involves phone calls from staff called "connectors" who help with transport to events and ideas for socialising. Patients are coaxed to visit clinics, even when not urgently ill, to play games, attend a "seniors' gym" and just chat.

For its part, England's National Health Service is increasingly using "social prescribing", sending patients to social activities rather than giving them drugs. More than 100 such programmes are running in Britain. Yet last year a review of 15 papers concluded that evidence to date was too weak to support any conclusions about the programmes' effectiveness. This reflects poorly on the state of thinking about loneliness. There are plenty of reasons to take its effects on health seriously. But the quality of evidence about which remedies work is woeful. Sadly, therefore, loneliness is set to remain a subject that causes a huge amount of angst without much relief.

*A detailed report on the survey's results can be found at https://www.kff.org/other/report/loneliness-and-social-isolation-in-the-united-states-the-united-kingdom-and-japan-an-international-survey

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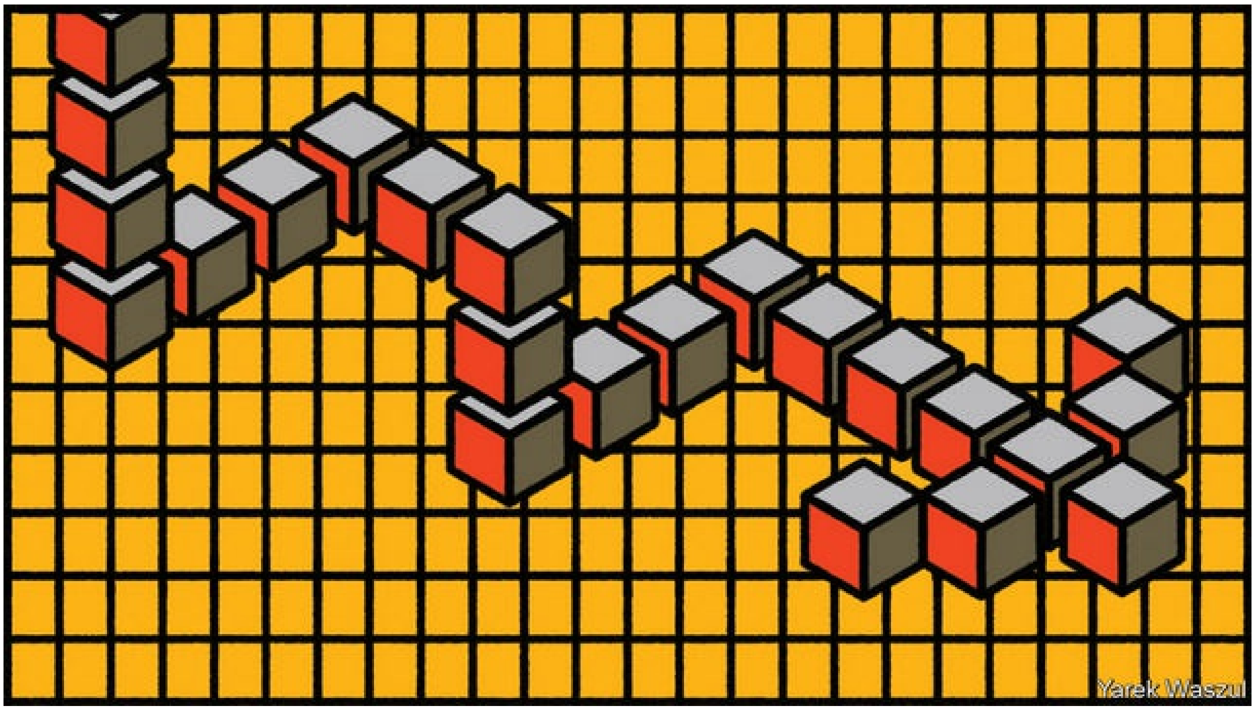
Technology Quarterly

The pot of gold at the end of the rainbow

What to make of cryptocurrencies and blockchains

Cryptocurrencies and their underlying technology, blockchains, have been hyped to the skies. Tim Cross offers a realist's guide



Aug 30th 2018

JOSEPH KENNEDY, John F. Kennedy's father, supposedly said that when he started getting share tips from his shoeshine boy, he knew it was time to sell. That was in the late 1920s. One investor in cryptocurrencies recalled that remark when he saw advertisements on the London Underground that seemed to suggest pensioners invest in bitcoin. "Be More Brenda," said the poster, featuring a white-haired lady claiming to have bought bitcoin in under ten minutes.

Cryptocurrencies are everywhere. According to one survey, 5% of Americans hold some cryptocurrencies—not bad for a financial product that is only a decade old. Bitcoin is the best-known, and in 2017 the dramatic rise in its price—from $3,000 in September to almost $19,000 by December—made headlines.

It was invented in 2008 by a reclusive cryptographer going by the name of Satoshi Nakamoto. He was dissatisfied with the conventional financial system, so he wanted to create an electronic version of cash that did not rely on a central operator and was free from direct control by a government or central bank. The idea took off. These days anyone who wants to get into cryptocurrencies can weigh the relative merits of bitcoin, ether, Monero, Dash, Litecoin and thousands of others. Many of those who bought in early have, on paper at least, made astonishing gains. Bitcoin's price in 2010 was around 6 American cents. Even at its current price of $6,470, it would provide an early investor with a handsome profit—though not nearly as handsome as if he had sold at the peak last December.

In keeping with their do-it-yourself image, cryptocurrencies have given rise to initial coin offerings (ICOs), a way for cryptocurrency companies to crowdfund themselves. Cash is pouring in. According to one estimate, from Coinschedule, a firm that tracks such things, by early August 706 ICOs had raised almost $18bn from a mix of institutional investors and individuals this year. That compares with just 221 ICOs in the whole of 2017, raising $3.7bn.

Chain reaction

Many of those startups hope to capture the benefits of blockchains, the technology that underlies cryptocurrencies. In essence, a blockchain is a database designed to be distributed among many users, to be immutable, to work without oversight from any central authority and to dispense with the need for its users to trust each other. These qualities, it is argued, make it suitable for a huge variety of new and exciting business applications, which many companies are now trying to explore.

For example, a blockchain's immutability and distributed nature would seem perfect for streamlining supply chains. A widget manufacturer in one country, its shipping agent, its customer in another country and customs authorities on both the sending and the receiving end could all use the same database to track the widget. Another promising idea might be to provide an incorruptible record of transactions covering anything from property deeds to the provenance of diamonds.

According to Crunchbase, an industry consultancy, in the first five months of this year a total of more than $1.3bn of venture capital was invested in blockchain startups. KPMG, a large consultancy firm, reckons that the amount of money venture capitalists want to invest in such things outstrips the opportunities to do so. Established companies are rushing to catch up. Technology firms such as IBM, Oracle and Amazon are giving their customers the chance to experiment with blockchains. KPMG offers a service to advise clients on blockchains, as do most of its rivals. Diar, a consultancy specialising in cryptocurrencies, lists dozens of blockchain-related patent applications, filed by companies as diverse as Bank of America, Intel, a chipmaker, RWE, an electricity firm, and British Telecom.

A bit of a let-down

This Technology Quarterly will take a more sceptical view. It will point out that, despite a decade of development, bitcoin has failed in its stated objective: to become a usable currency. Security is poor (according to one estimate, around 14% of the supply of big cryptocurrencies has been compromised); its decentralised nature inevitably makes it slow; there is no consumer protection; and the price is so volatile that not many people would want to use it as a means of exchange for goods and services. Other cryptocurrencies suffer from similar problems. Few merchants accept them.

At the same time the technology's built-in antipathy to regulation has attracted plenty of people who feel the same way for the wrong reasons. Some cryptocurrencies amount to Ponzi schemes, and unscrupulous ICO operators have swindled investors. America's authorities are investigating allegations of widespread price manipulation. Social-media firms have banned advertisements for ICOs amid concerns about fraud. Anyone thinking of investing in such instruments will need to do a lot of homework first.

Other drawbacks of bitcoin and such like are becoming increasingly apparent, too. The "mining" process required to verify all transactions is hugely power-hungry. Data centres have sprung up from Mongolia to Quebec, collectively consuming as much electricity as entire countries to run a system that cannot manage more than a handful of transactions per second.

The potential applications for the underlying blockchain technology look rather more attractive, but progress in developing them has been slower than hoped, and some apparent successes turn out to have been exaggerated. Because they are power-hungry and slow, the blockchains that drive cryptocurrencies have to be remodelled for use in business, which can make them less distinctive and more like other databases. Though the excitement surrounding the technology has provided a useful push to get interested parties around the table and start talking, most blockchain projects are still at the exploratory stage.

Putting a business on a blockchain is as complicated as any other big IT project. Those involved in the planning stage still have to ask the usual questions. What exactly is it meant to do? Why would an individual company want to sign up to such a shared venture? Who will design the system? Who will be in charge if things go wrong? And once a decision is made to build such a system, there will still be a lot of grunt work to be done. All this suggests that, whatever the benefits of blockchains, they will not arrive overnight.

One problem, says Gary Barnett, an analyst at GlobalData, a consultancy, is mutual incomprehension between insiders and outsiders. "There's a 'two tribes' vibe about a lot of this," he says. Because blockchains and cryptocurrencies are notoriously complicated, non-experts from other industries can end up confused by techno-speak, whereas advocates of the technologies are so excited by the potential that they give insufficient attention to important details of the industries they are aiming to revolutionise.

To understand the pros and cons of cryptocurrencies and blockchains, the best way is to start with bitcoin itself.

Cryptocurrency prices correct as of August 21st

Riding the rollercoaster

How to put bitcoin into perspective

The best-known cryptocurrency has been a failure as a means of payment, but thrilling for speculators

Sep 1st 2018

THE PRICE chart at CoinDesk, a cryptocurrency news site, begins on July 18th 2010, when a bitcoin could be had for $0.09. By November 2013 it had reached $1,124. In the summer of 2017 it started to take off, reaching over $19,000 in December. By end-March 2018 it was back down below $7,000 and in late August it was hovering between $6,400 and $6,500 (see chart). That has made a few people very rich (just 100 accounts own 19% of all existing bitcoin), encouraged others to play for quick gains and left some nursing substantial losses.

Bitcoin was never meant to be an object of speculation. When the pseudonymous Satoshi Nakamoto published a short paper outlining his plan for bitcoin a decade ago, it was as a political project. Bitcoin's roots lie in the "cypherpunk" movement, a philosophy that combines an anarchic dislike of governments and large companies with the techno-Utopian belief that computers and cryptography can liberate and protect people. Much of the early development of the internet was informed by similar ideas.

Bitcoin was intended as a computerised version of cash or gold, a “censorship-resistant” alternative to online payment systems run by companies such as Visa and PayPal. If trust in a central authority could be replaced with trust in computer code and mathematics, users could cut out the middleman and deal directly with each other, rugged individualist to rugged individualist.

Electronic cash is not a new idea. In a paper published in 1982 David Chaum, a computer scientist, had suggested using cryptography to create electronic cash, and the cypherpunks had been kicking such ideas around since the late 1990s. What made Mr Nakamoto’s invention stand out was that he had found a solution to one of the biggest problems with computerised money—how to keep users from spending the same digital coin repeatedly without relying on a trusted authority to check every transaction.

With a physical currency, this problem mostly takes care of itself. Once a coin or note has been handed over, its original owner can no longer spend it. But digital currencies are just wisps of information on a computer, and computers are designed to move and copy information easily. Mr Nakamoto solved the problem by handing the job of policing the system to its users. Bitcoin is designed to generate a permanent, constantly growing list of every transaction ever performed with the currency—the "blockchain". Since all users have a copy of the system's records, they would spot attempts to spend the same bitcoin twice.

A centralised institution like a bank can simply update its internal records every time its customers perform a transaction. Since bitcoin is decentralised, though, all transactions must be broadcast to everyone on the network so that they can update their local copies of the blockchain. When two parties want to make a transaction, they alert everyone else of their intention. Those proposed transactions are bundled into blocks by a subset of users called "miners", whose job is to maintain the records and ensure their integrity. Every block is connected to its predecessor by a chain of cryptographic links, which makes it next to impossible to alter records once finalised.

In order to prevent malicious miners from subverting that process, bitcoin requires something called "proof of work", in which miners demonstrate their commitment by competing to crack mathematical problems that are hard to solve but whose solutions are easy to check. Only the winner of each competition is allowed to add a block to the chain. The network aims for an average block-generation rate of one every ten minutes. If blocks come in faster than this, mining is made harder to slow things down.

All that computation takes a lot of electricity, and hence money (see article), so each new block earns its miner a reward, starting off at 50 bitcoin in 2009 and programmed to halve every four years. It is currently 12.5 bitcoin, or around $80,000. These block rewards are the only source of new bitcoin in the system. Mr Nakamoto argued that central banks cannot be trusted not to debase their currencies by printing money, so he set a hard limit of 21m for the number of bitcoin that could ever be mined.

All this may sound complicated, but the system generally works. Bitcoin can be used to make payments between any two users of the software, and though the experience is not exactly like using cash, it is a reasonable electronic analogue. Even so, bitcoin has failed to become an established currency, let alone—as its more ideological supporters had hoped—to flourish as an alternative to the traditional financial system.

One reason is that it is still not user-friendly. All participants have to download specialist software, and getting traditional money into and out of bitcoin's ecosystem is fiddly. Moreover, although the lack of a central authority makes the system resilient to attempts at coercion, it also means that if something goes wrong, there is no one who can fix it.

The original idea was that bitcoin users would "be their own banks", responsible for the security of their own funds, says David Gerard, a cryptocurrency-watcher and systems administrator. But that is harder than it sounds. If you lose access to your stash of bitcoin—say, by mislaying a USB stick or accidentally overwriting a hard drive—it can be impossible to recover. Many users therefore store their bitcoin on exchanges (companies that let users trade ordinary currency for the cryptographic sort). But many exchanges are amateurish operations and have an unenviable record of being hacked. And when bitcoins are stolen, there is no insurance scheme to make the owners whole. Nor are there any other protections of the sort that modern consumers take for granted. Mr Nakamoto's original paper proudly points out that with bitcoin, chargebacks (used when a credit-card holder disputes a transaction) are impossible.

There are structural problems, too. The size of an individual block of transactions is fixed, and the network enforces an average block-generation rate of one every ten minutes. In practice, that limits bitcoin's throughput to around seven transactions per second. (Visa's payment network can manage tens of thousands.) So when demand for bitcoin transactions is high, the system clogs up. Users have to accept that their transactions may be delayed or not go through at all, or offer miners extra fees as an incentive to prioritise their payments. Mr Nakamoto had hoped that bitcoin's transaction fees would settle at fractions of a cent, but at the height of the boom in late 2017 they briefly reached $55. They have since come down to about $0.65.

Faster, faster

Bitcoin's developers have tried various tweaks and workarounds to ease the jam. A scheme called SegWit, first introduced in August 2017, has provided a little extra wiggle room. A more ambitious proposal, called the Lightning

Network, hopes to take the bulk of transactions off the ponderous blockchain system and getting users to trade directly with each other, but after a couple of years in development it remains plagued by reliability problems. One recent evaluation by Diar, the cryptocurrency-research firm, found that Lightning transactions became increasingly less likely to be completed successfully as they got bigger.

Volatility, insecurity and occasional congestion make for a poor currency, so bitcoin has done best on the economic fringes. One use is for buying drugs and other dodgy items from online black markets, where buyers and sellers are prepared to put up with the downsides because they want to cover their tracks. It can help citizens of countries with currency controls get around them, says Alistair Milne, a financial economist at the University of Loughborough. And some cyber-criminals have turned to it for ransom demands.

Legitimate businesses, with a few exceptions, have proved more cautious. A report from JPMorgan published in 2017 found that, of the top 500 online retailers, only three accepted bitcoin, down from five the year before. Among those that have stopped supporting it are Expedia, a travel agency, and Valve, which runs Steam, an online video-games shop (which cited "high fees and volatility" as the reasons). Chainalysis, a research firm based in New York that tracks data from 17 different bitcoin merchant-payment processors, found that monthly transactions peaked in September 2017 at $411m, and had declined to $60m by May this year.

The South Sea bubble redux

The volatility that makes bitcoin unattractive as a currency also makes it an exciting target for speculation. "If we're being honest," says Tim Swanson, the founder of Post Oak Labs, a firm that provides technology advice, "the majority of people are buying [cryptocurrencies] because they hope the price will go up, rather than for any great philosophical reason."

Condemnation from prominent figures has only added to the currency's allure. Warren Buffett, a wealthy American investor, has called bitcoin "rat poison". Jamie Dimon, the boss of JPMorgan—the sort of financial institution that bitcoin fans dislike—has described it as "a fraud". A research note from Goldman Sachs, a bank, published in July, describes cryptocurrencies as “a mania” and concludes that they “garner far more… attention than is warranted”. Still, back in May the same bank announced its intention to open a cryptocurrency trading desk, citing demand from its customers. Autonomous Next, a financial-research firm, reckons that 175 cryptocurrency funds were set up in 2017, up from just 20 the year before.

Would-be punters will need a strong stomach. Bitcoin is thinly traded and barely regulated, and rumours of large-scale price manipulation have been supported by unusual trading patterns on exchanges. A paper published by two researchers at the University of Texas at Austin asks whether Tether, another cryptocurrency, is being used to prop up the price of bitcoin.

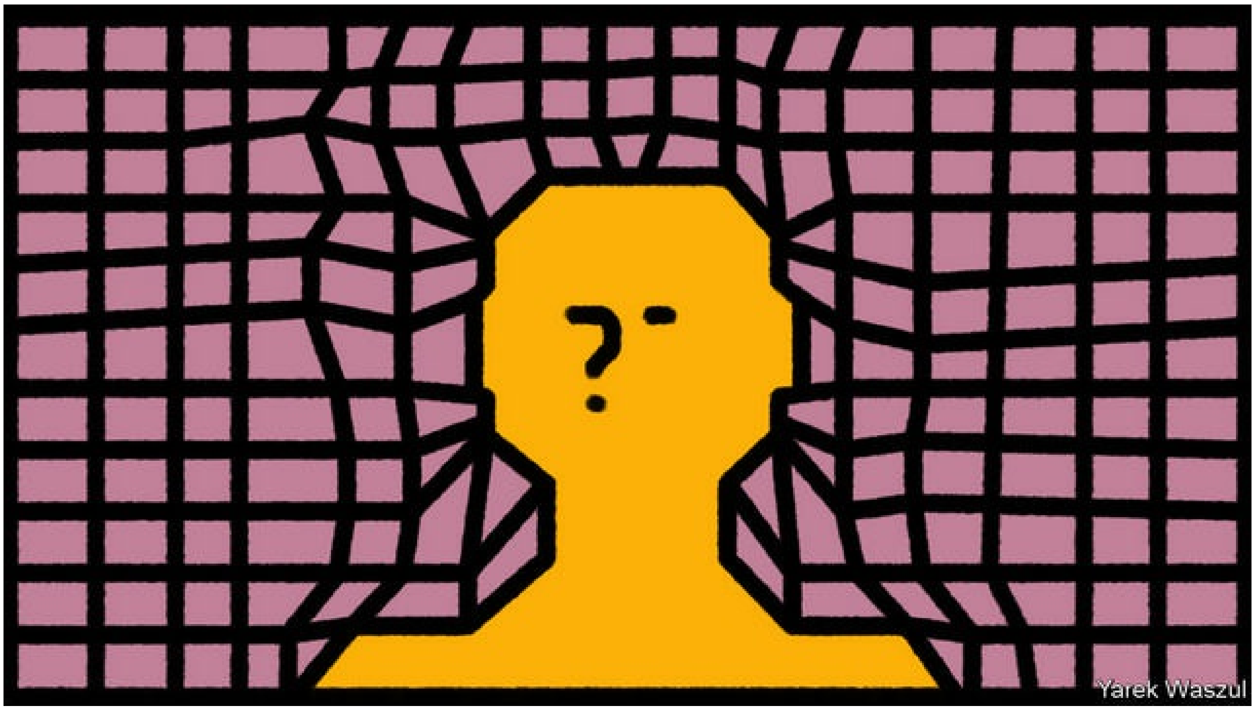
Governments are beginning to take notice. In May South Korean regulators raided Upbit, that country’s largest cryptocurrency exchange. In the same month America’s justice department began a criminal investigation into manipulation of bitcoin’s price.

Official scrutiny, and the recent drop in prices, have spooked many investors. Goldman Sachs argues that bitcoin remains overvalued. But for every bear there is a bull. Tim Draper, a venture capitalist who made his fortune backing technology companies, has forecast that by 2022 a bitcoin will be worth $250,000.

Brain scan

Satoshi Nakamoto, bitcoin's enigmatic creator

The pseudonymous inventor may never be identified



Sep 1st 2018

ON PAPER—or at least on the blockchain—Satoshi Nakamoto is one of the richest people on the planet. Bitcoin is a semi-anonymous currency and Mr Nakamoto is a pseudonymous person, so it is hard to be sure; but he is generally reckoned to own around 1.1m bitcoin, or around 5% of the total number that will ever exist. When bitcoin hit its peak of over $19,000, that made him worth around $20bn.

But Mr Nakamoto, though actively involved with his brainchild in its early history, has been silent since 2011. An army of amateur detectives has been trying to work out who he really is, but there is frustratingly little to go on. While developing bitcoin he claimed to be male, in his late 30s and living in Japan, but even that information is suspect. There are indications that he may have lived in an American time zone, but his English occasionally contains British idioms. Some of his goldbug-like comments about central banks that “debase the currency” and the evils of fractional-reserve banking led early cyber-libertarian bitcoin enthusiasts to claim him as one of their own. One thing is certain: he values his privacy. To register Bitcoin.org he used Tor, an online track-covering tool used by black-marketeers, journalists and political dissidents.

Still, the legions of sleuths have turned up various candidates, ranging from Japanese mathematicians to Irish graduate students. In 2014 *Newsweek*, a business magazine, fingered Dorian Prentice Satoshi Nakamoto, an American engineer. He emphatically denied the story, and the next day a forum account previously used by Mr Nakamoto posted, for the first time in five years, to say, “I am not Dorian Nakamoto”—though there are doubts about that account, too.

Attention also focused on Hal Finney, an expert in cryptography, an experienced programmer and a dedicated cypherpunk. He was the recipient in the first-ever transaction conducted in bitcoin, with Mr Nakamoto as the sender. He died in 2014. Andy Greenberg, a journalist, who studied private e-mails between Mr Finney and Mr Nakamoto, concluded that he was probably not bitcoin’s creator. And Mr Finney himself always denied that he was Mr Nakamoto.

Conversely, in 2016 Craig Wright, an Australian computer scientist, explicitly claimed that he was the man everyone was looking for. He invited several news organisations, including *The Economist*, to witness him prove his claim by using cryptographic keys that supposedly belonged to Mr Nakamoto. He did not convince his audience, so he said he would settle the matter by moving a bitcoin from Mr Nakamoto’s stash. He later decided against it when an online story suggested he could face arrest if he confirmed he was bitcoin’s creator, on the ground of “enabling terrorism”. But the story turned out to be a fake.

According to another theory, Mr Nakamoto is actually a group of people. But for now his, or their, identity remains a mystery. Some think his withdrawal was a matter of principle, to underline the point of a decentralised currency. Perhaps he simply wants a quiet life.

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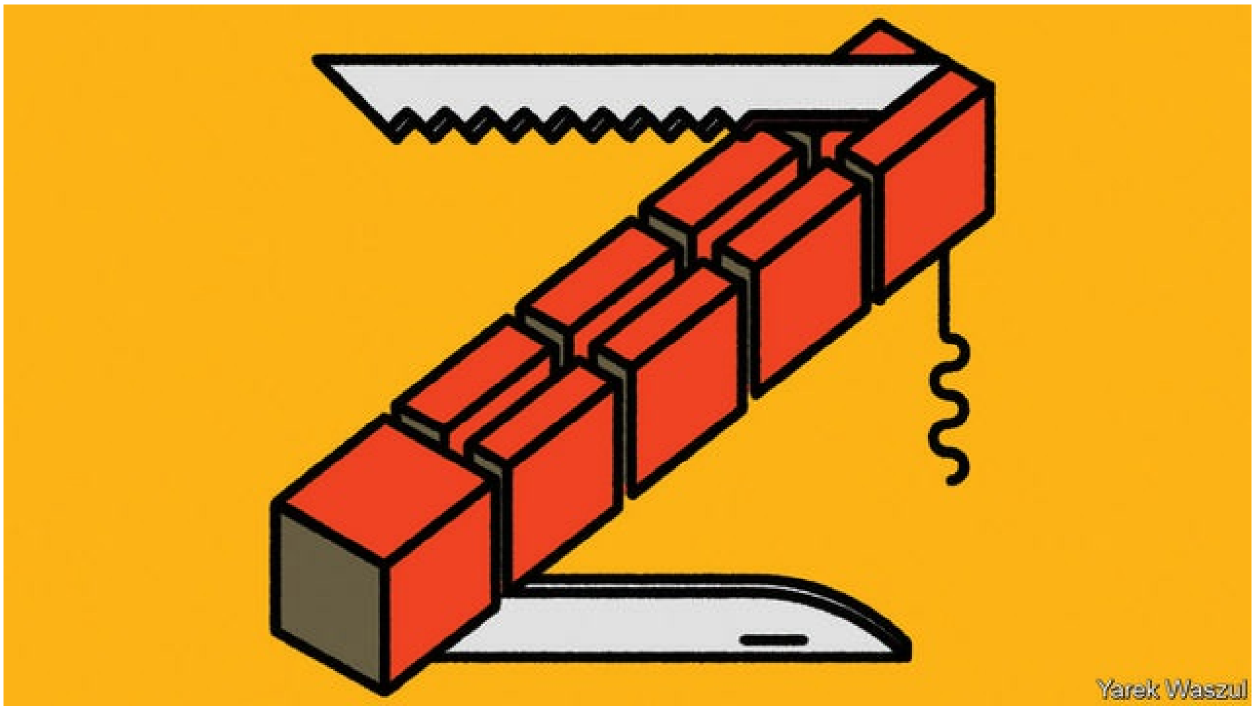
Beyond the hype

Dividing the cryptocurrency sheep from the blockchain goats

Cryptocurrencies look like a solution in search of a problem. Blockchains could be more interesting



Sep 1st 2018

A FAVOURITE comparison drawn by cryptocurrency and blockchain enthusiasts is with the early world wide web. These technologies are only a decade old, they say. Trying to predict how they might change the world in the future is next to impossible. Who could have known in 1998 that there would be such a thing as Facebook?

The comparison is carefully chosen. The web has been remarkable for the speed with which it has conquered the world. The first web page appeared on the internet in 1991. A decade later Amazon was booking revenues of $3.1bn a year; America Online, an early internet-service provider, had more than 20m customers; and half of Americans had internet access.

By that yardstick, cryptocurrencies have made very modest progress. But then it is highly unusual for a technology to fare as well as the web has done. A rule of thumb for venture capitalists is that nine out of ten projects they back will fail. Not every new thing is the next big thing.

Better, then, to evaluate cryptocurrencies and blockchains on their own merits. Start with cryptocurrencies. It is clear that, a decade after they were invented, their use for their ostensible purpose—as a means of exchange—is negligible. A lot of work is being done to fit them better for this task, so that could change. But if their use is to become widespread, they will have to offer something that existing currencies do not. Bitcoin's original selling-point—freedom from any kind of central control—holds little appeal for ordinary people, says Gary Barnett of GlobalData. Most of them just want a payment system that is safe and easy to use. And given cryptocurrencies' shortcomings—the lack of consumer protection, dizzying price fluctuations, fiddly software, slow throughput and a voracious appetite for electricity—at the moment they fail that test.

One thing that might help, despite bitcoin's anti-establishment roots, is more attention from regulators, to combat the epidemic of fraud and sharp practice in the field. Some cryptocurrency firms are focused on exactly that. Chainalysis, for instance, hopes to help firms analyse their clients' cryptocurrency trading to comply with anti-money-laundering rules.

Some think a more radical approach is needed. Despite the absence of a centralised operator, says Angela Walch, a lawyer and member of the Centre for Blockchain Technologies at University College London, the coders whose efforts establish the system in the first place and the miners who maintain a cryptocurrency's ledgers do hold power. So she thinks there is a case to be made for treating both coders and miners as fiduciaries, imposing a legal requirement on them to act in the interests of the system's users.

Going round in circles

Even a well-regulated cryptocurrency, though, would be subject to the "network effects" that have led to an oligopoly in social media. New users tend to choose the biggest firms because everyone else is already subscribing to them. In the same way, a currency's utility depends on other people using it. "In order for merchants to start accepting cryptocurrencies, there needs to be demand [from customers],” says Kim Baeur at Chainalysis. “But in order for customers to want to use it, they have to expect to be able to spend it.” Cryptocurrencies would have to offer a compelling advantage over other payment mechanisms to break that logjam. But since speculators love them, they are not likely to disappear either.

Blockchains could be a different matter. Like cryptocurrencies, they have been oversold. Because of its decentralised nature, a blockchain will always be slower and more cumbersome than a standard database. But blockchain developers are trying to minimise those problems by doing away with features such as proof of work, which is necessary in a public system open to anyone but superfluous in a system designed for private use. As with cryptocurrencies, a sensible attitude to regulation helps. The most credible actors cite their compliance with regulations around finance, personal data and the like as a selling-point.

For now, however, almost all blockchain projects remain experimental. Most will fizzle out. The less world-changing a proposed use, the better its chance of success. For example, the cryptographic structures that make data in a blockchain hard to change are fairly easy to introduce. When they add an extra layer of security to things like financial accounts or official documents, they could be useful.

A bigger prize awaits in the back office, reducing the time-consuming administration required for firms to talk to each other by providing a shared database which everyone can use. This may be easiest where existing systems are minimal and there is no incumbent centralised regulator. Two examples commonly cited are trade finance and international money flows.

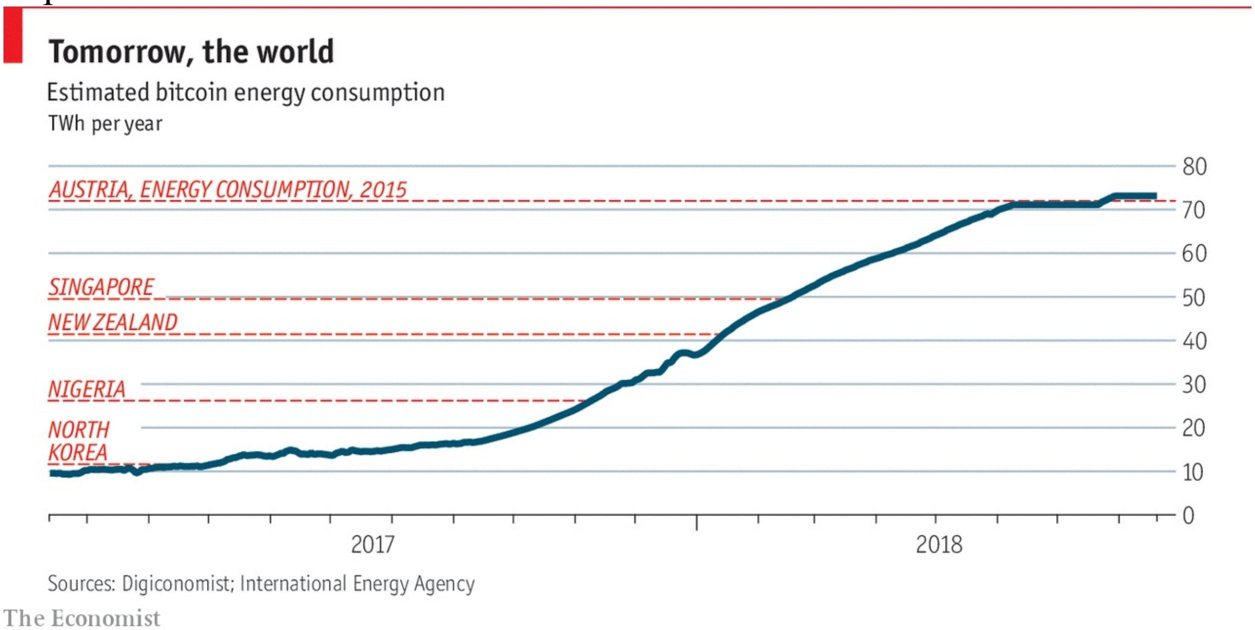
Other compelling uses may yet emerge. But it is worth bearing in mind that big IT projects—which is what blockchains amount to—tend to be cumbersome and slow even if they are undertaken by a single company. If they require several companies to work together, they will take even longer. So whatever happens, blockchain’s backers will need patience.

A voracious appetite

Mining cryptocurrencies is using up eye-watering amounts of power

An unwelcome side-effect of the way cryptocurrencies work

Sep 1st 2018



BITFARMS IS a mining company based near Montreal in Canada's Quebec province. Mining has a long history in this area. Quebec is the world's second-biggest producer of niobium, an important ingredient in steel alloys, and the third-largest of titanium dioxide, used in products from spacecraft to toothpaste.

Bitfarms, though, is a post-industrial sort of mining firm. Its racks of humming computers, crunching through zillions of cryptographic calculations every second, are designed to mine bitcoin and other cryptocurrencies. The location of Bitfarms is no accident. In 2016 Hydro-Quebec, the local electricity company, found itself flush with relatively cheap hydro-electricity and said it wanted to attract data centres like those run by Facebook or Google. That sparked a cryptocurrency gold rush.

Alex de Vries, an analyst at PricewaterhouseCoopers, a consultancy, helps to run a site called Digiconomist which keeps track of this business. He reckons that its total global revenues from such mining, even after bitcoin's fall from its peak in 2017, are around $4.5bn a year, mostly shared among a handful of Chinese firms that now dominate the cryptocurrency mining business.

The most striking statistic is the sheer amount of electricity needed to run the system. Mr de Vries estimates that bitcoin mining consumes at least 22 terawatt hours of electricity a year, and probably as much as 73TWh, roughly the same amount as Austria does. Ethereum, the second-most-popular cryptocurrency, eats up a further 21TWh.

This phenomenal energy hunger is implicit in the nature of cryptocurrency mining. Miners are responsible for maintaining the blockchain, but anybody can set themselves up as one, so there needs to be a way to deter frivolous or malicious operators. In bitcoin's "proof of work" system, miners demonstrate their commitment by using computer power (and therefore electricity) to supply the answer to a mathematical puzzle. Whoever solves it first is rewarded with some newly minted bitcoin.

The result is a Red Queen's race, where miners must run just to stand still. The best way of winning is to buy ever more and ever faster computers to solve the puzzles. But the system is designed to be self-adjusting, to keep the average rate at which new blocks are generated at one every ten minutes. The more computer power miners throw at the problem, the harder the task becomes. In the long run, says Mr de Vries, the cost of mining a block should tend towards the real-world value of the 12.5 bitcoin reward. At current prices that is about $80,000, which buys a lot of electricity.

The reward money has created an entire industry. In the early days most mining was done by individuals on home computers, but it soon moved to more efficient computer-graphics chips. Now it is done in vast data centres full of chips so specialised they can do nothing else.

The biggest mining company, Bitmain, founded in 2013, is privately held, so numbers are hard to come by, but according to one estimate from Bernstein, a Wall Street research firm, Bitmain may have made a profit of $3bn-4bn last year. It is planning to float on the stockmarket before the end of this year.

The dominance of a few big firms in mining worries many crypto fans. They are aware that anyone who controls more than half the total mining capacity in a cryptocurrency is able to manipulate its blockchain, a so-called “51% attack”. Several smaller cryptocurrencies have already fallen victim to such attacks.

For most outsiders, the bigger worry is the current system’s voracious power consumption. After its initial enthusiasm, Hydro-Quebec was so overwhelmed that it has had to call a moratorium on new applications for cryptocurrency mining. It is unclear where most mining operations obtain their electricity. But the biggest cryptocurrency farms are in China, where most of the electricity is generated by dirty coal-fired power stations.

Mindful of such concerns, some cryptocurrency developers are looking for alternative ways to secure their products, but there is little agreement on how to do it. The most popular idea is a “proof of stake” system, in which a miner’s chance of being able to add a block depends on how much of the cryptocurrency he already owns, removing the need for elaborate power-hungry calculations. But giving yet more currency to those that have the most has a whiff of plutocracy about it, and many users object.

Even the miners themselves are making contingency plans. Bitmain, for instance, is planning to diversify by launching a new series of chips designed for machine learning. Bitfarms says that bitcoin mining is merely a transient project to fund its longer-term goal: enabling business applications for the blockchains that underlie cryptocurrencies.

Token efforts

Initial coin offerings have become big business

Fundraising with cryptocurrencies is booming, but is that a good thing?

Sep 1st 2018

IT LOOKED like just another cryptocurrency scam. On April 18th the website of Savedroid, a German company, went offline, to be replaced by an image from “South Park”, a scatological cartoon, bearing the legend “Aannnd it’s gone”. Yassin Hankir, Savedroid’s boss, published a Twitter post that showed him first in an airport and later on a beach, with the caption “Thanks guys! Over and out…” The implication was that the company was gone and its founder had made off with $50m raised from sales of its cryptocurrency, SVD.

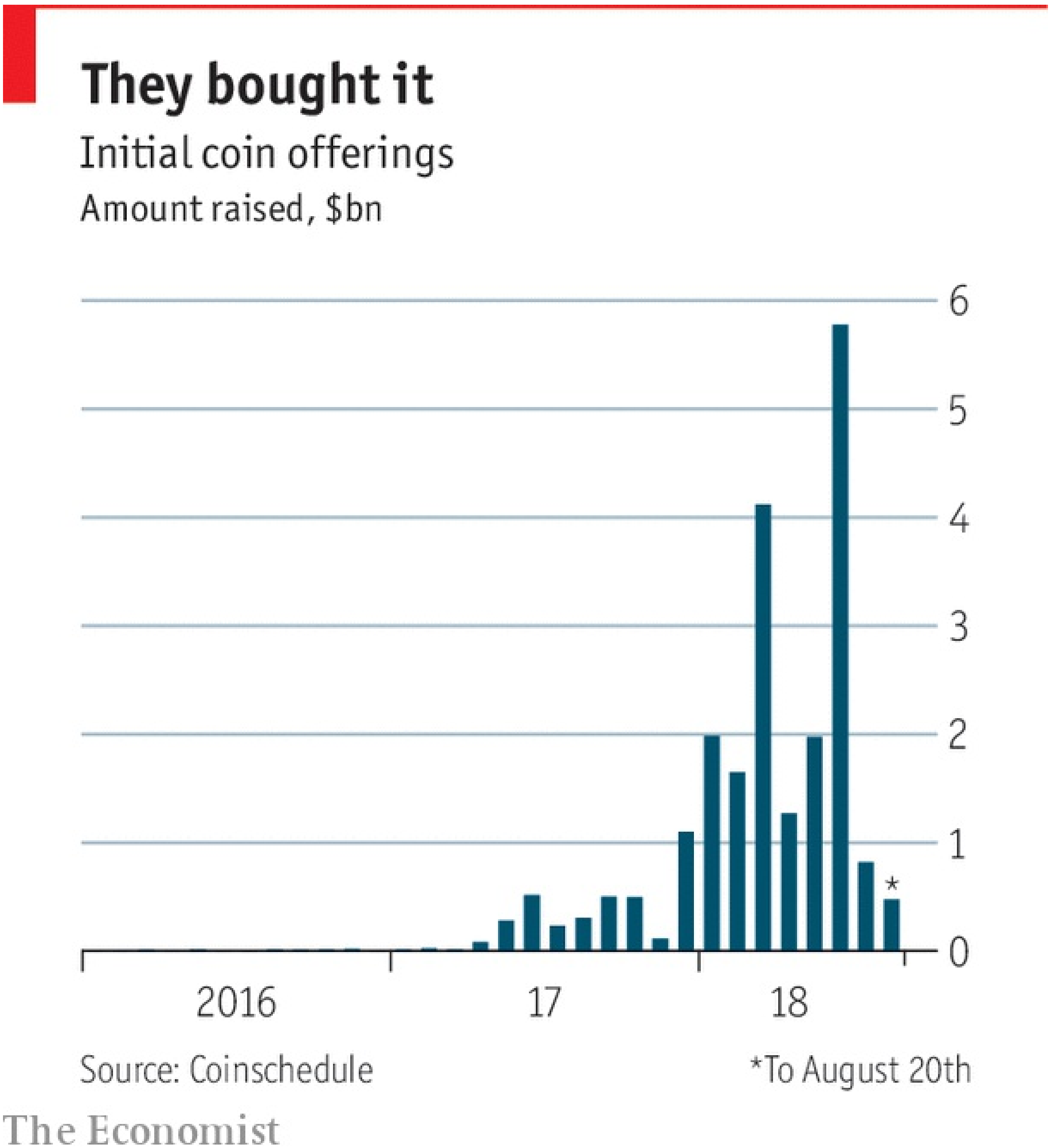
Savedroid had been running an initial coin offering (ICO), a form of fundraising popular among cryptocurrency firms. An issuer will create a pile of crypto-tokens, often running on top of an existing blockchain such as Ethereum, then sell some to raise money for developing its product. The hope is that once that product is launched, the associated tokens will rise in value, leaving those who bought them early with a tidy profit. Matt Levine, a journalist at Bloomberg News, has possibly the snappiest definition: “They’re like if the Wright brothers sold air miles to finance inventing the aeroplane.”

The idea is not new. Ethereum itself got started in this way, raising $18m in 2014. But ICOs have become big business. According to Coinschedule, an average of 18 ICOs per month took place in 2017. As of July, the number for 2018 was 99 a month. So far those ICOs have raised $17bn, up from $3.7bn for the whole of 2017.

Some have been enormous. Block.one, a firm based in the Cayman Islands, raised more than $4bn with an ICO for EOS, an Ethereum-like blockchain on top of which firms can write software. Earlier this year Telegram, which runs an instant-messaging service popular with cryptocurrency fans, raised more than $1.7bn when it sold its cryptocurrency to a group of private investors.

ICOs have attracted institutional investors as well as individuals. Protocol Labs, a firm based in San Francisco, is working on several blockchain-powered applications, including the Interplanetary File System, which would pay users in cryptocurrency to let others use their spare computer capacity, in a sort of user-powered version of cloud-storage firms such as Dropbox. It has presold $52m in cryptocurrency to Silicon Valley venture-capital firms such as Sequoia, Union Square and Andreessen Horowitz.

Though the names sound similar, ICOs are not like IPOs (initial public offerings), in which buyers acquire shares and voting rights in a company. Instead, most just offer a token, theoretically tradable at a later date for whatever service the ICO’s issuer plans to provide. Depending on how well the project does, those tokens may or may not be worth anything.



ICOs offer a way to raise cash to build decentralised versions of everything from social networks to cloud computing that would allow users to deal with each other directly without any central control. The modern internet, say supporters, is in effect controlled by a small number of vast firms that run the platforms on which most online activity takes place. By building decentralised alternatives, the power of those monopolies could be broken. Much of the early internet was developed this way. For example, SMTP, which specifies how e-mail should work, is an open protocol that anyone can use without paying, and made no money for its creators. ICOs can create a financial reward for the builders of such systems instead of relying on kindly coders.

Another attraction of ICOs is less noble: they avoid the bothersome paperwork and regulatory oversight that comes with more traditional methods of fundraising. This side of the business is now beginning to attract attention from the authorities. In Vietnam, for instance, police are investigating two ICOs, Pincoin and Ifan, run by a firm called Modern Tech, which is accused of duping buyers out of $660m. BitConnect, based in Britain, which described itself as a bitcoin lending platform, promised its investors returns of more than 1% a day, which would turn an initial investment of $1,000 into $37,800 within a year. Its website features pictures of happy investors frolicking amid money trees and piles of gold. Authorities in Texas and North Carolina obtained cease-and-desist orders against the company in January this year. A few days later BitConnect said it was shutting down, blaming those orders and the subsequent “bad press”.

Careful now

Pump-and-dump schemes are rife. An ICO’s creators talk up the value of their tokens before selling them and making off with the money. The Securities and Exchange Commission, one of America’s financial regulators, has created a spoof ICO website which appears to plug a product called HoweyCoin but is in fact designed to warn potential buyers of the pitfalls. (The name refers to the “Howey test”, which determines whether something counts as a security in American law and therefore falls under the SEC’s regulatory umbrella.) A paper by Hugo Benedetti and Leonard Kostovetsky, both at Boston College, found that ICOs can be very profitable, with average returns of 179% between the ICO price and the price the token fetches on its first day of trading. But they also found that less than half such projects remain active for more than 120 days after they have finished issuing tokens to the public.

It is an open question whether ICO tokens count as securities, and whether their issuers must therefore comply with the rules that regulate stock offerings. Regulatory responses vary from country to country, says Preston

Byrne, a financial lawyer and cryptocurrency watcher. South Korea banned ICOs last year, as did China, though many carry on regardless. American regulators have taken a cautious approach. In June Jay Clayton, the SEC's boss, advised would-be ICO-issuers to talk to the agency before proceeding. But William Hinman, the SEC's director of corporate finance, said later that month that he was not minded to treat ether, Ethereum's cryptocurrency, as a security, because of its "decentralised" nature. Regulators in jurisdictions such as Switzerland and the Isle of Man have been offering detailed guidance on how to conduct a legitimate ICO.

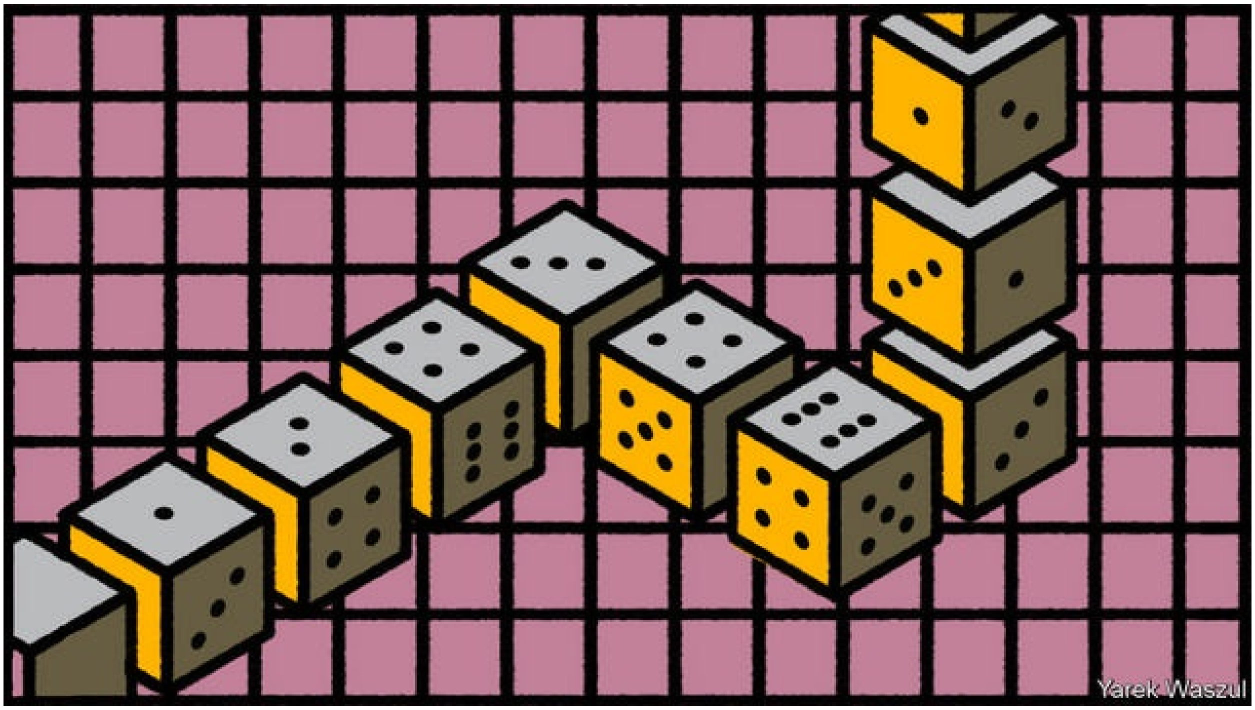
For now, says Mr Byrne, even honest ICOs are living in an uncomfortable legal limbo, with "some vexing questions about the liability of the people starting the scheme". Probably the only way to get clarity, he says, is to wait for a court case. Technology companies, for their part, have moved faster than regulators: Facebook, Google, Microsoft and Twitter have all banned ads for ICOs, citing the financial risks to their users and worries about fraud.

As for Savedroid, furious punters eventually tracked down its boss to a resort on the Egyptian Red Sea coast. But the next day the firm's website was back up, with an announcement that the shutdown had been a stunt. The point, claimed Dr Hankir, had been to warn investors just how easily the company could have disappeared. "There's so much scam happening, from the beginning to the end of ICOs," he said. "Even we, as a regulated German stock corporation, could have just run away…with all the funds."

Nailing it

The promise of the blockchain technology

What blockchains may be able to do for your business, and what they can’t



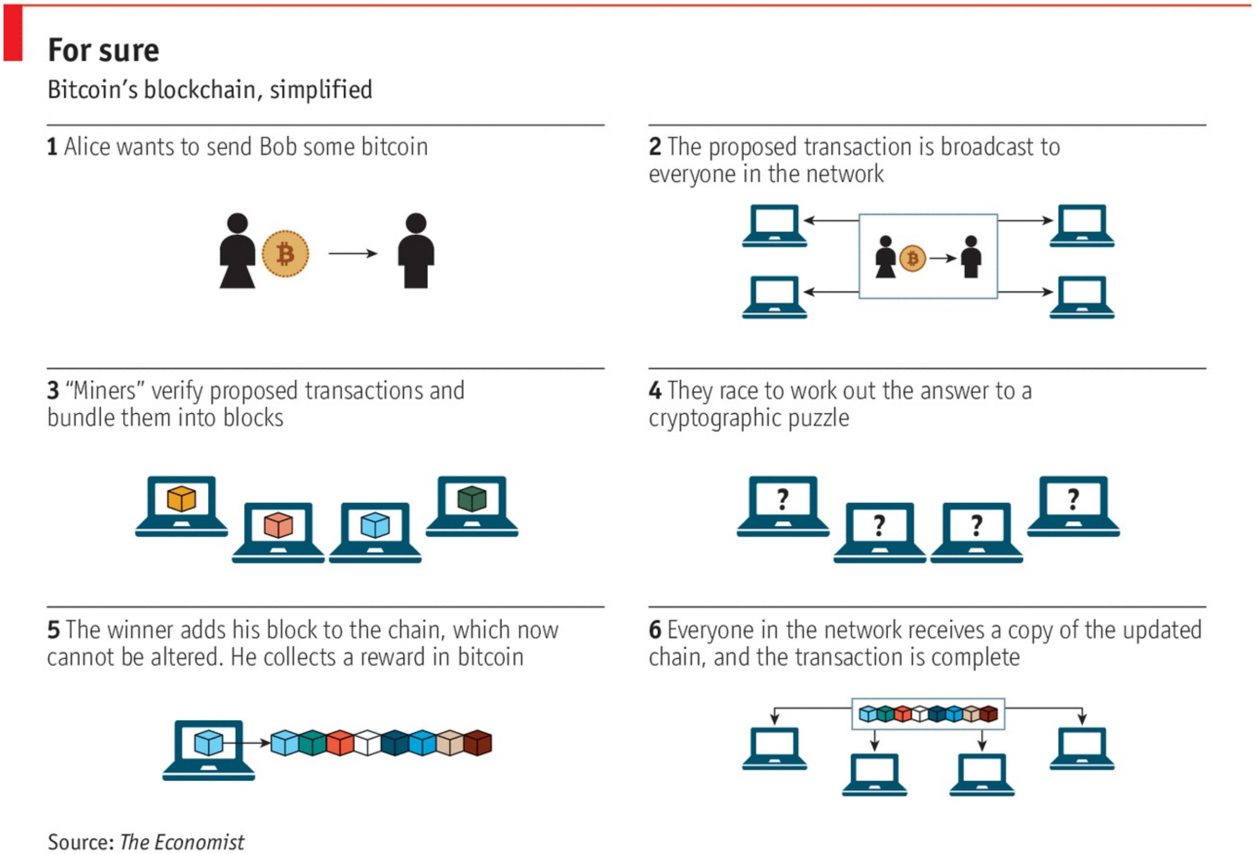
Sep 1st 2018

WEPOWER IS a Lithuanian startup that aims to change the way renewable-electricity projects are paid for. The government-guaranteed prices that have propelled growth in wind and solar energy around the world are being cut back, says Nick Martyniuk, WePower’s founder. So his firm wants to help developers of renewables raise money by selling the rights to the electricity their plants will produce once built. Customers will buy a smart contract now, running on Ethereum’s blockchain, that will provide them with power later.

Using a blockchain offers several advantages, says Mr Martyniuk, who used to work as an energy trader. Big energy users such as foundries and aluminium smelters already negotiate such contracts with power stations, but they are often complex and time-consuming. Contracts on a blockchain could be offered off the shelf, allowing smaller companies—and perhaps, one day, individuals—to use them too. Such contracts would be as easily tradable as any other crypto-asset, creating a secondary market in power agreements.

The blockchains that run cryptocurrencies (see diagram below) could have far wider applications than tracking the transaction history of electronic cash. Investors have taken note. Crunchbase, a business-information firm, reckons that in the first five months of 2018 blockchain startups raised more than $1.3bn from venture-capital firms, compared with around $950m in the whole of 2017. Cloud-computing platforms from Amazon, IBM, Microsoft, Oracle and others let users experiment with using blockchains in their businesses. Professional-services firms such as Accenture and PricewaterhouseCoopers are lining up to advise clients on the new technology.

The idea is that, because blockchains use distributed rather than centralised records and are more tamper-proof than other databases, they can be applied to tasks from streamlining medical record-keeping or trade finance to ensuring that diamonds and other minerals are ethically sourced. Santander, a bank, has said that adopting blockchains could save the finance industry $20bn a year in back-office costs. Creative minds are already turning to exotic applications. LegalThings, a Dutch firm, announced in April that it wanted to put sexual consent on a blockchain; lovers would sign an unalterable electronic contract before taking things further and send copies to thousands of strangers for safekeeping.



The Economist

The feature that most business blockchains share with the bitcoin original is that the information stored in a blockchain is kept by the system's users, not by a central authority, and that each entry is cryptographically linked to the ones before and after it. But businesses do not share the ideological motivations of bitcoin's creators, so they can throw out parts of bitcoin's technology they do not need. For example, both the bitcoin and the Ethereum blockchains are public and open for anyone to inspect, so they need a formal verification process for all transactions. But few businesses are keen to lay their back-office functions bare to the world, so most enterprise blockchains are both private and "permissioned", meaning that access is restricted to trusted users. Corda,

The obvious way to think about blockchains is as a kind of database, though a more exact definition that commands general agreement is hard to come by. The original blockchain, invented to power bitcoin, was designed to solve a specific problem, says Richard Brown, chief technology officer at r3, a blockchain firm:

a finance-focused blockchain developed by r3, a consortium of banks, and Hyperledger Fabric, originally developed by IBM and a firm called Digital Asset, work this way. Allowing only trusted participants removes the need for the wasteful proof-of-work systems that many cryptocurrencies use to update their records.

"How can I build a system of electronic cash that is resistant to official censorship and confiscation?" Bitcoin does the job passably well but extremely inefficiently.

Most attempts to use blockchains remain tentative

Other vendors weaken the cryptography that makes bitcoin transactions immutable. One reason is that European data-protection law gives individuals the right to ask for their data to be removed from a company's servers and imposes big penalties for non-compliance. Similar rules apply to medical data in America. But entries in a standard blockchain, once created, cannot be altered. Accenture has developed a mutable blockchain in which the content of individual blocks can be modified, leaving a digital "scar" to indicate that they have been changed.

Some business users prefer not to use the term "blockchain" at all, perhaps because they want to dissociate themselves from cryptocurrencies and their sometimes shady reputation. Corda, Digital Asset and a number of other firms like to call it "distributed-ledger technology". But whatever the name of the game, there is no shortage of proposed uses.

All together now

A common one is to smooth business transactions by allowing the different entities involved to draw on the same records. Simon Whitehouse, managing director of financial services at Accenture, reckons that blockchains could help streamline supply chains by allowing records to be shared by suppliers, shipping companies, import agents, customs officials and so on. This would also make dispute resolution easier where supply chains cross international borders, he says. At present all those involved in a supply chain use their own proprietary systems to track consignments, so the same data are being used in different formats and different places and have to shuttle from one database to another. Replacing all that with a single distributed database for everyone’s use could offer big savings. Accenture is already piloting such a scheme with a big technology company.

The finance industry is experimenting with the technology, too. Fusion LenderComm, developed by a firm called Finastra, is running on r3’s blockchain. It aims to streamline the syndicated-lending business, in which groups of banks jointly provide large loans for infrastructure projects and the like, by replacing an individual bank’s systems with a piece of common infrastructure that any lender can use.

The Bank of Canada and the Monetary Authority of Singapore are collaborating to investigate blockchains as a way of improving international payments. Banks in different countries often run computer systems that cannot easily talk to each other, which makes payments slow and expensive. A single shared ledger could relieve much of the administrative burden. Santander has launched a smartphone app called One Pay FX that lets customers send international payments in a matter of seconds and tells them when they will arrive. Instead of the standard international financial plumbing, One Pay FX uses a closed, permissioned, quasi-blockchain system operated by Ripple, an American firm.

The cryptography that protects entries in a blockchain from tampering could also be used to build robust registers of everything from property deeds to company accounts. Several countries, most famously Honduras, have flirted with the idea of putting their land registries on blockchains to guard against fraud. DHL, a big logistics firm, is testing whether the technology could be applied to shipments of medicines. Everledger, which raised $10.4m of funding in March, aims, among other things, to use blockchains to track the provenance of diamonds, from the mine to the wearer’s finger.

Not so fast

For all the technology’s potential, though, most attempts to use it remain tentative. Honduras’s property blockchain, originally announced in 2015, was eventually abandoned in the face of official indifference. And some supposed successes turn out to be wildly exaggerated. A rash of reports earlier this year that Sierra Leone had run the world’s first blockchain-powered election, using software from a Swiss startup called Agora, had to be corrected on Twitter by the country's National Electoral Commission. It pointed out that the election had been tallied on to its own database, which "does not use Blockchain in any way". Agora, it appeared, had merely been observing the election, and its blockchain tallies did not match the official ones.

The advantages of blockchains are often oversold. Because of the overheads involved in shuffling data between all participants, blockchains are less efficient than centralised databases, a problem that gets worse as the number of users rises. When the Bank of Canada tried using blockchains to process domestic payments, which are already quite efficient, it found they offered no benefit. Stripe, a big digital-payments firm, has abandoned its blockchain experiments after three years of trying, describing the technology as "slow and overhyped".

Talk about blockchains as "truth machines" is particularly unhelpful, says Kai Stinchcombe, who runs True Link, a financial-services firm for retired people. Many products, such as diamonds or luxury handbags, already come with certificates of authenticity. A blockchain could reassure buyers that those certificates have not been tampered with. But that is not the same as proving they are true. "If you put garbage onto a blockchain, all you get is distributed, encrypted garbage," he points out.

Verisart, a firm that hopes to reduce art fraud by providing blockchain-powered certificates of an artwork's provenance, is a case in point. Armed with a picture from Wikipedia and an impish sense of humour, Terence Eden, a developer at Britain's Government Digital Service, convinced the firm that he had painted a work called "La Gioconda". That information was added to Verisart's blockchain, where it was widely distributed and cryptographically secured. But that did not make it right. The painting is better known as the "Mona Lisa", created by Leonardo da Vinci in 1503. In the same vein, says Mr Stinchcombe, a blockchain may make it easier to verify the paperwork that claims to show that a diamond is ethically sourced, but it cannot stop mine operators falsely claiming that their products are legitimate.

Enthusiasts are also beginning to realise that even when a blockchain might be a suitable tool for the job at hand, they will still need to resolve the same sorts of problems as for any other big IT project. Proposing a new standard is the easy part. The point is to get everyone, including competitors with little love for each other, to agree on important details such as who will be in charge, how the system will be built, how data formats will work and what happens if someone wants to leave. As David Gerard, a blockchain sceptic who works at the *British Medical Journal*, puts it: "Blockchains don't solve the underlying problem of agreeing on what you want to do and how." Applying blockchains to highly regulated industries such as finance, says Mr Brown at r3, means reassuring regulators that the systems can operate as planned, and that systemic risks can be minimised.

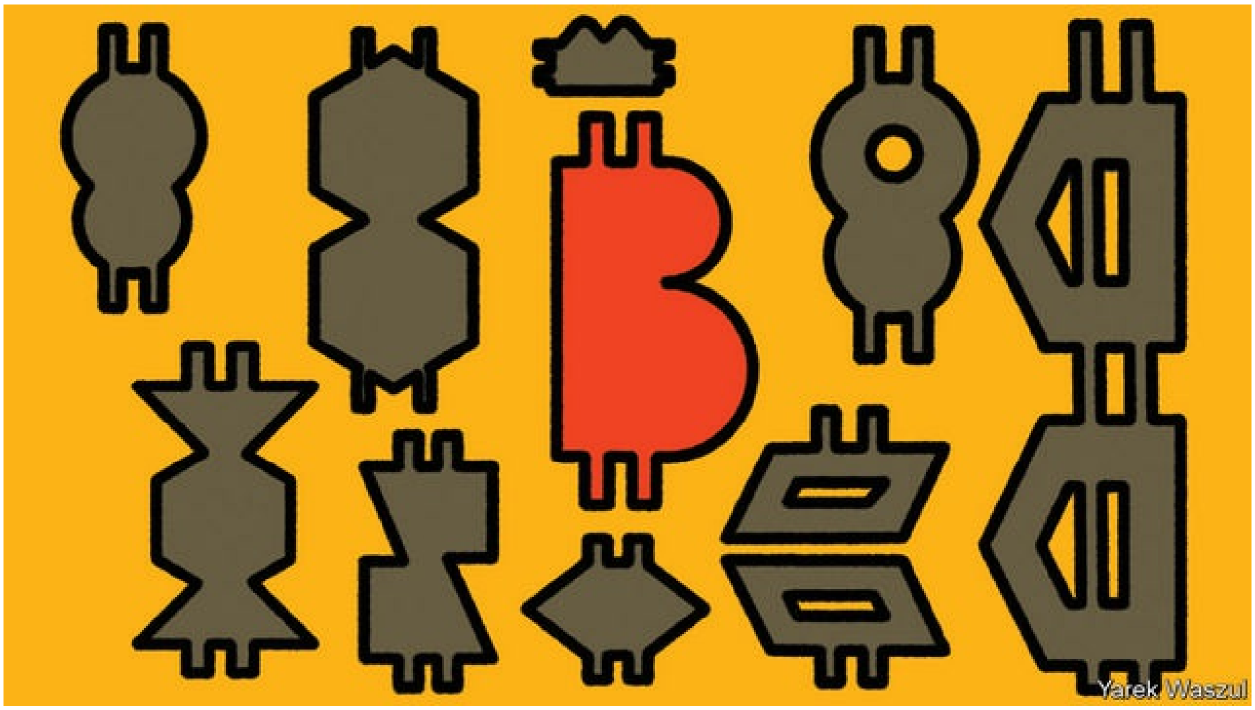
Computer scientists point out that the ideas underlying blockchains are hardly new. For example, the cryptographic linkages that secure entries in a block, known as Merkle trees, were first proposed in 1979. Still, the impression of novelty may serve a useful purpose. Sam Chadwick of the Thomson Reuters Foundation notes that the word "blockchain" can help spark interest among senior managers in the kind of back-office improvements that they would normally consider dull. And once competitors are sitting round a table, they find it easier to put aside their differences and work out more efficient ways of doing business. Mike Pisa of the Centre for Global Development, a charity, has been studying possible uses of blockchains in poor countries and finds that "it's a word that can attract attention to things we could have done before. That's a positive."

Tim Swanson, at Post Oak Labs, thinks blockchains are entering the "trough of disappointment" in the "hype cycle" proposed by Gartner, a technology consultancy. At this point, after an initial surge of excitement, reality reasserts itself as the limits of a technology become apparent. The key to making blockchains useful will be to manage expectations. And sometimes it is best to concede defeat. When Ujo Music tried to blockchainify the notoriously messy business of arranging payments to artists in the music industry, it did not succeed. The musicians were fazed by the technobabble; the technologists who had been called in did not understand the industry they were promising to revolutionise. They concluded: "We are but a few bright-eyed technologists with a special hammer, looking for the right nail."

Chips off the block

From one cryptocurrency to thousands

Bitcoin has spawned a horde of imitators



Sep 1st 2018

BITCOIN FANS like to point out that, like gold, the cryptocurrency is in limited supply. Its protocol specifies that only 21m bitcoin will ever be mined, with the last batch due in the middle of the 22nd century. A fixed supply, say bitcoiners, ensures that, unlike ordinary currencies, it will not be eroded by inflation.

But whereas the supply of bitcoin may be limited, that of cryptocurrencies is not. Bitcoin's protocol is open-source, so there is nothing to stop others copying the idea. And they have done, with gusto. So far thousands of different cryptocurrencies have been launched. Like bitcoin, they have proved attractive to speculators. For example, XRP, issued by Ripple, a payments firm, rose from less than one cent to touch $3.46 in January this year (it has since dropped back to around $0.35). The magnitudes vary, but the price movements of cryptocurrencies tend to be correlated. When bitcoin is rising, the so-called “altcoins” tend to rise as well, and vice versa.

Some of these altcoins are shady. Several projects have actually been called PonziCoin, and one, in 2014, seems to have done exactly what it promised, advertising a 120% annual return before folding soon after enough suckers had bought in. Some are meant as jokes: Dogecoin is based on an internet meme involving a Shibu Ina dog that went viral in 2013. Even so, in 2017 its price surged along with that of all the other cryptocurrencies, from $0.0002 to $0.017, an 85-fold increase. Dogecoins currently in circulation are worth a nominal $267m.

Many cryptocurrencies go nowhere

Some altcoins, though, are sincere attempts to fix some of bitcoin’s perceived problems. One of these is that bitcoin is not truly anonymous. If a pile of it can be tied to a user’s real identity, the blockchain will reveal every transaction in which he received those coins. (This was a big help to the FBI agents who in 2013 arrested Ross Ulbricht, the founder of the Silk Road, an early online black market that did much of its business in bitcoin.)

Zcash, Dash and Monero are all cryptocurrencies that aim to give users more privacy. Monero, in particular, quickly became a popular alternative to bitcoin in some of the less salubrious corners of the internet. “Stablecoins” such as Basis, Carbon and Tether, meanwhile, attempt to tame the volatility that makes cryptocurrencies attractive to speculators. Tether claims that each of its coins is backed by a US dollar. About 2.5bn Tether coins are currently in circulation. In 2017 the firm promised to hire external auditors to prove that it does, in fact, have a pile of real cash backing those coins. In March this year, still without an audit, it announced that it had parted ways with the firm it had hired.

In December 2017 the government of Venezuela, a country in deep economic trouble, announced that it had created the petro, a cryptocurrency supposedly backed by the country’s large oil reserves. It was designed in part to circumvent American sanctions. Nicolas Maduro, the country’s president, claimed that presales of the petro had raised $735m in precious foreign currency on the day it launched.

Many cryptocurrencies, though, go nowhere. Deadcoins.com, a site that keeps track of moribund ones, lists about 900 coins that have been abandoned by their creators or their users.

The best-known and most interesting twist on bitcoin's original idea is Ethereum. The brainchild of a bitcoin enthusiast, Vitalik Buterin, it was launched in 2015. Its main innovation is to allow computer code—dubbed "smart contracts"—to reside on its blockchain. That code will be run in predefined circumstances, against a small payment in ether—the Ethereum network's native cryptocurrency—to compensate the owner of whichever computer ends up running the program. These programs can interact with each other, which makes it possible to construct complex distributed blockchain-powered "dapps" (distributed apps).

Into the ether

That, in theory, makes Ethereum a more generalised system than bitcoin. The bitcoin blockchain is designed to do just one job: to serve as a ledger for electronic cash. An Ethereum dapp could be written to do the same thing, but other uses are possible, too. Golem, for instance, an Ethereum-powered project launched this year, is designed to create a "decentralised supercomputer", offering users rewards for putting their computers' spare capacity to work for other people. That has led to excited talk of Ethereum itself becoming a sort of "world computer you can't shut down", or even "Web 3.0", on top of which could be built decentralised, user-controlled versions of everything from Facebook to Skype.

For a world worried about the power of big internet firms, that could be an attractive prospect. Ethereum's smart contracts started on a modest scale, involving things like automated casinos and lotteries. Then they became grander: the Decentralised Autonomous Organisation (DAO), for instance, founded in 2016, was designed as an automated investment fund.

It ended up as a cautionary tale about the difficulty of writing bug-free code. Its smart contract took money from contributors and allocated it to projects that its 11,000 members had voted on. But after $150m of ether was invested in the DAO, a hacker found a bug in the code that allowed him to make off with $50m of that stash of cash.

These days shady dapps are flourishing. At the time of writing the second-most-popular dapp using Ethereum's networks is a kind of lottery whose rules are hosted on a site called Exitscam.me. This may be nothing more than growing pains. Yet Ethereum also suffers from many of the same built-in limitations as bitcoin. Its transaction rate is capped at about 14 per second. As with bitcoin, there are long-running plans to ease the jam, though it is unclear whether they will succeed.

For now, popular dapps can still clog the network. In late 2017 a game called "CryptoKitties" went viral on Ethereum's blockchain. It involves smart contracts that create unique, cryptographically protected virtual cats which can be traded between users. Traffic on Ethereum's network rose at least sixfold and many transactions failed.

Despite such fiascos, the flexibility of its smart contracts has made Ethereum the platform of choice for all sorts of blockchain-powered experiments. It has also provided a means to pay for them, by issuing new cryptocoins which, instead of running on their own blockchains, piggyback on the Ethereum one. That has turbocharged an idea called initial coin offerings (ICOs), a form of crowdsourced fundraising that is becoming popular in the cryptocurrency world.

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Swallowing bitter pills

China is sprucing up its pharma sector

The changes are helping multinational drugmakers. In time they may boost the domestic industry

Brett Ryder

Aug 30th 2018 | SHANGHAI

CHINA is home to 1.4bn people. The population is ageing, and thus more vulnerable to ailments. Sustained economic growth is making the country richer, and more able to afford remedies. To foreign pharmaceutical firms, this looks like a winning combination. They are less keen on protracted review times, onerous rules and the reams of paperwork required to sell drugs in China. It can take a decade after approval in America for foreign drugs to reach Chinese patients.

The Chinese authorities at last appear to have acknowledged the problem—and are administering a cure in doses that have surpassed even optimists' expectations. A reinvigorated regulator is waving through drugs from abroad, and clamping down on unscrupulous domestic companies. The government is spending more on drugs, including foreign ones, as it expands public health care. It is letting market forces weed out frail local firms. In other words, China is becoming a more normal market. Global drugmakers are rubbing their hands. By some estimates China became the second-largest global consumer of medicines in 2017. The market is worth $122.6bn, according to IQVIA, a research firm.

The normalisation owes a lot to the overhaul of the China Drug Administration (CDA). Under Bi Jingquan, who took over the regulator in 2015, the CDA introduced fast-track review for drugs for unmet medical needs, ditched the requirement to perform clinical trials with Chinese patients in state-run Chinese labs and relaxed rules that obliged many firms to invest in local factories. The CDA has also joined a global body which harmonises the way drugs are assessed. It is adopting international standards for the collection of clinical data. In three years Mr Bi accomplished what would normally take three decades, gushes Lu Xianping, the co-founder of Chipscreen Biosciences, a Chinese biotechnology firm.

For foreign drugs firms this means quicker and cheaper drug approvals. The approval in March last year of AstraZeneca's lung-cancer drug, Tagrisso (osimertinib), came seven months after regulators in developed markets gave theirs—"a very different timeline" compared with the past, confirms Sean Bohen, head of global medicines development at the British firm. On August 20th Roche, a Swiss company, secured Chinese consent for its own lung-cancer drug, Alecensa (alectinib), less than nine months after it launched in the West.

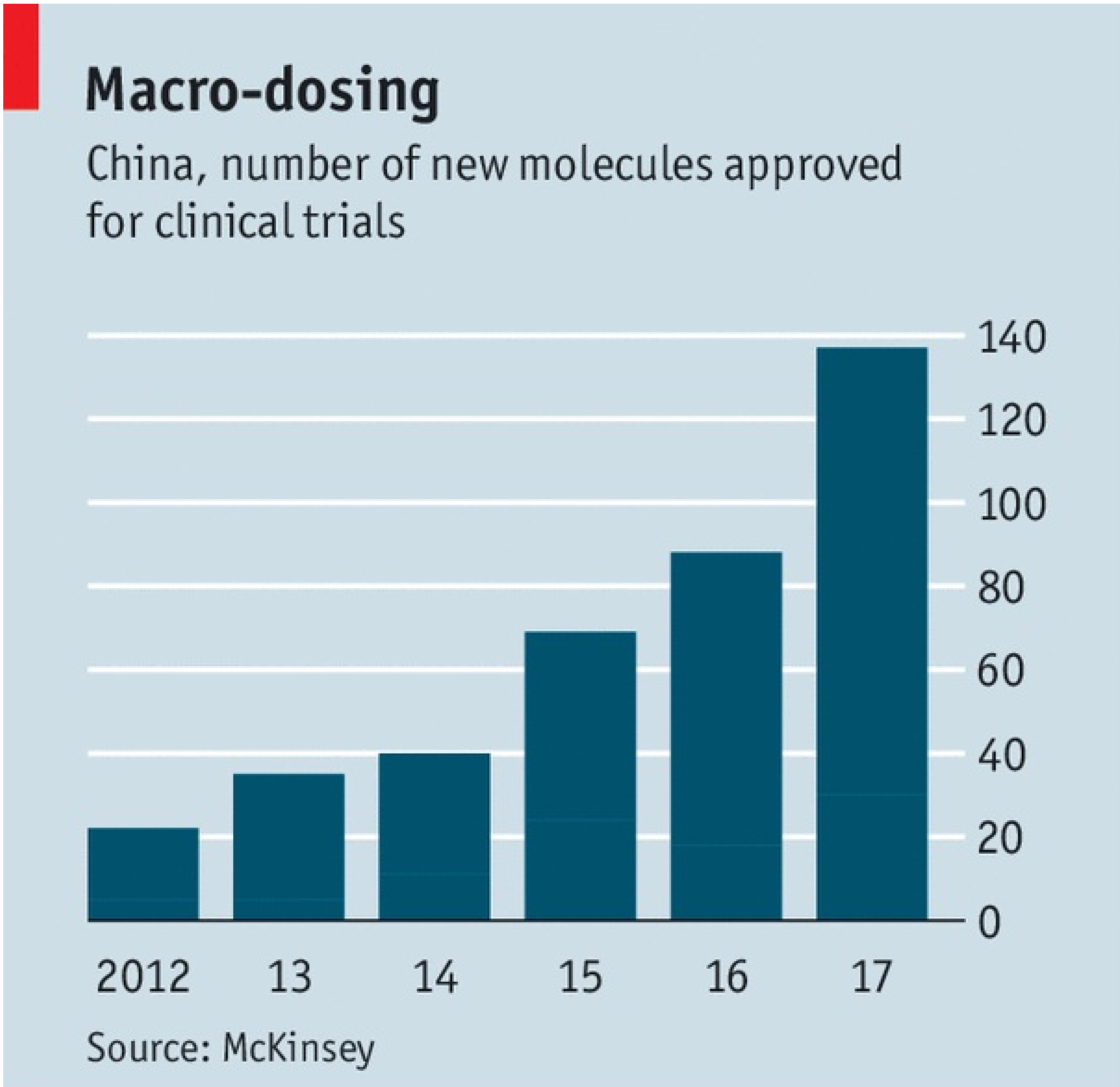
As well as these regulatory changes, China's national insurance scheme has expanded to cover most citizens. Although patients remain on the hook for part of the cost of the priciest treatments, the government is coughing up for more high-end drugs. In May the government extended patent protection for pharmaceuticals by five years, to as much as 25 years. It also removed import tariffs on cancer drugs and cut it on other medicines, despite trade tensions with America.

The Chinese authorities do demand steep discounts on the prices of expensive treatments. Across 36 premium drugs that were included on the national reimbursement list last year, producers had to swallow price cuts of 44% on average, relative to the previous year's average prices, calculates IQVIA. But firms are making up for lower margins with mammoth volumes. Deutsche Bank reckons that in the first quarter of 2018, the top 20 global pharma firms saw Chinese sales grow by 18% compared with last year. This was chiefly thanks to newly approved drugs.

Big Pharma thus has reason to cheer the shake-up; local drugmakers less so. Chinese producers of low-quality copycat drugs have been slow to meet the CDA's tougher new manufacturing standards and the requirement to prove that their pills are biologically equivalent to the original drugs. Unblocking the backlog of 22,000 applications for approval for sale (by foreign and domestic firms) will stiffen competition, which weaker firms may struggle to withstand. A programme to verify clinical-trial data appears to have curbed flaky applications. Mr Lu thinks that in the next five to ten years, half of China's 4,000 pharma companies could die as a result of the changes.

That appears to be the point. Hong Chow, general manager of Roche in China, reports that she has heard a government official say: "Better short-lived pain than a long one." The tough love is meant to let laggards wither and innovators flourish. It is having an effect: perhaps 50 local generics firms are transforming into research-driven ones and more biotechnology companies are being founded, often by Chinese returning from stints at foreign companies. A decision by the Hong Kong stock exchange earlier this year to allow firms to list before they turn a profit will encourage Chinese biotech startups to seek capital at home rather than abroad.

In the longer term that should spell stiffer competition for foreign drugmakers. Mr Bohen says that it is only a matter of time before a Chinese discovery in basic science leads to a new drug sold by a Chinese firm. Mark McDade of Qiming Venture Partners, a big health-care investor in China, points to top-notch Chinese research in cancer therapies known as CAR-T. The number of molecules approved for clinical trials in China has ballooned (see chart).



The Economist

The speed of change is not guaranteed. Developing new drugs is an uncertain, lengthy process. Mr Bi, the regulator who championed drug quality, was ironically one of those forced to resign in August after hundreds of thousands of children were discovered to have been given ineffective vaccines. Reforms to the CDA still have a long way to go. The agency has only just begun harmonising its rules with those of foreign counterparts. The goal of having 289 generics pass bioequivalence tests by the end of the year is optimistic.

Franck Le Deu, a senior partner with McKinsey, a consultancy, foresees a period of uncertainty following Mr Bi's sudden departure. The direction of reform is unlikely to change but its pace or focus might, he notes. That in turn will determine how long the boom times last for foreignpharma firms in China.

Missed punches

YouTube is fighting for a slice of the premium-video market

But first, it needs a game plan

Aug 30th 2018

SOME 20,000 spectators paid an average of £135 ($175) to see the bout live at the Manchester Arena in Britain. Another 800,000 or so spent £7.50 to follow it on YouTube. An estimated 1m more were glued to pirated streams. The fighters in the ring had no boxing experience. But they have plenty of YouTube fans. KSI, a British internet personality (whose real name is Olajide Olatunji), has more than 19m followers. His challenger, an American vlogger named Logan Paul, has 18m. In the fight for eyeballs, Messrs Olatunji and Paul knocked out David Haye and Tony Bellew, two British professional fighters whose heavyweight clash in May attracted 775,000 paying viewers.

YouTube did not organise the contest, which took place on August 25th; the boxers did. But the video-sharing giant took an undisclosed cut of the earnings and ran adverts alongside the stream. The event's enormous success has revived hopes that YouTube can get viewers to pay for content.

The platform continues to rake in money from advertising (Alphabet, which owns it, does not reveal how much). But wider concerns about fake news, data privacy and extremist content have not spared it. Several big brands pulled commercials from YouTube last year after finding that they were being posted alongside offensive videos.

YouTube's desire to convert some of its 1.5bn users into paying customers predates the ad kerfuffle. It has struggled to achieve this aim. Its subscription service, YouTube Premium, launched in 2015 as YouTube Red but was rebranded in May. It offers shows and films featuring YouTube stars (as well as some Hollywood names), plus ad-free streaming of all YouTube videos and access to music. YouTube keeps mum about subscriber numbers, but reports suggest it has attracted a few million. YouTube TV, which sells a bundle of live television channels (including CNN) to American viewers, reportedly adds another 300,000. The odd celebrity face-off is unlikely to change the picture much. Until YouTube works out a proper strategy, it will flail around to no great effect—much as the vloggers did in the ring.

Into the red

Why Indian carriers are losing money

While airlines elsewhere rake it in

Aug 30th 2018

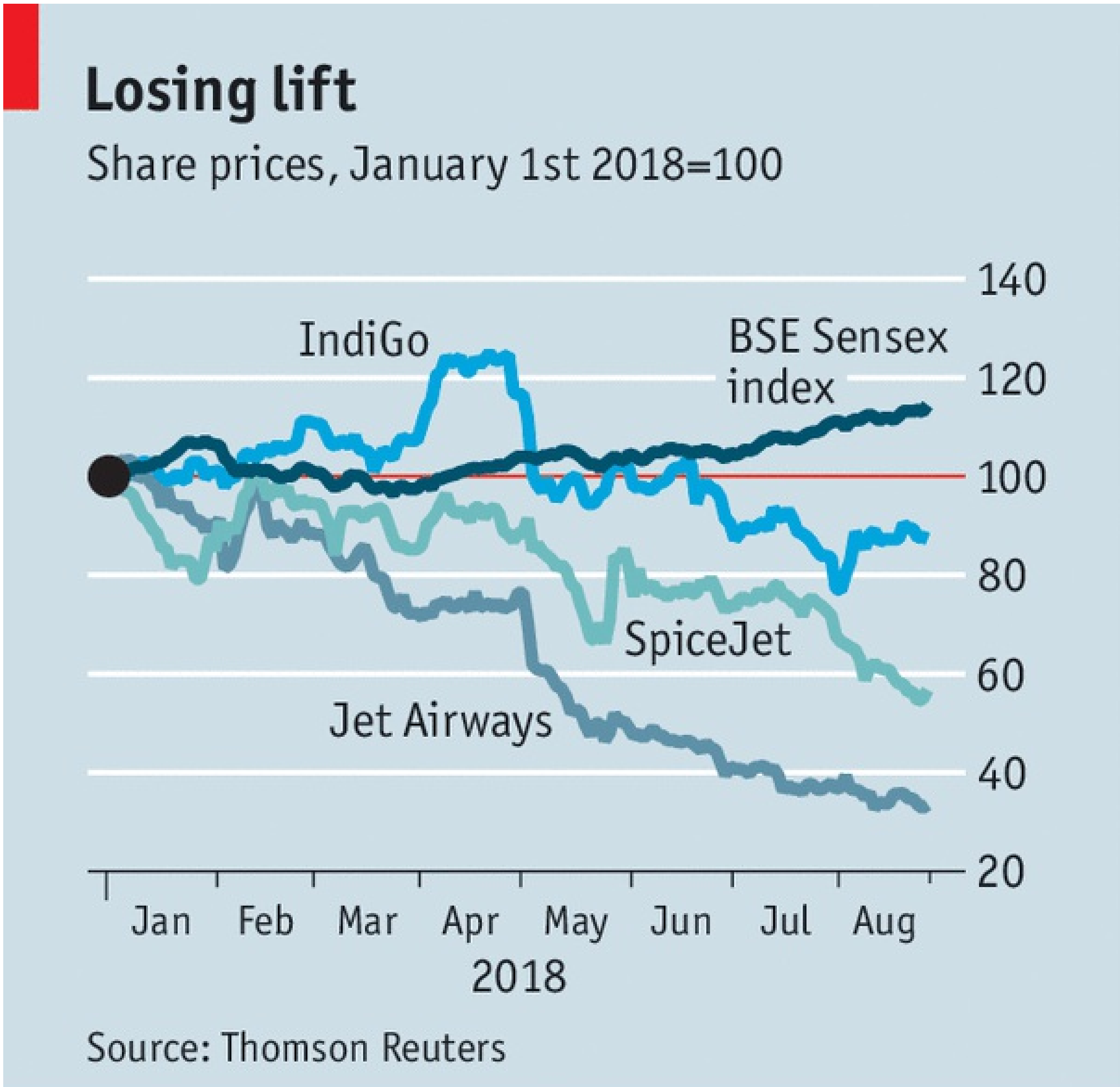
OVER the past few weeks whispered advice has circulated among frequent flyers in India. Do not book any tickets in advance with Jet Airways, the country's second-largest airline; it might not be long for this world. The suspicions had a grain of truth. On August 9th the carrier took the extraordinary step of delaying the planned release of its results for the three months to June. On August 27th it delivered the bad news—it lost $189m in the quarter, compared with a small profit in the same period of last year. It wants to raise capital to avoid running out of cash.

Jet Air is not the only Indian carrier to stall this summer. Airlines stocks have fallen even as Indian shares have performed decently overall (see chart). On August 14th SpiceJet, India's fourth-largest carrier, announced a surprise loss of $5m in the second quarter. A month earlier IndiGo, India's largest airline, posted a 97% year-on-year decline in net profits for the same period. And in

June the government abandoned its planned privatisation of Air India, the flag carrier which has lost money for a decade and is saddled with $7.8bn in debt, after it attracted no bidders.

At first glance, the Indian aviation market should be booming. Domestic “revenue passenger kilometres”, a measure of bums on seats, grew by 18% in the year to June. IATA, a trade body, forecasts that by 2025 India will be the world’s third-largest aviation market. What has crippled airline profits this year are rising costs and flat fares, explains Rahul Kapoor of Bloomberg Intelligence, a research firm.

The price of jet fuel has surged in tandem with that of oil (up from $26 a barrel in 2016 to over $70). IndiGo’s fuel bill rose by 54.4% in the three months to June, compared with last year. Making matters worse, since January the dollar, the currency in which fuel is priced, has strengthened by a tenth against the rupee, the currency in which ticket revenues are booked.



The Economist

Despite higher oil prices, IATA expects airlines globally to make $33.8bn in profit this year. Many carriers hedge against swings in fuel prices and exchange rates to ensure sudden spikes do not bankrupt them, says Mark Martin, an aviation consultant based in Dubai. But airlines in India did not do this. Poor corporate governance is likely to be responsible.

In another departure from industry norms, Indian airlines have not been able to pass those higher fuel costs on to flyers by raising fares. Indian travellers are "the world's most price-sensitive", says Mr Kapoor. If fares rise, they take the train instead—or stay at home. Whereas low-cost Western carriers, such as Ryanair and Southwest, recoup what they lose on discounted fares with offsetting fees for checked-in luggage and extra legroom, Indian passengers simply forgo the extras.

The Indian government does not help airline profits either, says Robert Mann, a former airline executive. India has Asia's highest aviation-fuel taxes. Airlines are forced to fly some loss-making regional routes to gain access to the best airport slots in Delhi and Mumbai.

But the industry's underlying problem is overcapacity. State subsidies for Air India mean some routes are flooded with too many seats. The larger issue is a race for market share in what will become one of the world's biggest markets for air travel. This problem looks poised to get worse before it gets better. Qatar Airways has plans to start a new full-service carrier in India with over 100 new jets. GoAir and Vistara, two fast-growing Indian carriers, plan to launch their first international flights in October. The lure is tomorrow's profits. The upshot is losses today.

Atlantia after Genoa

A disaster leaves a European infrastructure giant on edge

The scale and complexity of its concession contracts may save Atlantia from further damage

Aug 30th 2018 | GENOA

PROSECUTORS are still investigating what caused Genoa's Morandi bridge to collapse on August 14th, killing 43 people. Autostrade per l'Italia, the company which manages the bridge—as well as half of Italy's toll roads—has until early September to prove that it had performed proper maintenance. If it misses the deadline, it could lose all its road concessions in the country.

The disaster has left Atlantia—the holding company which owns Autostrade—in a precarious position. Its share price is down by 27% since the collapse. The loss of the Italian concessions would clobber its bottom line. In the first half of 2018 Autostrade accounted for almost two-thirds of Atlantia's profits of €1.7bn ($2.1bn).

The state sold Autostrade in 1999, to an entity that later became Atlantia, at a time when Italy was intent on reducing its public debt, a condition for entering the euro zone. In the years since, Atlantia's shares have greatly outperformed Italy's sleepy stockmarket. Healthy returns allowed the company to snap up airports in Italy and France; toll roads in Latin America, Poland and India; and a 15.5% stake in the Eurotunnel. In March it agreed to buy Abertis, a Spanish rival, in a deal that would create the world's biggest toll-road operator.

But Italian motorways remain central to Atlantia's fortunes. Once the Abertis acquisition is complete—the Genoa disaster has not yet derailed the deal—Italian assets will still contribute one-third of the group's profits, according to Standard & Poor's, a credit-rating agency. Were it stripped of those concessions, Autostrade could become a brake on Atlantia's earnings, not a motor.

Autostrade says it will prove that it had fulfilled its maintenance duties before the deadline. Even if it does, the pressure on it will not abate. Luigi Di Maio, the deputy prime minister and leader of the populist Five Star Movement, has said the bridge should be rebuilt by a state-run company. He also wants Autostrade renationalised.

A return to state ownership is only a remote possibility; Mr Di Maio's coalition partners from the right-wing Northern League are unconvinced. Taking away its concession is also easier said than done. Analysts reckon that if it were revoked, Autostrade could be entitled to around €10bn-15bn. Generous contracts entitle it to compensation equal to value of the deal, which expires in 2042, minus penalties of up to 10%—even if Autostrade is deemed to have shirked its obligations. Such a payout would be difficult to pull off politically and, given Italy's towering public debt, financially. The scale and complexity of Autostrade's concession—its entire network is covered by a single agreement—makes it hard to unravel, too.

It helps that, after a bungled initial response to the disaster, in which it indelicately asserted its right to compensation if its concession were revoked, Autostrade has sounded more contrite. Other bits of the government seem to have different goals to Mr Di Maio; Giuseppe Conte, the prime minister, wants four or five times the €500m Autostrade has committed to help victims' families, rehouse the displaced and build a new bridge. Autostrade will pay a heavy price for the disaster, but it may yet keep its business intact.

Passive, aggressive

Asset managers get involved in the companies they own

Index-tracking funds take a more hands-on approach to corporate governance

Aug 30th 2018 | BOSTON

EXECUTIVES have grown used to being nagged about their company's strategy and governance by all and sundry. Activist hedge funds targeted 524 companies worldwide between January and June, compared with 570 in the whole of 2013 and 805 in 2017, according to Activist Insight, a research firm. Last year two big index-makers, S&P Dow Jones and FTSE Russell, excluded firms with multiple share classes from their flagship indices. On August 22nd Glass Lewis, a firm of "proxy advisers" which advises shareholders on how to vote, gainsaid the management of Sports Direct by urging the British retailer's owners to evict its founder, Mike Ashley, from the board. Now hitherto quiescent big asset managers are sticking their oars in as well.

Institutional investors, which own the largest stakes in most listed firms, have conventionally deferred to proxy advisers in matters of corporate governance.

A positive recommendation from Glass Lewis or Institutional Shareholder Services (ISS), the two giants of the shareholder-advice industry, can raise the vote in favour of a motion on board appointments, executive pay and the like by up to 20 percentage points, according to a recent analysis by academics at Stanford University.

But big funds do not always blindly follow proxy advisers' suggestions. BlackRock, the world's biggest fund manager, overseeing more than $6trn of assets, is putting more emphasis on "stewardship": active engagement with firms it co-owns (and, in the case of index-tracking funds, from which it cannot divest). It employs only 35 people to liaise with firms' management and decide how its passive funds should vote, but that number is likely to double in the next three years. State Street Global Advisors, another big asset manager, boasts that last year it managed to shame a number of companies without a woman on their boards to hire some.

As well as their separate efforts to become more involved in the companies they own, asset managers are also banding together. Focusing Capital on the Long Term, an organisation founded in 2016, wants to reduce short-termism in investment, for instance by abolishing quarterly guidance. Its members include asset managers and pension funds, as well as companies like Dow Chemical, an American firm, and Tata, an Indian conglomerate. In 2017 a group of 50 investors, among them BlackRock, State Street, Vanguard and Elliott, a prominent activist fund, as well as the state pension funds of states like Illinois and California, launched a stewardship "code" for America, the last big advanced economy to lack one.

Institutional investors in British-listed firms have gone a step further. In 2014 a group of them founded a body called the Investor Forum to allow them to approach specific firms while avoiding legal restrictions on shareholders acting "in concert". Its 40 members include British fund-management firms such as Legal & General and Schroders, and foreign giants like Capital Group and GIC, a Singaporean sovereign-wealth fund.

Since 2015 the Forum has looked at 34 problem cases and spoken directly with the board in 22 of them. It intervened at Rio Tinto when the miner was picking a new chairman, and at BT, a telecoms firm, about poor capital allocation.When TCI, a strident hedge fund, alleged that the chief executive of the London Stock Exchange had been ousted against his will, the Forum helped investors obtain the information they needed to decide whether to support the board’s position.

The Forum does not forbid members from acting independently. Rather, explains Andy Griffiths, its head, it serves as an “escalation mechanism” when firms ignore individual investors or exhibit problems that worry many shareholders. Executives can expect to receive more such earfuls from investors, whether they are acting solo or in a chorus.

Beyond repair?

BMW’s reputation in South Korea goes up in flames

Mysterious fires risk damaging the marque’s prospects for years

Sep 1st 2018 | SEOUL

DRIVING a plush BMW is an emblem of status among brand-conscious South Koreans. Lately, it has become a source of angst. After 40 of the German carmaker’s diesel models mysteriously burst into flames, car parks have turned them away, forcing desperate motorists to park illegally in the street. “BMW phobia” is trending on social media. Since it owned up to the defect in July, the company has recalled 106,000 vehicles in the country. In August the government banned several models from the roads. On August 30th the police raided BMW’s offices in Seoul, the capital.

South Korea is not the only country where BMW has had to recall the vehicles, which were built between 2011 and 2016, for having a faulty exhaust. In Europe it is replacing the defective part in more than 300,000 cars. Inexplicably, however, only cars in South Korea have caught fire. That goes some way to explaining why fury there has been fiercer, and the government response tougher, than elsewhere. But the episode also illustrates the willingness of the authorities in Seoul to impose harsh penalties on businesses it deems irresponsible.

In most places, when flaws are discovered in products, the authorities impose temporary restrictions on their sale, fine the manufacturers, and let life go on. Not in South Korea. When most countries levied penalties on Volkswagen after the German carmaker was discovered in 2015 to be cheating in emissions tests, Korea banned sales of many VW marques, including Audi, its highly profitable premium brand. The bans were lifted late last year, but sales will probably take some time to recover.

BMW's contrition, and its assurances to owners of defective vehicles that they can count on all necessary assistance, have not doused the indignation. On August 28th Kim Hyo-joon, the head of BMW Korea, was hauled before parliament. Many Koreans suspect there may be additional problems with cars sold in the country (the firm denies this, and any other wrongdoing).

As the Audi precedent shows, a fiasco can dent a marque's prospects for years. Politicians are already murmuring about a ban not just on driving Beemers, but on sales, too. That would be a blow to BMW, which, like other luxury carmakers, covets well-heeled Korean consumers. The fires have not injured anyone or caused any physical damage (other than to the cars themselves). But BMW's reputation needs some new bodywork.

Schumpeter

Disputes over goodwill can seem arcane

Their outcome matters

Brett Ryder

Aug 30th 2018

WHEN it comes to concepts with inappropriate names, goodwill is near the top of the list. Instead of benevolence and big-heartedness, it provokes irritation and theological feuds among financial types. Goodwill is an intangible asset that sits on firms' balance-sheets and represents the difference between the price they paid to buy another firm and their target's original book value. If you think that sounds too abstract to care about, the numbers are huge. Total goodwill for all listed firms worldwide is $8trn, according to Bloomberg. That compares to $14trn of physical assets. Dry? Yes. Irrelevant? Far from it.

Controversy has boiled ever since takeovers took off in the 1980s. Today, the treatment of goodwill matters for almost all companies. Take the top 500 European and top 500 American firms by market value. Some 50% have a third or more of their book equity tied up in goodwill. The biggest goodwill carriers are the deal-junkies: AT&T ($143bn), Anheuser-Busch InBev ($137bn), General Electric ($82bn) and Berkshire Hathaway ($81bn). Apple is a rarity: it has little goodwill because it has eschewed big deals.

So it is of some consequence that on August 29th the International Accounting Standards Board (IASB), which frames the rules in most countries apart from America, said that as part of an ongoing review it would consider a shake-up. The existing rules are almost identical in America and Europe—when an acquirer buys a firm, it books the goodwill on its balance-sheet. It then periodically reviews this sum in an impairment test. Has the acquisition flubbed its market-share targets or got flabby? If so the goodwill is adjusted down by the firm, overseen by its auditors (it can only very rarely be adjusted up). The revised value is based on new forecasts of the expected cashflows. The write-off appears as a loss on the buyer's income statement and life goes on.

Just as the stock of goodwill sitting on balance-sheets has become vast, so have the write-downs. For the top 500 European and top 500 American firms by market value, cumulative goodwill write-offs over the past ten years amount to $690bn. There is a clear pattern of bosses blowing the bank at the top of the business cycle and then admitting their sins later, splattering their income statements in red. Vodafone has written off $52bn of goodwill in the past decade, a similar sum to its current market value.

The present system for tracking all this has two disadvantages. First, measurement. When assets like factories or software are booked on balance-sheets, the value bears some relationship to a number that can be validated externally. But there is a queasy circularity about goodwill: the more companies bid up the price of acquisitions, the bigger the asset they can book. Meanwhile, the process of impairment is horrendously subjective. Most buyers fold their acquisitions into their existing businesses, making it hard to separate them in order to measure their performance. And there is usually a gap of several years before companies own up to mistakes. Investors have already reacted long before then so the accounts become a lagging indicator, of diminished utility.

The second problem is comparability. Goodwill relates to intangible assets: a firm's culture or strategic presence in a growth market, say. But these are not normally recognised on balance-sheets. Take two identical firms, with the same operations, cashflow, debt, strategy and value. The firm built through past acquisitions would have a bloated asset base. As a result its ratio of debt to assets would look healthier. Its shares would look artificially cheap compared with their book value. And it would have a lower return on equity. Sophisticated investors adjust for this distortion. But retail investors and computers may not. Hans Hoogervorst, the IASB's chairman, has noted that many of the computers behind factor funds, a popular type of statistically driven investing, don't adjust properly for goodwill. It is an alarming insight.

One Utopian answer to the goodwill conundrum would be for all firms to recognise all their intangible assets on their balance-sheets. That would eliminate the comparability problem. It might also please economists who fret that accounts do not capture the economy-wide shift from tangible to intangible assets. This was discussed at the gathering of central bankers at Jackson Hole on August 23rd-25th. But the high-wire game of calculating the market value of entire companies is what the stockmarket does. The goal of accounts is more modest: to measure past performance and provide useful information that helps investors. Allowing firms to constantly estimate their own market value would duplicate the job of investors and also be a dog's breakfast.

A potential fix for the measurement problem, which the IASB is considering, is a return to the practice of writing off a fixed amount of goodwill every year, rather like screws are depreciated over time (this was the approach in America and Europe before the 2000s). But this involves spurious precision: no one has any idea how fast a company depletes its brand per year. And since goodwill is not a cash charge, reported profits would diverge from cashflows. Investors would ignore whatever annual charge the accounts showed. This is how Warren Buffett advised Berkshire Hathaway shareholders to view these costs back in the 1990s.

Impaired judgment

For all its flaws, the status quo is the best available approach. It can be tinkered with sensibly—the IASB is considering asking firms to give more detail about their unrecognised intangible assets. In time this might help develop a coherent methodology for valuing them. But for now the key is for investors to be clear about their objectives. If you are scrutinising a company's history and working out whether it has wasted vast sums on deals, then goodwill and write-downs are highly relevant. But if the objective is to assess a company's prospective ability to service debts or create value for its shareholders, goodwill does not matter much at all and should be ignored. After a long boom and lots of pricey deals, the write-downs are coming. A discerning eye, not an accounting revolution, is what is required to interpret them.

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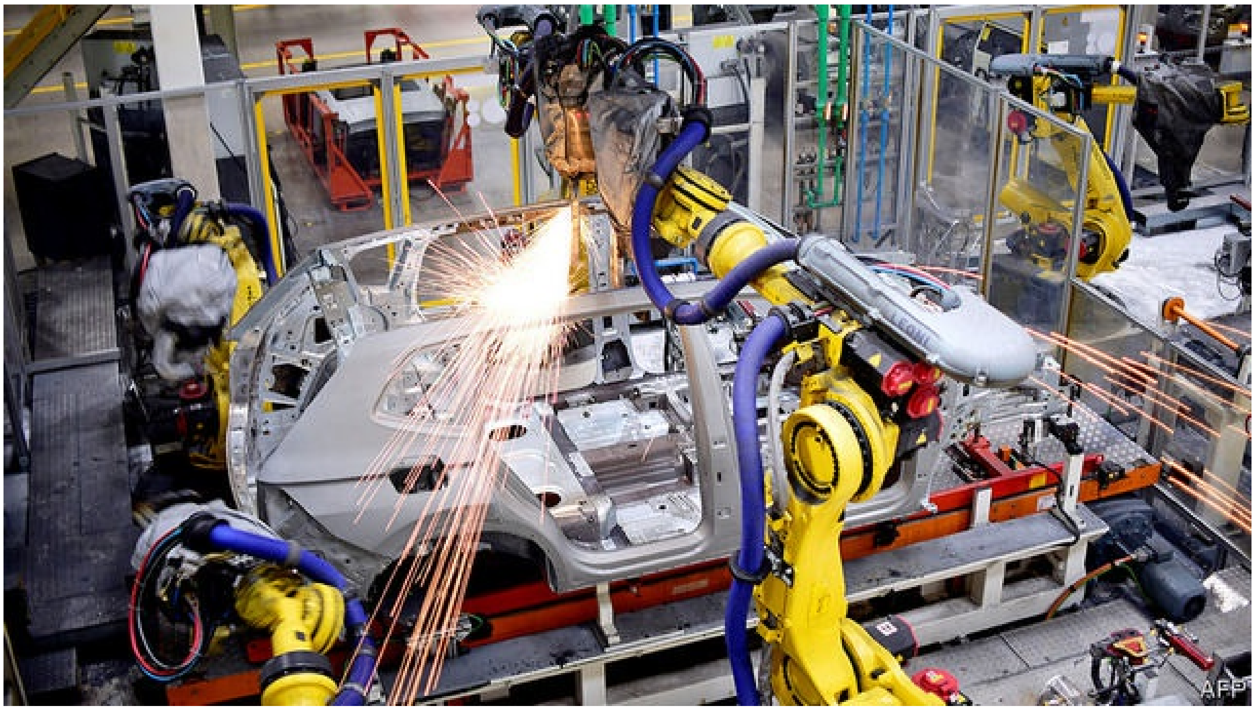
Wheeler dealer

A draft deal clarifies what populist trade policy means in practice

A bilateral breakthrough for America and Mexico, with Canada on the sidelines: can NAFTA negotiators pull it off?



Aug 30th 2018 | WASHINGTON, DC

"IT'S a big day for trade, a big day for our country," boasted President Donald Trump on August 27th. The cause of this jubilation was progress in renegotiating the North American Free Trade Agreement (NAFTA), a deal between America, Mexico and Canada. Enrique Peña Nieto, Mexico's president, confirmed that Mr Trump had managed to secure a bilateral "understanding" with Mexico. According to the White House's spin doctors, Mr Trump had kept his pledge to renegotiate NAFTA and had produced a "mutually beneficial win for North American farmers, ranchers, workers and businesses".

The deadline for publishing a more concrete version of the deal is August 31st, when the American administration plans to notify Congress of Mr Trump's intent to sign. The rush is to enable Mr Peña to sign before

December 1st, when he will be replaced by Andrés Manuel López Obrador, a firebrand leftist. Both men are keen to have the deal wrapped up by then, Mr Peña to make it part of his legacy and Mr López Obrador so he can concentrate on his domestic policy agenda.

As *The Economist* went to press, negotiators were still hard at work. Most significantly, Canada was not yet on board, though its negotiators were sounding optimistic. Mr Trump has said he will go ahead without the Canadians—and apply tariffs on Canadian cars—if they resist his terms. Canada, however, may be emboldened by hostility within America to anything less than a trilateral deal, and by the domestic political payoff from standing up to Mr Trump.

But even if it collapses, this week's tentative deal is significant. It brought into sharper focus the sorts of terms Mr Trump seeks to impose on America's trading partners. A Trumpian trade deal, it appears, involves not only spin (as all trade deals do), but threats (far more than is usual). Compared with other trade agreements of recent years, it is an uneasy blend of sweeteners for the left and for business interests. It increases uncertainty for companies. And it manages markets with a much heavier hand.

Playing to the left, the Trump administration is touting what it says are the "strongest, fully enforceable labour standards of any trade agreement". These will supposedly give teeth to rules that American unions complained were easy to ignore (though how, exactly, remains unclear). Provisions allowing investors to sue foreign governments will be fudged, with some sectors carved out (whether enough to please those fretting about corporate power also remains unclear). Several provisions are intended to please corporate lobbyists, among them protection for ten years for drugs known as biologics and an extension of copyright from 50 years to 75.

Mr Trump had originally said he wanted a sunset clause, with the new NAFTA expiring after five years unless all sides agreed otherwise. He has settled for less. After six years in force NAFTA will be reviewed, and terminated after ten more if all sides cannot agree to continue it. As long as the deal remains in force, further reviews will come every six years. This is supposed to prevent imbalances Mr Trump claims built up over time in the original, to America's detriment, while giving companies notice to rearrange their affairs should a deal be impossible to make.

Automatic transmission

The Trumpian imprint is most visible in new rules of origin for cars, an industry that captured negotiators' attentions in part because of its contribution to America's bilateral trade deficit with Mexico. All trade deals set conditions for products to qualify for preferential treatment. Otherwise European or Japanese parts makers, say, could benefit from deals their governments never negotiated. This rewrite is striking for the extent to which existing conditions have been tightened and new ones introduced.

The Mexicans have agreed to a higher threshold for regional content in cars (up from 62.5% to 75%) and to the removal of loopholes that meant some auto parts were, in effect, exempt. A minimum share of steel and aluminium must be sourced from the region. Most unusually, a minimum share of production must be done by workers earning above $16 an hour.

All this is supposed to sharpen carmakers' incentives to locate production in America. Juan Pablo Castañón, head of the Mexican Business Co-ordinating Council, says that 70% of Mexican car plants comply with the new rules for parts and metal. So the renegotiation could shift employment towards the United States, if carmakers rejig their supply chains in response or ramp up the supply of compliant vehicles there while selling non-compliant ones elsewhere. But they might simply choose instead to import more parts from outside the NAFTA region, and swallow the resulting 2.5% tariff. In any case, consumers will probably have to pay more.

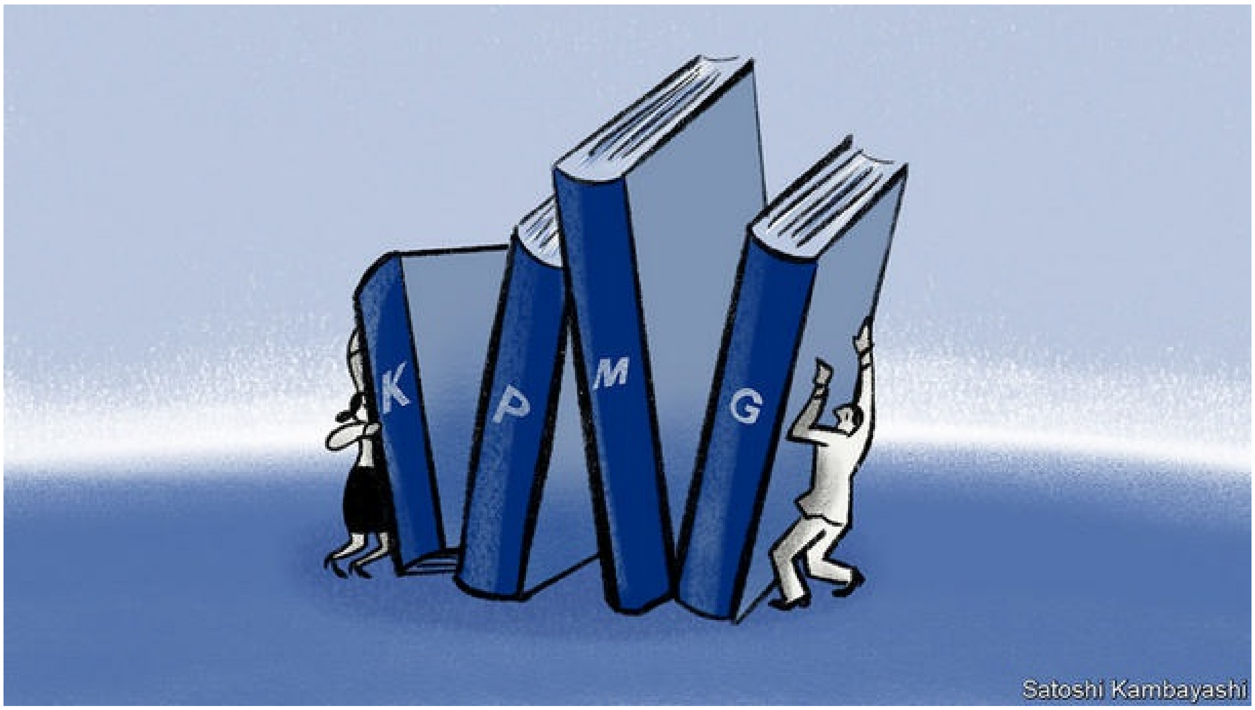
The most distinctive Trumpian feature is the bullying that is being used to impose the new deal. Reports emerged on August 28th of a separate side letter that would exempt some level of Mexican car exports from any new American tariffs imposed in the name of national security. Flavio Volpe, the president of the Canadian Automotive Parts Manufacturers' Association, an industry group, worries about how enforceable any new arrangement would be. Normally, trade agreements are self-reinforcing, with members sticking to them because they generate gains for all concerned. This one is clearly being held together with threats.

Some of these features of the new NAFTA may help sell it to American voters suspicious of conventional trade deals. It may even be better than no NAFTA at all. But the way talks have been conducted, and the gap between the promises made for it and the likely reality, have stored up problems for the future.

In the eye of the storm

KPMG is caught up in scandals but its woes are not existential

The firm has lost clients in South Africa. The fallout elsewhere is limited



Aug 30th 2018

AUDITORS are often accused of being too lenient on the companies they scrutinise. After all, those companies pay the bills. The four that dominate the market—Deloitte, EY, KPMG and PwC—also offer lucrative services like consulting and tax advice. Concerns have long swirled that conflicts of interest risk deterring auditors from challenging dodgy accounting.

Recent controversies have centred on KPMG, the smallest of the Big Four. In Britain lawmakers have criticised it for signing off the accounts of Carillion, a public-sector contractor that later went bust. A regulatory investigation is under way. Last week regulators fined it for misconduct in its audits of Ted Baker, a clothing retailer.

In America three former partners face criminal charges for alleged involvement in the theft of confidential information about the regulator's plans to inspect KPMG audits. In South Africa KPMG is under investigation for its work for companies owned by the Gupta family, which has been accused of corruption. Among the auditor's alleged misdeeds are allowing the costs of a wedding as business expenses. On top of all this, in the United Arab Emirates it has been under scrutiny for its audits of Abraaj, a private-equity firm that filed for liquidation in June. Investors in Abraaj claim that money from some funds was used to plug holes in others, and that KPMG failed to notice.

The scandals have raised questions about KPMG's culture. The partners charged with data theft in America were high-ranking. Eight executives in South Africa stepped down after an internal investigation concluded that they should have severed ties with the Guptas earlier. In Britain the regulator has lamented an "unacceptable deterioration" in the quality of audits. For its part, KPMG says it has made clear to stakeholders that "conduct that violates its code of ethics will be strongly dealt with". Partners found to have fallen short of standards in America and South Africa have been sacked. The firm has acknowledged some failings in South Africa and says it looks forward to co-operating with a regulatory review. It is also taking steps to improve audit quality in Britain.

KPMG's troubles tarnish its main asset—its reputation. A big enough blow could knock it over, disrupting capital markets in turn. According to Audit Analytics, a research firm, KPMG audited 19% of the S&P 500 in 2017 and a quarter of companies in the FTSE 350. If clients fled, other firms would have to absorb that work.

More nasty news is quite possible. The inquiry into KPMG's audit of Carillion is still under way, and the trial against its former partners in America is due to begin only in 2019. But it is in South Africa that KPMG's reputation has been hit hardest. Its links to the Guptas have tapped into public anger at state corruption, says Iraj Abedian of Pan-African Investment & Research Services, a consultancy. The firm has laid off more than 400 staff; some senior partners have jumped ship. It has been banned from auditing public-sector entities; some private-sector clients, including Barclays Africa, a bank, have switched auditor. Mr Abedian reckons that national regulators might even revoke its licence.

But according to Jim Peterson, who was once an in-house lawyer for Arthur Andersen, an accounting firm that went bust in 2002, each of the Big Four has weathered storms similar to those now buffeting KPMG. Critics attribute this resilience to a broken market for auditing services. Large companies may employ several of the Big Four as consultants or advisers. That limits a company's choice if it wants to switch auditor, because regulators generally prevent a single firm from providing many consulting and auditing services simultaneously. Some wonder if the concentrated market, and the potential disruption if a large audit firm were to fail, also leads regulators to go easy. (Regulators maintain that their priority is to ensure that quality stays high.)

At least as important a reason for the auditing trade's resilience is a feature that stops scandals in one market having much impact in others. Rather than being standard multinationals, all the Big Four are networks of local firms that share a brand but are managed separately. That creates firewalls between jurisdictions. Auditing firms can plausibly tell regulators and clients that problems elsewhere are nothing to do with them.

Moreover, clients tend to form relationships with their individual audit partner; news about the firm matters less. Investors generally wave through the selection of auditors (though a significant minority of shareholders of General Electric voted against reappointing KPMG this year).

Accounting networks have survived the closure of local offices before. PwC's affiliate in Japan shut down in 2007. Its Indian affiliate has been banned from auditing clients for two years, starting in March. That has passed largely unremarked elsewhere. Still, Arthur Andersen's fate is salutary. The collapse of Enron and WorldCom, two big clients, led to a series of legal cases against the firm. Clients fled. So did member firms—for fear of exposure to legal damages, says Mr Peterson. Audit firms are resilient, but they are not immortal.

Redefining helpful finance

Rules on bank lending in poor neighbourhoods are being rethought

NEW YORKAmerica's Community Reinvestment Act is sensitive, but still up for revision

Getty Images

Aug 30th 2018 | NEW YORK

THE document is dry, dusted with references to "benchmarks", "performance evaluation" and "a metric-based framework". But the 25 pages published on August 28th by the Office of the Comptroller of the Currency (OCC), one of America's federal bank regulators, may start a protracted dispute over lenders' obligations to poor neighbourhoods and hence to racial minorities.

The OCC is inviting responses to 31 questions about putative changes to the rules implementing the Community Reinvestment Act (CRA), which was passed in 1977 with the best of intentions: maintaining lending and bank branches in America's poorest areas; and combating "redlining", the denial of loans to people in certain districts as a disguised means of racial discrimination. The CRA obliges regulators to assess not only banks' financial soundness but also their lending to poor customers and small businesses, and their commitment to "community development" in the areas where they operate. The results can determine whether banks are allowed to merge, or to open or move branches.

The rules have changed several times in the past 40 years (eg, to reflect the legalisation of interstate banking in the 1980s). The OCC's paper is part of a broader review of bank regulation begun last year by the treasury secretary, Steven Mnuchin, at the behest of President Donald Trump—who sympathises with pleas from banks, especially small ones, that red tape is restricting lending. Mr Mnuchin published his own assessment of the CRA in April, in a memo to the three regulators that implement it: the OCC, the Federal Reserve and the Federal Deposit Insurance Corporation (FDIC).

Banks have long grumbled that the CRA's rules are unclear and inconsistently applied, and that inspections are costly and time-consuming. Much less loudly, they also complain that the CRA has been a sort of shakedown, in which they must satisfy political needs rather than meet well-defined regulatory standards. The act's defenders insist that it is an essential bulwark against redlining and other restrictive practices.

Both the Treasury and the OCC argue that new rules would boost lending to needy areas rather than choke it. Whether or not that is true, there are good technical reasons for an overhaul. In its memo the Treasury noted, for example, that there is no formal process to help banks decide whether a loan will meet the act's requirements; and that the terms used to assess banks' performance ("excellent", "substantial") are undefined. Banks are assessed on lending within areas based on the siting of their head offices, branches and deposit-taking automated teller machines. Mobile technology makes this look out of date.

The OCC's paper is studiously formal. It invites comments on the current rules, asks whether more quantitative assessments are needed and so forth. The result may well be a new system that relies more heavily on objective data. That may sound technocratic and benign, but it will cause political ructions. And the Fed and the FDIC will doubtless also want their say. Change is on the way for the CRA. Despite the technocratic tone, it will not happen quietly.

Go Fund Me

Markets bash Argentina's and Turkey's currencies again

Another torrid week for the peso and lira

Sep 1st 2018

THE first YouTube video, posted in 2005, showed the site's 25-year-old co-founder standing in front of elephants at the San Diego zoo. One of its most recent videos is a little different: it shows Argentina's president, Mauricio Macri, explaining why he needs the IMF to stand in front of the bears destroying his country's currency.

The peso fell by more than 7% on August 29th, capping another difficult month. Its fall will make it harder for the central bank to meet next year's inflation target, further undermining the institution's credibility and the currency's appeal. Argentina must also roll over or replace about $50bn of debt falling due over the remainder of 2018 and 2019. The financial markets worry that the government will struggle to secure both refinancing and re-election, since the sky-high interest rates required to attract creditors may further repel voters in the October 2019 elections.

On YouTube, Mr Macri asked the IMF to speed up disbursement of the $50bn loan it had agreed to in June. Argentina received $15bn upfront. The remainder, which it had hoped not to need, is scheduled to arrive in 12 equal quarterly instalments, provided Argentina meets the fund's conditions. In a statement, Christine Lagarde, the IMF's managing director, said the fund would "re-examine the phasing" of the loan.

Mr Macri admitted that the market had expressed a lack of confidence in his government's finances. In Turkey, by contrast, the president, Recep Tayyip Erdogan, has often expressed a lack of confidence in markets. He sees the sell-off in the Turkish lira as a weapon in an economic war waged by America, which has imposed sanctions on two Turkish ministers and two of its exports (steel and aluminium) because of the detention of an American pastor, Andrew Brunson.

The Economist

Like Argentina, Turkey suffers from stubborn inflation, a wide current-account deficit and heavy foreign-currency debts, although Turkey's liabilities are mostly the result of corporate, not government, overborrowing. On Tuesday Moody's, a rating agency, downgraded 18 Turkish banks and two finance firms, which could face problems rolling over foreign-currency loans. Berat Albayrak, Turkey's finance minister and the president's son-in-law, denied that the economy faced a big risk, because government and household debt remain relatively low. The lira slid further afterwards.

Since April, Argentina and Turkey have responded quite differently to their currency crises. Argentina has hiked interest rates aggressively and asked the IMF for help promptly. Turkey, by contrast, has tightened monetary policy belatedly and often indirectly. And it has appealed for financial assistance to allies like Qatar, rather than the IMF, not least because the fund's help might first require a thawing of relations with America. But despite their differences, these two emerging-market responses share a common feature: so far, neither seems to be working.

The river between

Informal trade is ubiquitous in Africa, but too often ignored

BUSIAHow border towns—and national economies—are shaped by small retailers slipping between countries

Aug 30th 2018 | BUSIA

“THE border is like a river,” says Ronald Sembatya, “where somebody can come to get fish.” He is resting beside his wheelchair in the muddy no-man’s land between Uganda and Kenya. His disability makes it hard to find work elsewhere. But here he earns his “fish” by shuttling goods across the border, slotting a bag of flour or carton of eggs beneath the seat of his chair. Scores of other wheelchair-users trundle back and forth, their loads rarely inspected by officials. The local police commander says he has orders not to touch them. Stop a wheelchair, sighs a customs officer, and “people will lynch you”.

Informal trade is ubiquitous in Africa, but often, like Mr Sembatya’s wheelchair, tactfully ignored. He passes on a potholed track a few hundred metres from the main border post at Busia, a town straddling the frontier.

Kenyan women tramp through the same puddles to buy cheap Ugandan tomatoes. Some traders deal in charcoal; other hoist sacks of maize onto bicycles, slipping truckloads across one bag at a time. Such trade shapes border communities. It also shapes national economies.

The prevalence of cross-border business challenges the idea that African countries, warped by colonialism, trade little with each other. True, four-fifths of official exports go to other continents. But statisticians in Uganda reckon that the country's informal exports were worth $419m in 2016, equivalent to 17% of recorded trade. Perhaps 30-40% of trade in southern Africa is informal. In Benin, informal transit trade to Nigeria may account for a fifth of GDP.

Some informal traders run unregistered businesses, but pass through official border posts. Others dodge customs, but sell their goods into formal markets. In Nigeria cars and rice are smuggled by criminal syndicates. But many of Africa's informal traders operate on a tiny scale, carrying a bundle of second-hand clothes or a basket of vegetables to market. Most of these small traders are women.

They follow trade routes established long before Europeans drew lines on maps. One study finds that grain prices differ across much of the Nigeria-Niger border, as they do at frontiers the world over, but that the difference shrinks where the same ethnic group lives on both sides. Even today, only a third of African borders are marked on the ground. Livestock herders in the Horn of Africa may be hundreds of miles from any border post; most of the cattle driven from Ethiopia to Sudan probably use unofficial crossings.

Traders also exploit opportunities for arbitrage. In the season of 2017-18 perhaps 100,000 tonnes of cocoa were smuggled from Ivory Coast into neighbouring Ghana, where farmers were paid more for the crop. And protectionism diverts trade from official channels. A recent study in Benin by the Centre d'Etudes Prospectives et d'Informations Internationales, a French think-tank, finds that raising tariffs by 10% makes it 12% likelier that a product is imported informally.

But informality cannot be reduced to smuggling. Many of the goods crossing at Busia are local farm produce, which can generally move duty-free within the East African Community. Even so, traders often prefer to use the unofficial *panya* ("rat") routes. It is faster, say some. Others distrust the state. "If they just see this building, they fear," says Margaret Katambi, a second-hand clothes trader, sitting near the imposing border post.

Using the *panya* routes is risky. If you meet a policeman he may demand bribes or confiscate goods, says Mariam Babu, who chairs an association of women traders. Sometimes a man might pose as a police officer, she says: "He can tell you, 'Give me sex and I'll give you back your goods.'" Things are particularly bad in the eastern Democratic Republic of Congo, where half of the traders surveyed by the World Bank in 2010 said they had experienced violence, threats or sexual harassment. In such lawless borderlands the lines between tax and extortion, and enforcement and assault, are all too frequently crossed.

In Busia the situation is improving, says Ms Babu. More than 1,200 women are members of her association, which regularly meets customs officials and police. Special customs procedures for goods worth less than $2,000 let traders obtain a simplified certificate of origin. A Kenyan startup called Sauti helps traders check prices, tariffs and exchange rates on their mobile phones.

The challenge is to manage smuggling while leaving space for small traders. Informal trade can empower women, reduce poverty and improve food security, says Francis Mangeni of the Common Market for Eastern and Southern Africa, a 21-country bloc. Governments are slowly coming round to that view. "These borders were imposed on us," says Dicksons Kateshumbwa, Uganda's top customs official. "So the worst thing you can do is say, 'I am putting up a wall'."

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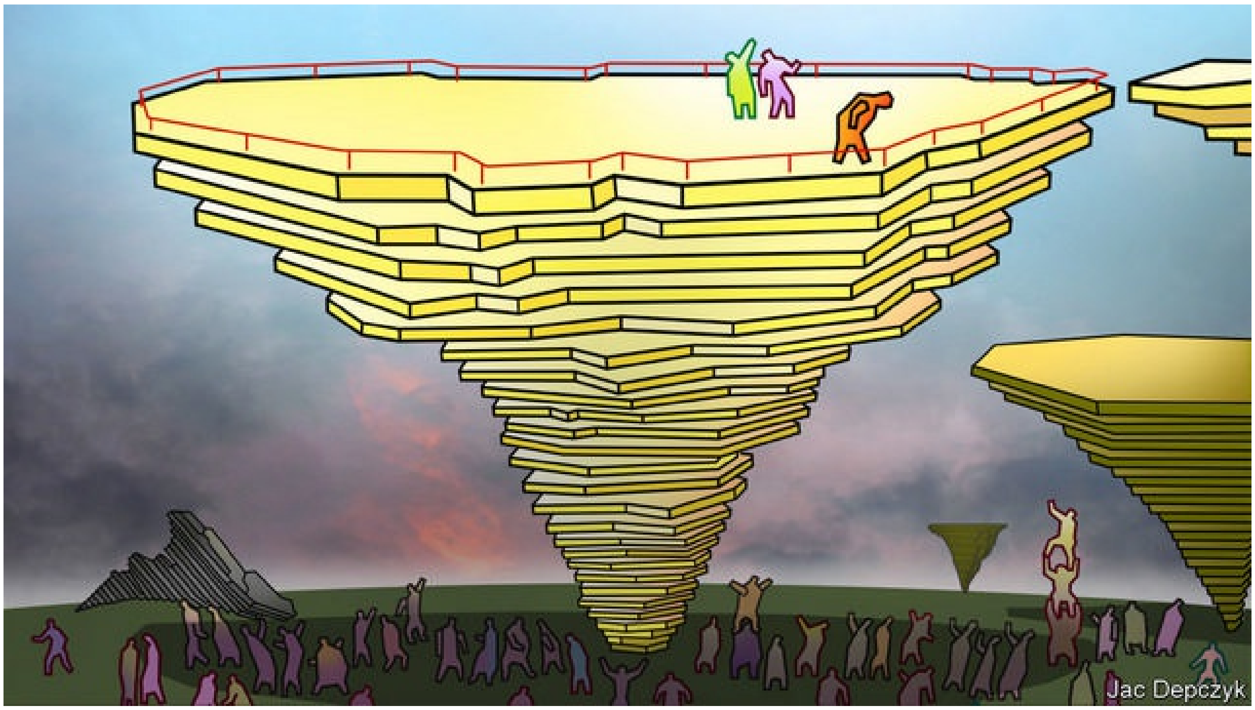
Free exchange

Central bankers grapple with the changing nature of competition

This year’s Jackson Hole meeting was a chance to study market concentration



Aug 30th 2018

RECENT visitors to Jackson Hole, a resort in the Teton Mountain range in Wyoming, were denied the usual scenic views by a shroud of smoke from recent forest fires. Disappointing, no doubt, for the tourists among them—but oddly fitting for the economic panjandrums attending the Federal Reserve Bank of Kansas City’s annual symposium on August 23rd-25th. Not only are economic policymakers used to making choices in a fog of uncertainty, but this year’s theme of market structures generated its own haze. Though the nature of competition in America’s economy is changing, it is unclear how worried they should be.

Jerome Powell, the chairman of the Federal Reserve, highlighted slow wage growth in recent decades. America seems stuck in a “low-productivity mode”, he said. Others pointed to sluggish investment, despite cheap capital, and a fall in workers' share of national income. Could these ills share some common causes, namely rising market concentration and crimped competition?

As evidence, Alan Krueger of Princeton University pointed to nominal wage growth that is 1-1.5 percentage points lower than would normally be expected with inflation and unemployment as low as they are now. He laid some blame on employers' growing power, as no-poaching agreements and non-compete restrictions proliferate, on sickly union membership and on the falling real value of the federal minimum wage.

Antoinette Schoar of the Massachusetts Institute of Technology (MIT) remarked that a banking shakeup by fintech upstarts, long predicted, has not fully materialised. Rather than turning new firms into viable competitors, venture capital seems to have nurtured them only for incumbents to gobble them up. As markets have become more concentrated, observed John van Reenen, also of MIT, the gap in productivity between the biggest and smallest companies has widened. If something is stopping substandard firms from closing the gap, that could be sapping the economy's dynamism.

These concerns fit into a dark story, of an economy weakened by behemoths abusing their market power. But there is a competing narrative. Consider the Jackson Hole conference itself, stuffed with star academics and policymakers. Is it an incumbent monopolist, resting on its reputation as the year's hottest macroeconomic event? Or is it a shining example of the power of network effects, convening great minds to produce ideas jointly that surpass anything they could dream up separately?

Rising market concentration, Mr van Reenen pointed out, might reflect not a decline in competition, but a change in its nature. Platforms such as Google, Uber and Airbnb match buyers and sellers, and thus make outsize gains as they grow. In such winner-takes-most competition, a slight advantage can tip the entire market in a company's favour. Mr van Reenen finds that America's rising economic concentration is mostly caused by big, productive companies gaining market share. Far from growing complacent and fat, they seem impressively muscular.

Other observations chimed with this narrative. Alberto Carvallo of Harvard

University showed that the prices of goods sold in brick-and-mortar shops vary less by location and are updated more often if they are also sold by online rivals. Prices of shops' products were much more likely to reflect changes in exchange rates if the same items were sold on Amazon. Such cost-sensitivity is hard to square with the idea that competition is lacking.

The differences between these rival narratives matter for economic policymakers. In one version nefarious market forces are constricting productivity, holding down investment and wages. If so, that would make the trade-off between inflation and unemployment harder to manage. In the other, restrained investment and wages are signs of structural changes that boost productive potential—in which case, there would be fewer ill-effects from running the economy hot.

Two economists, three opinions

Unsurprisingly, given the number of economists assembled, the only point of agreement was on the need for more evidence. Part of the difficulty is that the two narratives are not as distinct as they appear. As Janice Eberly and Nicolas Crouzet of Northwestern University pointed out, the same forces could be creating both competition-harming barriers to entry and rising productivity associated with economies of scale. They find a correlation between a company's market share and its investment in patents, algorithms and other intangible capital.

Moreover, the impact on competition seems to vary by industry. In retail and manufacturing, although concentration and intangible investment have risen, the researchers' measure of price markups has stayed low. By contrast, in the high-tech and health-care industries, they find an association between intangible investments and markups. Even as sophisticated logistical algorithms sharpen the battle between the likes of Amazon and Walmart in retailing, in other words, a proliferation of patented devices and databases full of customer insights could be enabling market leaders in pharmaceuticals and finance to shut rivals out.

Raghuram Rajan of the University of Chicago offered another reason to wait before declaring increased economic concentration either good or bad for the economy overall. Even if superstar companies are passing efficiency gains on to consumers now, they may not keep doing so indefinitely. If they continue to be boosted by the trends behind economic concentration, from stellar returns to amassing troves of customer data and the increasing sophistication of proprietary software, their pricing forbearance may not last. Once their dominance is secure, they could turn predatory, milking consumers and squeezing innovative potential from the broader business environment. The economy has changed a lot in recent years—and there is no reason why it cannot keep changing.

Briefing

- **Berlin, Rawls and Nozick: Rawls rules** [Thu, 30 Aug 21:30]
  Three post-war liberals strove to establish the meaning of freedom. Berlin, Rawls and Nozick put their faith in the sanctity of the individual.

Rawls rules

Three post-war liberals strove to establish the meaning of freedom

Berlin, Rawls and Nozick put their faith in the sanctity of the individual

Aug 30th 2018

ONE definition of a liberal is a person who supports individual rights and opposes arbitrary power. But that does not tell you which rights matter. For example, some campaigners say they want to unshackle transgender people, women and minorities from social norms, hierarchies and language that they see as tyrannical. Their opponents say that this means limiting what individuals do and say, for instance by censoring frank discussions of gender, or forbidding the emulation of minority cultures. Supporters of these kinds of "identity politics" claim to be standing up for rights against unjust power. But their opponents do, too. If both claim to be "liberal", does the word mean much at all?

The problem is not new. Isaiah Berlin identified the crucial fault line in liberal thought in Oxford in 1958. There are supporters of "negative" liberty, best defined as freedom not to be interfered with. Negative liberties ensure that no person can seize his neighbour's property by force or that there are no legal restrictions on speech. Then there are backers of "positive" liberty, which empowers individuals to pursue fulfilling, autonomous lives—even when doing so requires interference. Positive liberty might arise when the state educates its citizens. It might even lead the government to ban harmful products, such as usurious loans (for what truly free individual would choose them?).

Berlin spied in positive liberty an intellectual sleight of hand which could be exploited for harm. Born in Riga in 1909, he had lived in Russia during the revolutions of 1917, which gave him a "permanent horror of violence". In 1920 his family returned to Latvia, and later, after suffering anti-Semitism, went to Britain. As his glittering academic career progressed, Europe was ravaged by Nazism and communism.

Under positive liberty the state is justified in helping people overcome their internal, mental vices. That lets government decide what people really want, regardless of what they say. It can then force this on them in the name of freedom. Fascists and communists usually claim to have found a greater truth, an answer to all ethical questions, which reveals itself to those who are sufficiently adept. Who, then, needs individual choice? The risk of a perversion of liberty is especially great, Berlin argued, if the revealed truth belongs to a group identity, like a class or religion or race.

To reject positive liberty is not to reject all government, but to acknowledge that trade-offs exist between desirable things. What, for example, of the argument that redistributing money to the poor in effect increases their freedom to act? Liberty must not be confused with "the conditions of its exercise", Berlin replied. "Liberty is liberty, not equality or fairness or justice or culture, or human happiness or a quiet conscience." Goals are many and contradictory and no government can infallibly pick among them. That is why people must be free to make their own choices about what constitutes good living.

Yet determining the proper sphere of that freedom has been the great challenge all along. One lodestar is the harm principle. Governments should interfere with choices only to prevent harm to others. But this is hardly a sufficient rule with which to exercise power, because there are plenty of harms that liberals typically do permit. An entrepreneur might harm an incumbent businessman by bankrupting him, for example. The most significant attempt of the 20th century to find a stronger boundary between the state and the individual was made by the Harvard philosopher John Rawls in 1971.

Rawls's "A Theory of Justice" sold over half a million copies, reinvigorated political philosophy and anchored debates between liberals for decades to follow. It posited a thought experiment: the veil of ignorance. Behind the veil, people do not know their talents, class, gender, or even which generation in history they belong to. By thinking about what people would agree to behind the veil, Rawls thought, it is possible to ascertain what is just.

To begin with, Rawls argued, they would enshrine the most extensive scheme of inalienable "basic liberties" that could be offered on equal terms to all. Basic liberties are those rights that are essential for humans to exercise their unique power of moral reasoning. Much as Berlin thought the power to choose between conflicting ideals was fundamental to human existence, so Rawls argued that the capacity to reason gives humanity its worth. Basic liberties thus include those of thought, association and occupation, plus a limited right to hold personal property.

But extensive property rights, allowing unlimited accumulation of wealth, do not feature. Instead, Rawls thought the veil of ignorance yields two principles to regulate markets. First, there must be equality of opportunity for positions of status and wealth. Second, inequalities can be permitted only if they benefit the least well-off—a rule dubbed the "difference principle". Wealth, if it is to be generated, must trickle all the way down. Only such a rule, Rawls thought, could maintain society as a co-operative venture between willing participants. Even the poorest would know that they were being helped, not hindered, by the success of others. "In justice as fairness"—Rawls's name for his philosophy— "men agree to share one another's fate."

Rawls attributed his book's success with the public to how it chimed with the political and academic culture, including the civil-rights movement and opposition to the Vietnam war. It demonstrated that left-wing liberalism was not dreamed up by hippies in a cloud of marijuana smoke, but could be rooted in serious philosophy. Today, the veil of ignorance is commonly used to argue for more redistribution.

Ironically, since 1971 the rich world has mostly gone in the opposite direction. Having already built welfare states, governments deregulated markets. Tax rates for the highest earners have fallen, welfare benefits have been squeezed and inequality has risen. True, the poorest may have benefited from the associated growth. But the reformers of the 1980s, most notably Margaret Thatcher and Ronald Reagan, were no Rawlsians. They would have found more inspiration in Rawls's Harvard contemporary: Robert Nozick.

Nozick's book "Anarchy, State and Utopia", published in 1974, was an assault on Rawls's idea of redistributive justice. Whereas Rawls's liberalism relegates property rights, Nozick's elevates them. Other forms of liberty, he argued, are excuses for the immoral coercion of individuals. People own their talents. They cannot be compelled to share their fruits.

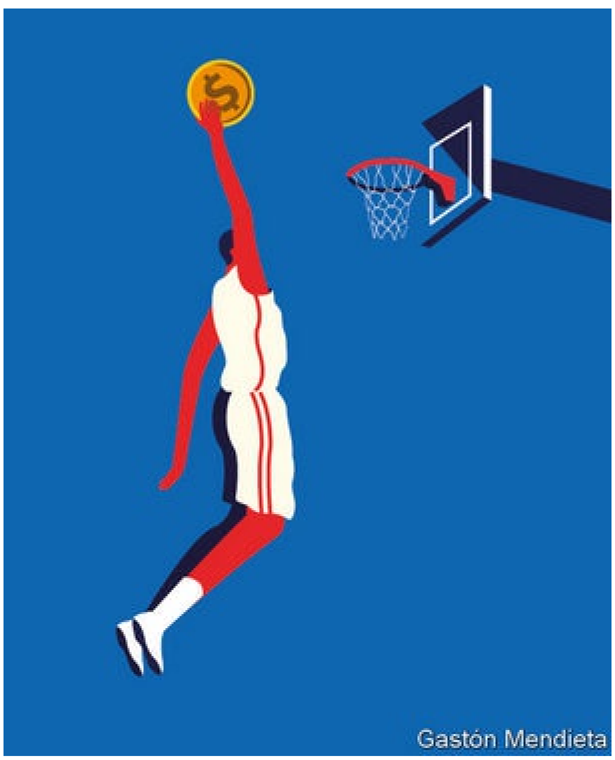
Nozick questioned whether distributive justice is even coherent. Imagine some distribution of wealth that is deemed to be just. Next suppose that a large number of people each pay 25 cents to watch Wilt Chamberlain, then the top player in the NBA, play basketball. A new distribution would emerge, containing a very rich Mr Chamberlain. In this transition, people would have engaged in purely voluntary exchanges with resources that are properly theirs, if the initial distribution really is just. So what could be the problem with the later one? Liberty, Nozick said, disrupts patterns. Justice cannot demand some preferred distribution of wealth.

His work contributed to a philosophy in favour of small government that was blooming at the time. In 1974 Friedrich Hayek—Thatcher's favourite thinker—won the Nobel prize in economics. Two years later it went to Milton Friedman. But although the world moved rightward, it did not shift far enough to become Nozickian. "Anarchy, State and Utopia" called for only a minimal, "nightwatchman" state to protect property rights. But vast government spending, taxation and regulation endure. Even America, despite its inequality, probably remains more Rawlsian.

Too much Utopia

Some of Rawls's fiercest critics have been to his left. Those concerned with racial and gender inequality have often seen his work as a highfalutin irrelevance. Both Rawls and Nozick practised “ideal theory”—hypothesising about what a perfect society looks like, rather than deciding how to fix existing injustices. It is not clear, for example, whether Rawls’s principle of equality of opportunity would permit affirmative action, or any other form of positive discrimination. Rawls wrote in 2001 that the “serious problems arising from existing discrimination and distinctions are not on [justice as fairness’s] agenda.” Nozick acknowledged that his views on property rights would apply only if there had been no injustice in how property had been acquired (such as the use of slaves, or the forced seizure of land).

Rawls was also more concerned with institutions than with day-to-day politics. As a result, on today’s issues his philosophy can fire blanks. For example, feminists often say he did too little to flesh out his views on the family. His main prescription is that interactions between men and women should be voluntary. That is not much help to a movement that is increasingly concerned with social norms that are said to condition individual choices.



Rawlsianism certainly provides little to support identity politics. Today’s left increasingly sees speech as an exercise in power, in which arguments cannot be divorced from the identity of the speaker. On some university campuses conservative speakers who cast doubt on the concepts of patriarchy and white privilege, or who claim that gender norms are not arbitrary, are treated as aggressors whose speech should be prevented. The definition of "mansplaining" is evolving to encompass men expressing any opinion at length, even in writing that nobody is compelled to read. Arguments, it is said, should be rooted in "lived experience".

This is not how a Rawlsian liberal society is supposed to work. Rawls relied on the notion that humans have a shared, disinterested rationality, which is accessible by thinking about the veil of ignorance, and is strengthened by freedom of speech. If arguments cannot be divorced from identity, and if speech is in fact a battleground on which groups struggle for power, the project is doomed from the outset.

Rawls thought that the stability of the ideal society rests on an "overlapping consensus". Everyone must be sufficiently committed to pluralism to remain invested in the democratic project, even when their opponents are in power. The polarised politics of America, Britain and elsewhere, in which neither side can tolerate the other's views, pushes against that ideal.

The more that group identity is elevated above universal values, the greater the threat. In America some on the left describe those who have adopted their views as "woke". Some fans of Donald Trump—who has taken the Republican party a long way from Nozickian libertarianism—say they have been "red pilled" (a reference to the film "The Matrix", in which a red pill lets characters realise the true nature of reality). In both cases, the language suggests some hidden wisdom that only the enlightened have discovered. It is not far from there to saying that such a revelation is necessary to be truly free—an argument that Berlin warned is an early step on the path to tyranny.

The good news is that pluralism and truly liberal values remain popular. Many people want to be treated as individuals, not as part of a group; they attend to what is being said, not just to who is saying it. Much hand-wringing about public life reflects the climate on social media and campuses, not society at large. Most students do not subscribe to radical campus leftism. Still, backers of liberal democracy would do well to remember that the great post-war liberals, in one way or another, all emphasised how individuals must be free to resist the oppression of large groups. That, surely, is where liberal thought begins.

Science and technology

- **Machine learning: Head full of brains, shoes full of feet** [Thu, 30 Aug 21:30]
  A sense of curiosity is helpful for artificial intelligence. Another approach to training machines.
- **Air pollution: A poisoned mind** [Thu, 30 Aug 21:30]
  Older men are more prone to cognitive impairment from dirty air. A new study from China highlights air-pollution concerns.
- **Marine technology: Shiver me timbers** [Thu, 30 Aug 21:30]
  A new type of motorboat takes to the water in disguise. Using foils to travel faster through the water.
- **Scientific research: Betting on the result** [Thu, 30 Aug 21:30]
  Experts are good at betting which scientific experiments can replicate. Despite some studies not being repeatable.

Machine learning

A sense of curiosity is helpful for artificial intelligence

Another approach to training machines

Aug 30th 2018

SOFTWARE that can learn is changing the world, but it needs supervision. Humans provide such oversight in two ways. The first is to show machine-learning algorithms large sets of data that describe the task at hand. Labelled pictures of cats and dogs, for instance, allow an algorithm to learn to discriminate between the two. The other form of supervision is to set a specific goal within a highly structured environment, such as achieving a high score in a video game, and then let the algorithm try out lots of possibilities until it finds one that achieves the objective.

These two approaches to "supervised learning" have led to breakthroughs in artificial intelligence. In 2012 a group of researchers from the University of Toronto used the first method to build AlexNet, a piece of software that in a competition recognised one in ten more images than its closest competitors. In 2015 researchers at DeepMind, a British AI firm owned by Alphabet, used the second method to teach an algorithm to play Atari video games at superhuman levels, an advance that led to later triumphs at Go, a board game.

Such breakthroughs underpin much of the excitement in AI today. But supervised learning has weaknesses. Human guidance is expensive, involving manual tasks such as labelling data or designing virtual environments. Once complete, that guidance cannot be used for other lessons. Nor is supervised learning very realistic. The real world does not often label things or provide explicit signals about the progress that a learner is making. Both AlexNet and DeepMind's game-playing agents require millions or billions of examples or simulations to work on—and powerful computers that use lots of electricity. "If you are going to do this with every new [training] task, you are going to need dozens of nuclear power plants doing nothing else," says Pierre-Yves Oudeyer, an AI researcher at Inria, the French national institute for computer science in Paris.

I wonder…

If AI is going to really take off, then something more is needed. Dr Oudeyer says that requirement is driving interest in one of the fundamental mechanisms used by humans to learn about the world: curiosity. Instead of training algorithms with functions created by humans, Dr Oudeyer and others have spent the past 20 years developing artificial agents that use their own intrinsic reward systems to inspect the world around them and gather data. Such work is starting to come into its own.

The first generation of curious AI used "prediction error" to motivate the agent. The software would explore the environment it was required to study, whether physical or virtual, looking for things that deviated significantly from what it predicted it would find. In other words, it searched for novel data. Using prediction error worked, but it had a big flaw. An agent looking at passing cars, for instance, might become obsessed with the sequence of the colours of each car, because its prediction about what colour would come next is almost always wrong. That serves no useful purpose. Nor would a curious robot repeatedly throwing itself down the stairs for the sheer informatic thrill of it, rather than learning to walk its way down.

This problem is fixed by concentrating on the rate at which an agent's prediction error changes, rather than on the error itself. Using this process, a robot watching the sun rise and set will see its prediction errors start high but decrease over time, as it learns about the actual properties of a physical system. Using the rate of change in a prediction-error system as a signal for the agent to move on to something else is equivalent to giving it a boredom threshold. If the robot trying to work out the pattern of colours of passing cars were to use such a system it would make errors at a steady rate, and get bored.

Dr Oudeyer has tried out his curiosity algorithms in practical pursuits. In June his group tested one on 600 primary schoolchildren at a number of public and private schools in the Aquitaine region of France. The idea was to model each child's learning in mathematics and present each pupil with exercises in a way that optimises their learning. The system, called KidLearn, treats each child as its own curious agent, and adapts the learning content to suit that child's level of understanding and progress. Unlike other software, KidLearn does not rely on data gathered from other children as its guide but is tuned primarily by a child's curiosity. Dr Oudeyer's researchers will shortly report on how well their system performs.

Researchers in Silicon Valley have been embracing curiosity, too. In a recent paper Deepak Pathak and his colleagues at the University of California, Berkeley and OpenAI, a non-profit research firm backed by Elon Musk, showed that curiosity-driven learning works well across a range of virtual environments, despite the fact that their agent was told nothing about the video games it was playing, nor given any signal when it died in the game or reached a higher level.

The curious agent displayed some interesting behaviour. It learned to achieve higher scores in Breakout, a block-breaking game, because the higher the score the more complicated the pattern of blocks becomes, and the more the agent's curiosity was satisfied. When two curious agents played Pong they learned to rally so long that they crashed the game because they found rallying was more interesting than winning. Dying is also boring. "The agent avoids dying in the games since that brings it back to the beginning of the game, an area it has already seen many times and where it can predict the dynamics well," the researchers said in a recent paper.

There are other ways to bestow machines with the urge to explore. Kenneth Stanley, a researcher at Uber's AI lab in San Francisco, mimics evolution. His system starts with a set of random algorithms, chooses the one that looks good for the task at hand, then generates a set of algorithms derived from it. Eventually it arrives at an algorithm that is most suited for the job. Evolution, Mr Stanley notes, can yield serendipitous results that goal-driven optimisation cannot. Biological evolution was not explicitly curious about flying, and yet it still managed to come up with birds.

All this suggests that a more complete set of learning algorithms is emerging. Artificial agents that are driven by curiosity or evolution could look after the earlier stages of learning. They are also more suited to sparse environments devoid of much data. Once something interesting has been found, supervised learning could take over to ensure particular features are learned exactly. Last week, in a video-game competition in Vancouver, AI agents created by OpenAI, using the most advanced supervised-learning techniques available, were crushed by humans in DOTA 2, a strategy game. More curious modes of learning might have helped AI play the long-term parts of the game, in which there are few reward signals and no changes in score.

"I'd hate to die twice. It's so boring," were the death-bed words of Richard Feynman, an American theoretical physicist. His last salute to curiosity followed a lifetime probing the inner workings of the universe, finding new things to model and to understand. That very human inclination can motivate machines as well as man.

A poisoned mind

Older men are more prone to cognitive impairment from dirty air

A new study from China highlights air-pollution concerns

Aug 30th 2018

LIVING under thick layers of smog is known to cause illness and reduce life expectancy. The degree to which pollution harms the mind is less clear. In theory some of the toxins that get inhaled could damage the nervous system and hamper intellect, but few studies have looked into this. One just has, however, and the results are worrying, particularly for older men.

The new study is by Xiaobo Zhang, Xin Zhang and Xi Chen of Peking University, in China. When Dr Zhang returned to China in 2012, after teaching in America, he found it difficult to concentrate during days when the air in Beijing was heavily polluted. He knew from previous research conducted by another lab that young students living in polluted areas performed more poorly in exams, but there was no exploration of whether this held true for a broader population and, if it did, what specific effects the toxins were having on cognitive function.

To find out, the team looked at tests carried out as part of the China Family Panel Studies (CFPS), a survey by Peking University. In 2010 and 2014 the same group of around 20,000 people were tested in standardised mathematics and given a verbal test in word recognition. Crucially, the CFPS logged precise information about the date and location of each test.

Putting this information together allowed the researchers to match test scores at each location with the local air quality as reported by the air-pollution index, a measure that rates pollution levels in different cities across China based on daily readings of sulphur dioxide, nitrogen dioxide and tiny bits of particulate matter. The index ranges from zero to 500, signifying the highest level of pollution.

As they report in *Proceedings of the National Academy of Sciences*, the researchers showed that chronic exposure to pollution lowered the scores on the verbal tests, and that the higher the pollution levels were the more the scores dropped. On average, an increase of 13.23 units (one standard deviation) in the pollution index over the course of three years resulted in a reduction of 1.36 points for men and 0.91 points for women, on the 34-point verbal exam. In contrast, mathematics scores were hardly altered by pollution exposure.

The effects were particularly dramatic in older men who had no education beyond primary school. The data showed that these men lost an average of 9.18 points on the verbal exam if they were exposed to an increase of 13.23 units of pollution over three years. For men who had attended middle school at least, this loss was reduced to just 1.88 points.

Precisely why the mathematics scores barely changed, and why men were harmed most, remains unclear. Dr Zhang speculates that pollutant damage is probably accumulating in the white matter of the brain, which people depend upon more heavily for verbal tasks; and men have less white matter than women. It is possible, too, that men with a poor education may work outside, and are thus more exposed to air pollution. Whatever the reasons, the results ought to be food for thought in polluted cities everywhere.

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Shiver me timbers

A new type of motorboat takes to the water in disguise

Using foils to travel faster through the water

Aug 30th 2018 | PLYMOUTH

A STRANGE craft has been seen darting around Britain’s south coast recently. It has been causing something of a sensation among local seafarers, not least because it is painted in “dazzle” camouflage. This is composed of a series of geometric shapes and was used on vessels in the first world war to make it difficult for an enemy to estimate a ship’s speed and heading. A similar bit of subterfuge was behind the paint scheme on this mystery boat. But rather than dodging artillery shells or torpedoes, this dazzle was designed to make it hard for competitors to see details of the hull.

That is because the vessel was a prototype of a new type of craft called the R35, developed by Princess Yachts, a producer of luxury motor yachts. (Fittingly, the company’s base in Plymouth is near the naval dockyards that did much of the wartime dazzle painting.) But the secrets behind the boat’s hull will be available for all to see when the first production R35 is unveiled at the Cannes boat show, which opens on September 11th. Its most obvious feature is a pair of retractable hydrofoils positioned near the rear of the hull.

Hydrofoils have long been used on marine craft, such as ferries, to raise the bow so that the boat skims along the surface of the water. This reduces drag which means a boat can travel more quickly, and it smooths out the ride over waves. The most extreme use of the technology occurred in the 2013 America's Cup yacht race, when the contenders introduced hydrofoils to lift their hulls completely out of the water. These yachts appear to fly above the surface. The R35 takes a different tack, by deploying its foils to keep itself in the water.

The thrill switch

Racing yachts and speedboats are a bit like high-performance cars. Just as a vehicle designed for the racetrack can prove ungainly when driven slowly around town, boats that are honed for speed can be difficult to handle when pottering about, and vice versa. The solution in the automotive world is a system that lets a driver easily adjust the setting of things such as the suspension, throttle and steering response. On a typical high-performance car today you can flick a switch to "comfort" for a trip to the shops or "track" for a blast around the Nürburgring.

A similar switch can be found at the helm of the R35. It provides options for "comfort", "sports" and one for safer handling in rough seas. Unlike most previous craft using fixed foils, those on the R35 are constantly adjusted. They remain retracted at slow speed, as when berthing in a marina. Out on the ocean, the foils deploy as speed increases. Sensors detect the position of the boat in the water, and a computer calculates 100 times a second the ideal angle at which the foils should be set to lift the bow and reduce drag. The foils also ensure that the stern remains in the optimum position in the water to improve thrust and handling. And, as both the port and the starboard foils can be adjusted independently of each other, the R35 can "lean" into a fast turn, making it highly manoeuvrable at speed.

The use of active foils means it is easier to control the boat and more comfortable for passengers, says Paul MacKenzie, Princess's director of product development. The company worked on the project with BAR

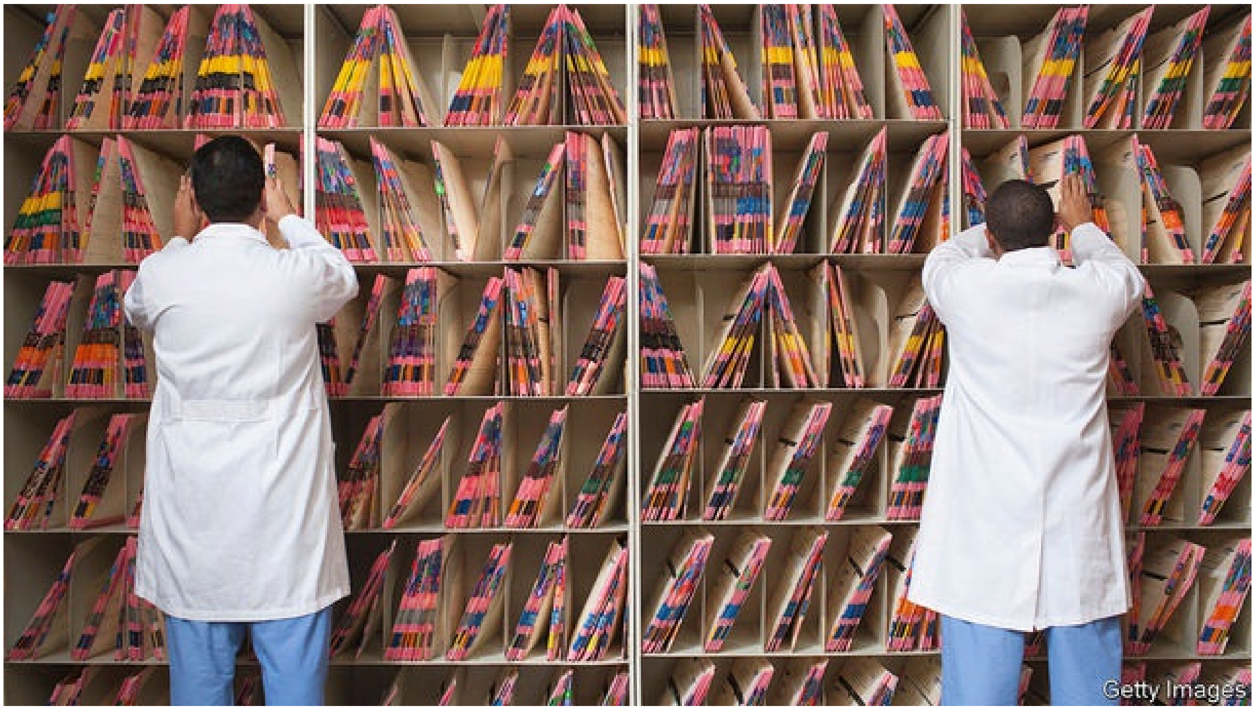
Technologies, a firm set up by Ben Ainslie, who is leading Britain's attempt to win the America's Cup, which next takes place in 2021. Pininfarina, an Italian design house famous for supercars, styled the craft. The boat is also unusual because it is made from carbon-fibre composites, which means it is both stronger and 25% lighter than it would have been if constructed from fibreglass, the material mostly used for leisure craft.

All this makes the R35 a bit of a supercar among boats. The foils, plus twin V8 Volvo Penta petrol engines, take the boat to 50 knots (92.6kph). It also comes with a supercar price tag: around $1m, depending on specifications. Kiran Haslam, Princess's marketing director, says the active foils could be scaled up for use on larger marine craft. But he won't say more. Watch out for more dazzle off the south coast.

Academic research

Experts are good at betting which scientific experiments can replicate

Despite some studies not being repeatable



Aug 30th 2018

EXCITING results from a scientific study are in effect meaningless if they cannot be replicated. All too often, at least in psychology experiments, that seems to be the case. A new report by a scientist who looks at this area, Brian Nosek of the University of Virginia, has once again showed that a high proportion of psychology studies failed to replicate. And this time, Dr Nosek and his colleagues may have found a shortcut to identify which fall into this category.

In most circumstances, a study is considered to be significant if the odds are 5%, or lower, that the result would have occurred by chance. So for every 20 studies that get published, it is reasonable to expect that one will have results that are not correct. In 2015 Dr Nosek, working with a different team, found something alarming: that a whopping 64% of 97 psychology experiments that he re-ran failed to replicate.

Those experiments had appeared in specialist publications. For his new work, published this week in *Nature Human Behaviour*, Dr Nosek selected experiments that had appeared in *Science* and *Nature* between 2010 and 2015. He expected replications of work in these top-tier journals to be more successful. He also re-ran them using samples that were five times larger than those of the originals to reduce the possibility of getting a different result due to chance. Although the results were better than those of the 2015 study, eight of the 21 experiments failed to replicate. Among the 13 that did, a calculation of the size of the effect the studies were examining was, on average, 75% of that in the original experiment.

As a psychologist himself, Dr Nosek was curious whether the research community had a sense of which sorts of experiments were likely to replicate. To this end, he found 206 social scientists (mostly psychologists and economists) via social media. Given tokens, each with a nominal value of 50 cents, the experts were invited to trade on the outcome of the re-run experiments, buying into the "shares" of studies which they thought would replicate and selling or shorting those they thought would not.

The social scientists were on the money. The market prices for each share associated with work that replicated all ended up being worth more than those that did not. Those owning shares in the replicating studies got paid out according to the value of the tokens they held. Stakes in the non-replicants were worth nothing. All this suggests that experts had a decent inkling ahead of time of which of the studies would not replicate, despite the peer-review process used by scientific journals to weed out experiments that might not be robust. Perhaps, then, there is a market opportunity in testing scientific results.

Books and arts

- **Life as art: Sins of the fathers** [Thu, 30 Aug 21:30]
  Karl Ove Knausgaard reaches The End of his struggle. But is his strange fictional autobiography a masterpiece or a literary circus act?.
- **Personality tests: Jung at heart** [Thu, 30 Aug 21:30]
  The enduring appeal of personality types. How a mother-and-daughter duo invented the world’s most influential personality test.
- **Visions of the future: In the kingdom of cyborgs** [Thu, 30 Aug 21:30]
  Big data is reshaping humanity, says Yuval Noah Harari. Uneven and easy to mock, his new book contains provocative and profound ideas.
- **Urban history: How the Thunder rolls** [Thu, 30 Aug 21:30]
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- **Marketing movies: Do look now** [Thu, 30 Aug 21:30]
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Sins of the fathers

Karl Ove Knausgaard reaches The End of his struggle

But is his strange fictional autobiography a masterpiece or a literary circus act?

Aug 30th 2018

My Struggle: Book Six. By Karl Ove Knausgaard. Translated by Don Bartlett and Martin Aitken.*Archipelago; 1,160 pages; $33. Published in Britain as "The End" by Harvill Secker; £25.*

THE title of the British edition of the sixth and final volume of Karl Ove Knausgaard's "My Struggle" seems self-explanatory. But what exactly is it that is coming to an end in "The End"? A novel? A diary? A memoir? An autobiography posing as a novel or a novel posing as an autobiography? Or the biggest act of self-indulgence in modern literature?

"My Struggle" is a phenomenon. In Mr Knausgaard's native Norway one in ten people owns a copy of one of the volumes, but its popularity is global.

“It’s completely blown my mind,” said Zadie Smith, likening her yearning for the next book to the crack-addict’s hunger for another hit. Rachel Cusk—who like Mr Knausgaard is a practitioner of “autofiction”, in which writers take their own lives as subject matter—dubbed it “perhaps the most significant literary enterprise of our times”.

It is also one of the strangest: ridiculously long (3,770 pages overall in Don Bartlett’s and Martin Aitken’s admirable translation), devoid of plot, hopelessly meandering. “My Struggle” just keeps coming at you, much as life does. One moment Mr Knausgaard is meditating on whether it’s possible to find meaning in a world without God; the next he is describing the mundane details of feeding a child or lighting a cigarette (the series would have been considerably shorter if he wasn’t such an avid smoker). The reader is spared nothing. “I hadn’t masturbated, not a single time, until I was nineteen,” he writes. He laments “the ignominy and the constant humiliation of premature ejaculation”.

“The End” is the strangest of the six volumes as well as the most self-indulgent: a book about self-obsession that opines at length about what it is like to write a book about self-obsession. It starts with an impending disaster. Mr Knausgaard’s uncle is so furious about his depiction of his father’s death from alcoholism—“verbal rape”, the uncle calls it—that he threatens to sue him to high heaven. The Norwegian media relish the fight. The harassed author struggles to meet his next deadline, getting up at four every morning while bringing up his three small children and looking after his manic-depressive wife.

Mr Knausgaard repeatedly returns to the question of whether his project—to turn his life into art—is worth it. Is it reasonable to impose such suffering on his family for the sake of his craft? He doesn’t really do it for the fame; though he gets a certain thrill from discovering that he’s “big”, he lives as far away from the literary limelight as he can get. He does it because, like Martin Luther, “I can do no other.” A bizarre inner compulsion drives him to bare his soul to the world in the name of “truth”.

His second great obsession, after himself, is with that other author of a book called “My Struggle”, Adolf Hitler. About half-way through, “The End” shifts abruptly in tone and focus—from a reflection on the life of a writer in rich and stable Scandinavia to a 400-page essay on Hitler's early years. Mr Knausgaard follows Hitler's progress from aspiring artist to down-and-out. He undertakes a close reading of "Mein Kampf" to see how the trainee dictator's mind works, and reconstructs the intellectual world of pre-war Europe—with its exuberant high culture on the one hand, and its obsession with race and biology on the other. He insists on treating Hitler as "one of us", an ordinary human being who was abused by his father and disappointed in his life, rather than as a monster.

My only friend, The End

Why has such a quixotic and demanding work achieved such success? The title no doubt played an important part. So did Mr Knausgaard's craggy good looks; had he been pimply and puny, he might have found a much smaller audience for his thoughts on masturbation and Hitler. But there are also more substantial reasons.

The most obvious is Mr Knausgaard's unflinching honesty. In an age of spin he dwells on the imperfections of human life—his father's drinking, his wife's neediness, his children's tantrums. In an age of political correctness, he confesses that he feels emasculated by child care. Such transgressive blurring of the borders between the public and private, sayable and unsayable, can be both life-affirming and riveting. Readers see that they are not alone in at once loving their families and resenting them for impinging on their time.

Just as important, though Mr Knausgaard wrote them fast, his books take their time. "My Struggle" is the equivalent of slow food in a drive-thru age. The internet serves up instant gratification: buzzy stories that command attention for a few minutes or even a few seconds. The medium renders everything equally accessible and equally disposable. Mr Knausgaard provides the internet in reverse: a slow-moving contemplation of everything from the trivial to the profound.

The trickier question is whether the series actually deserves its success. Is it a masterpiece, as its many fans maintain? Or is Mr Knausgaard a literary circus freak? Ostensibly he ignores most of the rules of great literature. His sentences are deliberately under-wrought; he writes in the same flat tone about lighting a cigarette and the essence of beauty. The structure can feel slapdash. A discussion of Anders Breivik's slaughter of 77 Norwegians in 2011 is disappointingly brief; rather than using the episode to drive home his point that the foundations of civilisation are dangerously fragile, Mr Knausgaard moves on.

But at his best he is wonderful. The study of his relationship with his dysfunctional father—which forms the centrepiece of "A Death in the Family", the first volume, and ripples through the other five—is unforgettable. Mr Knausgaard captures the torture of a child's interactions with a difficult and self-obsessed parent: the longing for approval from someone who is incapable of giving it, at least with any consistency; the highs and lows as this object of awe praises him one moment and scorns him the next; and the emotional turmoil as a complicated man slowly becomes deranged, moving in with his mother (the author's grandmother), persuading her to join him in his drinking binges, and finally drinking himself to death, surrounded by filth, from discarded bottles to unwashed clothes and human excrement.

And, flat though it may be, Mr Knausgaard's style can be compelling. "It wasn't hard to write well," he reflects in one passage, "but it was hard to make writing that was alive, writing that could prise open the world and draw it together in one and the same movement." Paradoxically, by not bothering with conventional fine writing, Mr Knausgaard succeeds in producing prose that is "alive", partly because of his eye for detail and partly because of the quality of his intellect. His lengthy section on Hitler, for example, contains one of the best discussions anywhere of the Führer's skill as a public speaker:

his enormous ability to establish community, in which the entire register of his inner being, his reservoir of pent-up emotions and suppressed desire, could find an outlet and pervade his words with such intensity and conviction that people wanted to be there, in the hatred on the one side, the hope and utopia on the other, the gleaming, almost divine future that was theirs for the taking if only they would follow him and obey his words.

This reviewer finished "The End" with mixed emotions: gratitude that Mr Knausgaard had broken all the rules to admit readers into his life, but also relief that the whole thing was over, and a conviction that he and his acolytes should now find new experiments to pursue. In his “Confessions”, Jean-Jacques Rousseau promised to tell his story with such brutal honesty that his project, “which has no precedent”, would also, once complete, “have no imitator”. Let us hope that this is also the case with “My Struggle”—and that “The End” really is the end.

Jung at heart

The enduring appeal of personality types

How a mother-and-daughter duo invented the world's most influential personality test

Aug 30th 2018

The Personality Brokers. By Merve Emre.*Doubleday; 336 pages; $27.95. To be published in Britain by William Collins as "What's Your Type?"; £20.*

LONG a staple of personnel departments, these days personality tests are grist for dating sites and New Age seminars. They are the ultimate pop-psychology product, catering to both the age-old injunction to "Know thyself" and the modern notion of identity as a personal brand. Yet they lack any verifiable basis in science. That awkward fact is among the many insights in "The Personality Brokers", Merve Emre's brilliant cultural history of the personality-assessment industry. She focuses on the best-known example, the Myers-Briggs Type Indicator (MBTI).

Readers could be forgiven for supposing that the MBTI was the creation of white-coated psychometricians. In fact it was the work of a singular mother-and-daughter pair of amateur psychologists. Born in 1875, Katharine Briggs idolised Carl Jung, writing an adoring ditty in his honour (“Hail, Dr Jung!”) and an unpublished fan-novel, “The Man from Zurich”. Her daughter Isabel Myers, born in 1897, wrote mystery stories.

These were formidable women. Briggs graduated top of her class from Michigan Agricultural College (now Michigan State University); Myers accomplished the same feat at Swarthmore. In a more emancipated era, they might have found outlets for their talents in orthodox careers. As it was, both channelled their energies into child-rearing and, in Myers’s case, theories for the promotion of harmonious marital relations. In 1926 Briggs wrote an article in the *New Republic* inviting readers to find their hue in Jung’s “personality paint box”. In 1943 Myers distilled these ideas into “a series of pleasurable and provocative questions”, formulated to assign people to one of 16 personality types.

Her early customers were companies keen to introduce efficiencies. But the quiz also interested practitioners of a nascent branch of academic psychology concerned with personality. Thus, in 1959, the MBTI came under the purview of the Educational Testing Service (ETS), publishers of the SAT, which sought to vet the proliferating array of tests associated with “personology”. Employed by ETS as an adviser, Myers was a fish out of water. She set little store by “empirical validation”; Jung had not bothered with that rigmarole, instead drawing his theories from religion, philosophy and literature. Besides, her product was already in use.

For their part, her colleagues at ETS deemed it “little better than a horoscope” (as Ms Emre paraphrases), and were queasy about marketing it. Still, Henry Chauncey, the outfit’s boss, made a prescient observation about its appeal. Without wishing to “dignify the hypotheses by speaking of them as a theory”, he noted that the system “can be described in words that have meaning to the layman”, and “isn’t so complex or unusual that he throws his hands up”. After ETS ditched the MBTI in 1975, Myers found a publisher with no qualms about selling it to all-comers.

Today, the MBTI is variously assailed for spreading a phoney sense of selfhood and its susceptibility to gaming. But its popularity endures. As Ms Emre says, the personality test offers a double-hit of narcissism and community. Respondents experience a “rush of self-discovery” and “the cheerful lull of self-acceptance”, but also “the comfort of solidarity”. After all, “part of the appeal of type was imagining that there were others out there like you”.

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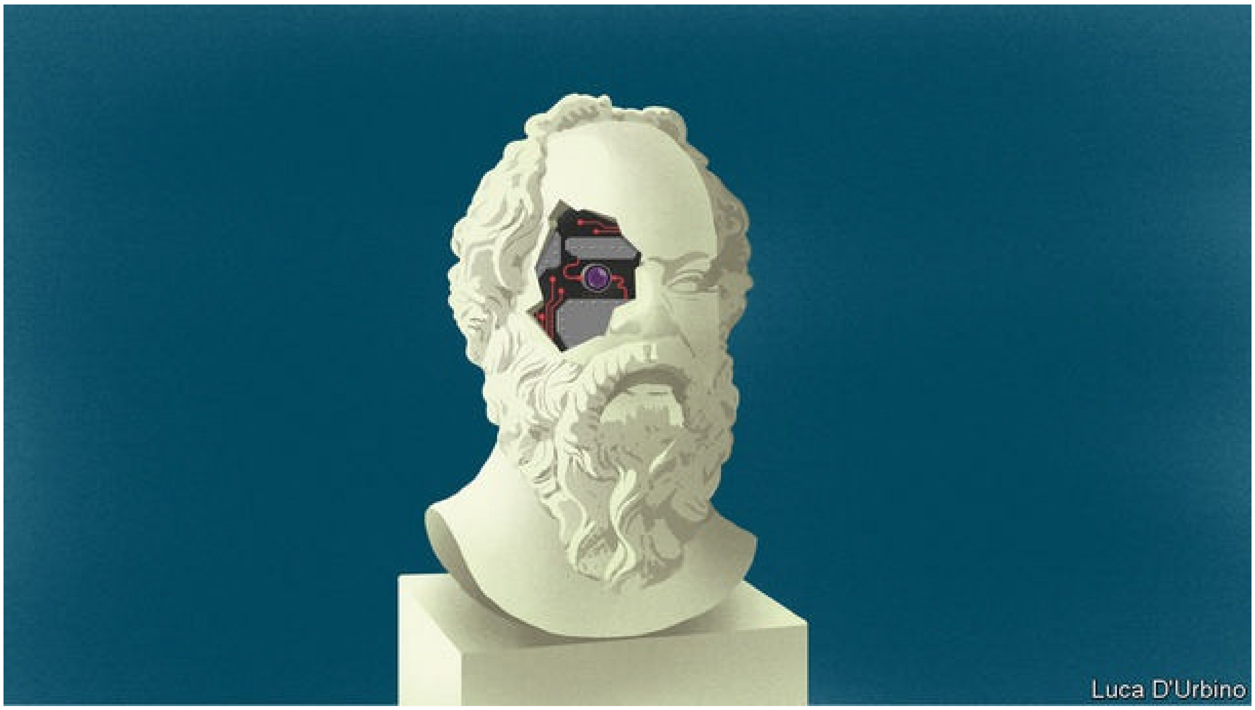
In the kingdom of cyborgs

Big data is reshaping humanity, says Yuval Noah Harari

Uneven and easy to mock, his new book contains provocative and profound ideas



Aug 30th 2018

21 Lessons for the 21st Century. By Yuval Noah Harari.*Spiegel & Grau; 372 pages; $28. Jonathan Cape; £18.99.*

YUVAL NOAH HARARI may be the first global public intellectual to be native to the 21st century. Where other authors are carpetbaggers, hauling their 20th-century thinking into the new millennium, Mr Harari is its local boy done good. He comes with all the accoutrements of the modern pop thinker: a posh education (Oxford, followed by a teaching gig at the Hebrew University of Jerusalem), two bestsellers and the obligatory TED talk. He even meditates for two hours a day.

And he is armed with a big idea: that human beings will change more in the next hundred years than they have in all of their previous existence. The combination of biotechnology and artificial intelligence (AI) may enable some people to be digitally enhanced, transforming what being human means. As this happens, concepts of life, consciousness, society, laws and morality will need to be revised.

The ballast for these views was laid down in Mr Harari's earlier books. In "Sapiens" he argued that what made humans special was their ability to organise on a large scale around shared beliefs, such as religion, nationalism or capitalism. In "Homo Deus" he looked at how humans may meld with technology, and what this means for inequality. He foresaw a world divided between biologically and digitally enhanced "gods" and the "useless", who lack the cash for an upgrade.

In his new book Mr Harari takes these changes as a given, and turns his attention to contemporary themes such as work, education and immigration, as well as more abstract subjects such as justice, liberty, war and religion. This descent from the ivory tower to the crowded terrain of punditry has inevitably attracted criticism—and there is plenty to mock. Clichés abound: "Strangeness becomes the new normal", Mr Harari tells readers, a few sentences before counselling them to "feel at home with the unknown" and "reinvent yourself". Still, his is a creative mind teeming with provocative ideas. Even—or especially—when they are questionable, they are worth considering.

The most controversial is that so-called "big data"—the notion that more information than ever can be collected about the world—means algorithms will know people better than they know themselves, and that this knowledge can be used by business or governments for manipulative ends. "Just as divine authority was legitimised by religious mythologies, and human authority was justified by the liberal story, so the coming technological revolution might establish the authority of big data algorithms, while undermining the very idea of individual freedom."

As more of the world becomes tailored around individuals' personality traits and interests, Mr Harari prophesies, people will become passive recipients of AI decisions. Their autonomy and capacity for free thinking will wither. The individual agency on which democracy and capitalism are predicated may become extinct.

Accept this premise, and Mr Harari is correct that (for example) the way political leaders are chosen, how inequality is treated and how young people are educated will all have to change. But will the technology that generates Amazon book recommendations and micro-targeted ads on Facebook ever be so flawless that people become zombies? In any case, if human brains really do get upgraded, wouldn't advanced critical thinking and free will be enshrined in the code?

The basic danger that Mr Harari identifies is certainly real. AI's machine-learning systems already utilise troves of data to spot obscure patterns and solve tricky problems. Today's web giants hold daunting amounts of information on customers' preferences, intentions and activities. As well as diagnosing the problem, Mr Harari sees a possible way out: "If we want to prevent the concentration of all wealth and power in the hands of a small elite, the key is to regulate the ownership of data." Yet he is vague as to how that might be accomplished, merely intoning that "this may well be the most important political question of our era", and that, unless it is answered soon, "our sociopolitical system might collapse".

Despite its occasional hyperbole, the book contains many gems. Mr Harari's analysis of the Industrial Revolution is compelling. He traces the political clout of socialism to the economic power of workers, noting that this transmission mechanism has broken down in the 21st century, when workers are no longer "exploited" but "irrelevant". He puts forward an intriguing thesis about the sputtering engines of history. The 20th century, he contends, offered three "global stories" to follow: fascism, communism and liberal capitalism. Today "we are down to zero."

The ideas shine most when Mr Harari discards the strut of the pundit and delves into the areas he knows well, history and religion. His commentary on Judaism, Catholicism and Buddhism in a supposedly post-truth world sparkles. "When a thousand people believe some made-up story for one month, that's fake news. When a billion people believe it for a thousand years, that's a religion," he quips.

The division of the book into thematic sections creates a jagged structure.

Some of the material is recycled from old articles and interviews, and indeed from bits of Mr Harari’s previous books. This is a collection of ideas, not a fully fledged cosmology. But readers who accept these shortcomings can accompany the author as he peers fascinatingly into the future.

How the Thunder rolls

The ballad of Oklahoma City

A story of basketball, land-grabs and violence

Aug 30th 2018

Boom Town. By Sam Anderson.*Crown; 448 pages; $28.*

OKLAHOMA CITY was born in a single day—to be precise, at noon on April 22nd 1889. That was the date of the Land Run, one of the federal government's wackiest experiments. Anyone could claim 160 free acres of what was formerly Native American territory. You just had to get there. People came from far and wide, awaiting the bugles that would allow them to flood in (see picture). The ensuing years were devoted to creating a city out of the resulting mess.

This tension between chaos and control is at the heart of Sam Anderson's "Boom Town", a portrait of one of America's least-celebrated metropolises. Mr Anderson yokes together urban history, mini-profiles of local characters

—such as Wayne Coyne of The Flaming Lips, a rock band, and Clara Luper, a civil-rights leader—and the story of the Thunder, Oklahoma City's basketball team. Its rise and decline serve as a metaphor for the city's volatile fortunes.

But if "Boom Town" is a book about basketball, civic ambition and the relationship between them, it is also a chronicle of violence: the outlaw violence of yore, the natural violence of tornadoes and the horror of the bombing in 1995, which left 168 people dead. And, like many stories of the American West—where culturally and historically Oklahoma City belongs, though geographically it is firmly in the middle—it is a saga of land. Early residents were obsessed with land; that was the whole point of the place. Later local powerbrokers embarked on a campaign to annex nearby towns, expanding the city into a sprawl. The oil beneath the surface has long driven economic booms and busts. Now the land is starting to react to fracking, and unprecedented earthquakes are rocking the state.

Zany anecdotes abound, including one about the first mayor getting shot (over a land dispute, naturally). Mr Anderson spends a wild night on the tiles with Mr Coyne. There's the tale of how the city stole the Thunder from Seattle:

The Thunder, like almost everything else in Oklahoma City, was not native to the region. Its transplant was sudden, violent, scandalous, messy, and—for everyone involved—transformative.

It is an unruly stew of a book, which defies genres and expectations, but Mr Anderson's writing is good enough to pull it off. He can make a non-sports fan anxious about bygone games; he makes Oklahoma City seem a cross between a struggling heartland town, an outpost of the Wild West, and Oz.

Do look now

The race for the Oscars begins in Venice

The new ecology of Hollywood means film festivals are vital launch pads for movies

Aug 30th 2018 | VENICE

ANYONE thinking of betting on February's Academy Awards should keep an eye on the Venice Film Festival, which began on August 29th, and the Telluride Film Festival in Colorado, which starts two days later. There is a good chance that the next Best Picture will be publicly screened for the first time at one or both of those events. In the past decade, four of the films that won that Oscar were first shown at Venice, including "The Shape of Water" and "The Hurt Locker", and five at Telluride, among them "Moonlight" and "Slumdog Millionaire". Of the past ten Best Pictures, the remaining one, "The Artist", was first seen at the festival in Cannes.

It wasn't always thus. In 2006 "Crash" took the top prize, after being launched at the Toronto International Film Festival. But before that almost every Best Picture had its own red-carpet premiere in Los Angeles or New

York. What has changed since is that Hollywood has abandoned the kind of commercial, middlebrow epic that once dominated the Oscars—the likes of "Braveheart", "Titanic" and "Gladiator"—in favour of superhero blockbusters. The Academy's new award for "achievement in popular film", also known as the "Popcorn Oscar", is a bid to accommodate that shift; meanwhile, the films that pick up the established awards tend to be quirkier, lower-budget art-house dramas—and they need festivals to boost their profile.

"When we chose 'Birdman' as our opening film in 2014," says Alberto Barbera, director of the Venice festival, "nobody expected it to win Best Picture." But awestruck reviews turned Alejandro Iñárritu's experimental backstage farce into a contender. "Room", an adaptation of Emma Donoghue's bestselling novel of abuse, followed a similar trajectory. "We went to Telluride in 2015 as a small film with a cast that wasn't very well known," says Ed Guiney, the producer; "we came out of there with so much critical support that we were seen as an awards-worthy movie." "Room" went on to be nominated for Best Picture; its star, Brie Larson, took the trophy for Best Actress.

And, in the Oscar stakes, not all festivals are equal. Appearing at any of the prestigious ones helps attract attention, says Mr Guiney; but timing is key. As esteemed as the festivals at Berlin and Cannes are, they take place in February and May respectively: too early to influence Academy voters when they are filling in their ballot papers the next winter. The race for the Oscars begins at Venice and Telluride.

Not surprisingly, studios now jostle for their films to open in Venice (as the Cole Porter lyric puts it). Once, says Mr Barbera, Hollywood marketing types worried about the damage that a slew of bad festival reviews might do. Now Venice has its pick of "the most important new movies"; this year, he says, some that would previously have been included have been turned away for lack of space. The curtain-raiser is "First Man", a biopic of Neil Armstrong. New offerings from the Coen brothers and Paul Greengrass will also feature, as will "The Favourite", co-produced by Mr Guiney. Whether or not "The Favourite" becomes the favourite of the awards season, one of these films probably will.

Obituary

- **John McCain: Means of resistance** [Thu, 30 Aug 21:30]
  Obituary: John McCain. The navy pilot, senator and presidential candidate died on August 25th, aged 81.

Means of resistance

Obituary: John McCain

The navy pilot, senator and presidential candidate died on August 25th, aged 81

Aug 30th 2018

EVERY inch of John McCain's body shouted endurance. The brisk, slightly swinging walk, the stiffly held arms, the tight shoulders and clenched smile, all carried the mark of Vietnam like one scar. His arms were stiff because they had been broken when he fell out of the sky in his bomber, then yanked up by ropes in prison day after day. Released from the "Hanoi Hilton", after five and a half years of sporadic torture and solitary confinement, he could no longer reach up to comb his hair. His hair itself had turned white, though he was only in his 30s. He walked with something like a strut because his damaged knees had hardly any cartilage left. Not that this stopped him hiking for miles through the Grand Canyon and the desert hills of Arizona, the stunningly beautiful piece of America that he represented in Congress for more than 30 years. The swell of his chest was pride in what he felt he had achieved there.

At times, though, his shoulders hunched and he would clasp his arms round his chest, as if against a jailer's blows. It happened when he found himself embroiled, and caught out, in something distasteful: doing too much for lobbyists from the gambling industry (he loved to toss $100 chips round a craps table, lucky feather and penny stowed in his pocket); accepting favours and funds from Charles Keating of the savings-and-loan scandal; trading low blows with rivals in his runs for the Republican nomination in 2000 and for the presidency in 2008—and then failing at both. Withstanding prison beatings was hard, but for a greater cause. The unaccustomed pain of political failure had no obvious upside, therefore hurt more.

He did not want Vietnam to define his career, but inevitably it did. (Neither did he want to be called a hero, but inevitably he was.) Vietnam brought the best moment of his life, when he refused early release from prison and gained, for the first time in his self-indulgent life up till then, a serious sense of a shared purpose larger than himself. And Vietnam brought the worst moment, when he signed a forced confession admitting that he was a "black criminal". He never quite got over the disgrace of that.

Also looming over him were the straight-backed shadows of his grandfather and father, both admirals, both steeped in duty, honour, country. When he felt proud of himself, it was also on their behalf. When he was ashamed it was because he had also let them down. By 1981, when he knew he would never make full admiral and had wrecked his first marriage with affairs, old political ambitions resurfaced: another sort of national service into which he could plunge himself.

Discipline was the hard part. He had always struggled with it, whether at Annapolis, where his cheeky behaviour led to graduation fifth from the bottom of his class, or in flight training, where he drank, chased tail and had a good time generally. But his worst failing was his temper, his sheer rapid-fire, finger-jabbing rage against the jerks who frustrated him. He excused it as impatience, especially at the crawling way Congress worked and the failure of parties to work across the aisle. (Democrats made great partners: he teamed up with Russ Feingold for his greatest legislative achievement, campaign-finance reform, with Joe Lieberman on cap-and-trade bills, with Ted Kennedy on immigration reform.) Or he called his temper passion, especially for curbing pork-barrel spending—and if that passion ever ebbed, he was ready for the old soldiers' home.

Truth and principles. Those were his watchwords, though political life made them tricky. On his national campaign bus, the Straight Talk Express, he chatted candidly to the press, but in the vain hope that they would lay off him. In Congress he took dogged stands against Big Tobacco, global warming and over-regulation, but swerved on health-care reform and balanced budgets, as well as immigration in the end. This, and his openness to Democrats, earned him a maverick reputation. He preferred to think he was an honest free agent, still conservative most of the time, but not in thrall to the hard-right Republican base. That principle was dented whenever he ran for higher office—most famously when, in 2008, he made a naked appeal to the base by picking the ludicrously unqualified Sarah Palin as his running-mate.

The need for war

His greatest consistency lay in urging wars abroad, wherever winnable, and for him both Afghanistan and Iraq fell under that head. America had a duty to spread freedom and democracy, by force of arms if necessary. He longed to go into Syria to support the rebels, to send heavy weapons to Ukraine and to "bomb, bomb, bomb" Iran, as he sang once. When it came to wars, he suspended his usual backing for tax cuts and balanced budgets. Even Vietnam, he thought, should have been winnable, if those idiot civilian commanders had bombed enough.

That said, the gung-ho approach of Donald Trump left him cold. They might share a party, but he had nothing to do with him and the half-baked nationalism he promoted. The brain-cancer diagnosis in July 2017 freed his tongue, and tested his mettle, in all the ways he relished. The talk was never straighter, the stance never more upright, than when he called on his fellow-Republicans not just to endure, but to resist.

Economic and financial indicators

Output, prices and jobs

Aug 30th 2018

Output, prices and jobs

% change on year ago

	Gross domestic product				Industrial production	Consumer prices			Unemployment rate, %
	latest	qtr*	2018†	2019†	latest	latest	year ago	2018†	
United States	+2.9 Q2	+4.2	+2.9	+2.5	+4.2 Jul	+2.9 Jul	+1.7	+2.4	3.9 Jul
China	+6.7 Q2	+7.4	+6.6	+6.3	+6.0 Jul	+2.1 Jul	+1.4	+2.1	3.8 Q2§
Japan	+1.0 Q2	+1.9	+1.2	+1.2	-0.9 Jun	+0.9 Jul	+0.5	+1.0	2.4 Jun
Britain	+1.3 Q2	+1.5	+1.3	+1.4	+1.2 Jun	+2.5 Jul	+2.6	+2.4	4.0 May††
Canada	+2.3 Q1	+1.3	+2.3	+2.2	+3.8 May	+3.0 Jul	+1.2	+2.2	5.8 Jul
Euro area	+2.2 Q2	+1.5	+2.1	+1.9	+2.5 Jun	+2.1 Jul	+1.3	+1.7	8.3 Jun
Austria	+3.4 Q1	+9.7	+2.9	+2.2	+5.0 Jun	+2.1 Jul	+2.0	+2.2	4.7 Jun
Belgium	+1.3 Q2	+1.2	+1.6	+1.6	-2.3 Jun	+2.2 Jul	+1.8	+2.0	6.0 Jun
France	+1.7 Q2	+0.6	+1.8	+1.8	+1.7 Jun	+2.3 Jul	+0.7	+1.9	9.2 Jun
Germany	+1.9 Q2	+1.8	+2.1	+2.0	+2.5 Jun	+2.0 Jul	+1.7	+1.8	3.4 Jun‡
Greece	+2.3 Q1	+3.1	+2.0	+2.0	+1.2 Jun	+0.9 Jul	+1.0	+0.8	19.5 May
Italy	+1.1 Q2	+0.7	+1.2	+1.2	+1.7 Jun	+1.5 Jul	+1.1	+1.3	10.9 Jun
Netherlands	+2.9 Q2	+2.8	+2.7	+2.4	+3.5 Jun	+2.1 Jul	+1.3	+1.6	4.7 Jul
Spain	+2.7 Q2	+2.3	+2.7	+2.2	-2.0 Jun	+2.2 Jul	+1.5	+1.7	15.2 Jun
Czech Republic	+3.4 Q1	+2.0	+3.5	+3.0	+3.4 Jun	+2.3 Jul	+2.5	+2.2	2.4 Jun‡
Denmark	-1.4 Q1	+1.2	+1.6	+1.9	-1.8 Jun	+1.1 Jul	+1.5	+1.0	3.9 Jun
Hungary	+4.6 Q2	+3.6	+4.2	+2.9	+3.1 Jun	+3.4 Jul	+2.1	+2.9	3.6 Jul§††
Norway	+3.3 Q2	+1.5	+1.9	+1.8	+0.6 Jun	+3.0 Jul	+1.5	+2.3	3.9 Jun‡‡
Poland	+5.2 Q1	+3.6	+4.4	+3.5	+10.3 Jul	+2.0 Jul	+1.7	+1.8	5.9 Jul§
Russia	+1.8 Q2	na	+1.7	+1.7	+3.8 Jul	+2.5 Jul	+3.9	+3.0	4.7 Jul§
Sweden	+3.3 Q2	+4.2	+2.8	+2.3	+5.4 Jun	+2.1 Jul	+2.2	+1.9	6.0 Jul§
Switzerland	+2.2 Q1	+2.3	+2.2	+1.9	+8.7 Q2	+1.2 Jul	+0.3	+0.8	2.6 Jul
Turkey	+7.4 Q1	na	+4.3	+3.3	+2.9 Jun	+15.8 Jul	+9.8	+12.8	9.7 May§
Australia	+3.1 Q1	+4.2	+2.9	+2.8	+4.3 Q1	+2.1 Q2	+1.9	+2.2	5.3 Jul
Hong Kong	+3.5 Q2	-0.9	+3.4	+2.7	+1.0 Q1	+2.4 Jul	+1.9	+2.1	2.8 Jul‡‡
India	+7.7 Q1	+10.1	+7.2	+7.4	+7.0 Jun	+4.2 Jul	+2.4	+4.6	5.6 Jul
Indonesia	+5.3 Q2	na	+5.3	+5.4	+1.0 Jun	+3.2 Jul	+3.9	+3.5	5.1 Q1§
Malaysia	+4.5 Q2	na	+5.7	+5.4	+1.1 Jun	+0.9 Jul	+3.1	+0.8	3.4 Jun§
Pakistan	+5.4 2018**	na	+5.4	+5.0	+0.6 Jun	+5.8 Jul	+2.9	+5.4	5.9 2015
Singapore	+3.9 Q2	+0.6	+3.2	+2.9	+6.0 Jul	+0.6 Jul	+0.6	+0.6	2.1 Q2
South Korea	+2.9 Q2	+2.8	+2.8	+2.8	-0.4 Jun	+1.5 Jul	+2.2	+1.7	3.7 Jul§
Taiwan	+3.3 Q2	+1.6	+2.6	+2.0	+4.4 Jul	+1.7 Jul	+0.8	+1.6	3.7 Jul
Thailand	+4.6 Q2	+4.1	+4.1	+3.6	+4.6 Jul	+1.5 Jul	+0.2	+1.2	1.1 Jun§
Argentina	+3.6 Q1	+4.7	+1.3	+2.0	-5.6 Jul	+30.9 Jul	na	+24.2	9.1 Q1§
Brazil	+1.2 Q1	+1.8	+1.6	+2.4	+3.5 Jun	+4.5 Jul	+2.7	+3.9	12.4 Jun§
Chile	+5.3 Q2	+2.8	+3.8	+3.5	+5.0 Jun	+2.7 Jul	+1.7	+2.5	7.2 Jun§‡‡
Colombia	+2.5 Q2	+2.3	+2.7	+3.1	+1.3 Jun	+3.1 Jul	+3.4	+3.3	9.1 Jun§
Mexico	+2.6 Q2	-0.6	+2.2	+2.2	+0.2 Jun	+4.8 Jul	+6.4	+4.6	3.4 Jul
Venezuela	-8.8 Q4~	-6.2	-15.7	-5.9	na	na	na	12,592.5	7.3 Apr§
Egypt	+5.4 Q2	na	+5.4	+5.6	+8.0 Jun	+13.5 Jul	+33.0	+16.1	9.9 Q2§
Israel	+3.8 Q2	+2.0	+3.7	+3.2	+1.5 Jun	+1.4 Jul	-0.7	+1.1	4.2 Jul
Saudi Arabia	-0.9 2017	na	+1.0	+2.0	na	+2.3 Jul	-0.8	+2.6	6.1 Q1
South Africa	+0.8 Q1	-2.2	+1.5	+2.0	+1.3 Jun	+5.1 Jul	+4.6	+4.8	27.2 Q2§
Estonia	+3.6 Q1	-0.5	+3.4	+3.3	+2.6 Jun	+3.5 Jul	+3.6	+3.1	5.1 Q2§
Finland	+2.8 Q1	+2.0	+2.6	+1.8	+5.4 Jun	+1.3 Jul	+0.6	+1.2	6.5 Jul§
Iceland	+6.6 Q1	+4.4	+4.1	+3.5	na	+2.7 Jul	+1.8		2.2 Jul§
Ireland	+9.1 Q1	-2.3	+4.5	+3.6	+8.3 Jun	+0.8 Jul	-0.2	+0.6	5.1 Jul
Latvia	+4.0 Q1	+5.4	+4.0	+3.7	+0.4 Jun	+2.6 Jul	+2.7	+2.5	7.7 Q2§
Lithuania	+3.7 Q2	+3.5	+3.7	+3.3	+6.0 Jul	+2.5 Jul	+3.9	+2.9	8.2 Jul§
Luxembourg	+5.1 Q1	+8.0	+3.9	+3.3	+3.8 Jun	+1.5 Jul	+1.9		5.5 Jul§
New Zealand	+3.0 Q1	+1.1	+3.0	+2.1	+1.4 Q1	+1.5 Q2	+1.7	+1.6	4.5 Q2
Peru	+5.4 Q2	+12.5	+3.7	+4.0	+10.5 May	+1.6 Jul	+2.9	+1.4	6.2 Jul§
Philippines	+6.0 Q2	+5.3	+6.6	+6.1	+17.9 Jun	+5.7 Jul	+2.4	+5.0	5.5 Q2§
Portugal	+2.2 Q2	+2.0	+2.2	+2.3	-0.8 Jun	+1.6 Jul	+0.9	+1.4	6.7 Q2§
Slovakia	+4.1 Q2	+7.5	+3.7	+3.8	+2.1 Jun	+2.6 Jul	+1.4	+2.5	5.5 Jul§
Slovenia	+4.6 Q1	na	+4.5	+3.7	+0.6 Jun	+1.9 Jul	+1.0	+2.1	7.9 Jun§
Ukraine	+3.6 Q2	+4.9	+3.0	+2.8	+2.9 Jul	+8.9 Jul	+15.9	+10.5	1.2 Jul§
Vietnam	+6.8 2017	na	+6.9	+6.5	+13.4 Aug	+4.0 Aug	+3.4	+3.8	2.3 2016

Source: Haver Analytics. *% change on previous quarter, annual rate. †*The Economist* poll or Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. ~2015 **Year ending June. ††Latest 3 months. ‡‡3-month moving average.

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Trade, exchange rates, budget balances and interest rates

Aug 30th 2018

Trade, exchange rates, budget balances and interest rates

	Trade balance	Current-account balance		Currency units, per $		Budget balance	Interest rates	
	latest 12 months, $bn	latest 12 months, $bn	% of GDP 2018†	Aug 29th	year ago	% of GDP 2018†	3-month latest	10-year gov't bonds, latest
United States	-832.6 Jun	-465.5 Q1	-2.7	-	-	-4.6	2.31	2.83
China	+362.7 Jul	+68.3 Q2	+0.6	6.82	6.60	-3.7	2.90	3.43§§
Japan	+42.7 Jun	+201.8 Jun	+3.7	112	109	-3.8	-0.03	0.06
Britain	-184.2 Jun	-106.3 Q1	-3.5	0.77	0.77	-1.7	0.81	1.39
Canada	-23.4 Jun	-53.4 Q2	-2.6	1.30	1.25	-2.3	1.93	2.32
Euro area	+274.5 Jun	+476.8 Jun	+3.4	0.86	0.83	-0.7	-0.32	0.40
Austria	-6.2 May	+9.5 Q1	+2.3	0.86	0.83	-0.4	-0.32	0.57
Belgium	+25.1 Jun	+0.2 Mar	nil	0.86	0.83	-1.1	-0.32	0.76
France	-75.3 Jun	-10.2 Jun	-0.6	0.86	0.83	-2.4	-0.32	0.72
Germany	+292.0 Jun	+323.5 Jun	+7.8	0.86	0.83	+1.3	-0.32	0.40
Greece	-22.3 Jun	-2.6 Jun	-1.2	0.86	0.83	-0.2	-0.32	4.24
Italy	+56.2 Jun	+57.3 Jun	+2.6	0.86	0.83	-2.0	-0.32	3.14
Netherlands	+61.5 Jun	+91.3 Q1	+9.6	0.86	0.83	+1.3	-0.32	0.49
Spain	-33.7 Jun	+20.7 May	+1.4	0.86	0.83	-2.7	-0.32	1.26
Czech Republic	+18.8 Jun	+0.9 Q1	+0.5	22.0	21.7	+0.9	1.49	2.12
Denmark	+5.9 Jun	+19.5 Jun	+7.4	6.38	6.19	-0.7	-0.30	0.38
Hungary	+9.0 May	+4.6 Q1	+2.2	279	254	-2.6	0.17	3.36
Norway	+25.3 Jul	+22.8 Q1	+7.4	8.35	7.73	+5.4	1.03	1.77
Poland	-2.1 Jun	-0.1 Jun	-0.4	3.66	3.55	-2.2	1.51	3.16
Russia	+146.4 Jun	+64.6 Q2	+4.0	68.4	58.8	+0.3	6.07	8.79
Sweden	-3.0 Jul	+16.8 Q1	+3.3	9.16	7.92	+1.1	-0.38	0.53
Switzerland	+29.9 Jul	+72.9 Q1	+8.9	0.97	0.95	+0.8	-0.73	-0.03
Turkey	-83.7 Jul	-57.4 Jun	-5.9	6.43	3.44	-2.8	23.4	21.7
Australia	+10.1 Jun	-36.8 Q1	-2.5	1.37	1.25	-1.0	2.10	2.56
Hong Kong	-69.7 Jul	+14.3 Q1	+3.9	7.85	7.82	+1.9	1.94	2.21
India	-171.2 Jul	-48.7 Q1	-2.4	70.6	64.0	-3.6	6.83	7.92
Indonesia	+1.4 Jul	-24.2 Q2	-2.4	14,655	13,341	-2.6	7.11	7.92
Malaysia	+28.3 Jun	+11.2 Q2	+2.9	4.11	4.27	-3.3	3.67	4.04
Pakistan	-37.7 Jul	-18.1 Q2	-5.8	124	105	-5.4	7.93	10.0†††
Singapore	+44.8 Jul	+64.6 Q2	+17.2	1.37	1.35	-0.7	na	2.38
South Korea	+78.6 Jul	+72.5 Jun	+4.8	1,110	1,126	+1.0	1.66	2.36
Taiwan	+17.2 Jul	+84.5 Q2	+13.4	30.7	30.2	-0.9	0.66	0.84
Thailand	+10.6 Jul	+50.3 Q1	+9.3	32.7	33.2	-2.9	1.18	2.52
Argentina	-11.0 Jul	-33.8 Q1	-4.7	31.6	17.4	-5.7	31.9	10.8
Brazil	+58.5 Jul	-15.0 Jul	-1.0	4.13	3.17	-7.0	6.64	9.54
Chile	+9.9 Jul	-3.6 Q2	-1.6	667	627	-2.1	0.30	4.42
Colombia	-5.0 Jun	-9.8 Q1	-2.8	3,002	2,934	-1.9	4.50	6.86
Mexico	-13.8 Jul	-19.7 Q2	-1.7	19.1	17.9	-2.3	8.11	7.87
Venezuela	-36.2 Oct~	-17.8 Q3~	+5.0	248,409	10.1	-15.5	14.5	8.24
Egypt	-40.3 Jun	-7.7 Q1	-2.4	17.9	17.6	-9.6	19.4	na
Israel	-22.1 Jul	+9.7 Q1	+1.8	3.61	3.57	-2.4	0.10	1.94
Saudi Arabia	+87.3 2017	+19.9 Q1	+7.4	3.75	3.75	-3.3	2.61	na
South Africa	+3.7 Jun	-12.2 Q1	-3.2	14.4	13.0	-3.6	7.01	8.94
Estonia	-2.2 Jun	+0.8 Jun	+1.8	0.86	0.83	-0.4	-0.32	na
Finland	-2.8 Jun	+0.3 Jun	+0.9	0.86	0.83	-0.7	-0.32	0.59
Iceland	-1.6 Jul	+0.8 Q1	+4.1	107	105	+1.2	4.70	na
Ireland	+57.0 Jun	+35.4 Q1	+9.3	0.86	0.83	-0.2	-0.32	0.93
Latvia	-3.0 Jun	+0.1 Jun	-0.3	0.86	0.83	-1.2	-0.32	na
Lithuania	-2.9 Jun	nil Q1	+0.8	0.86	0.83	+0.6	-0.32	1.20
Luxembourg	-7.3 Jun	+4.6 Q1	+5.3	0.86	0.83	+1.2	-0.32	na
New Zealand	-3.2 Jul	-5.7 Q1	-2.9	1.49	1.37	+1.0	1.91	2.64
Peru	+7.9 Jun	-3.2 Q2	-1.5	3.30	3.24	-3.1	3.31	na
Philippines	-35.7 Jun	-1.9 Mar	-1.3	53.5	51.1	-2.8	3.16	6.38
Portugal	-17.9 Jun	nil Jun	+0.1	0.86	0.83	-1.0	-0.32	1.91
Slovakia	+3.8 Jun	-2.0 Jun	-1.2	0.86	0.83	-0.9	-0.32	0.97
Slovenia	nil May	+4.1 Jun	+6.1	0.86	0.83	+0.5	-0.32	na
Ukraine	-7.0 Jun	-2.8 Q2	-5.0	28.1	25.5	-2.6	17.5	na
Vietnam	+6.3 Aug	+6.4 2017	+1.2	23,301	22,731	-6.3	4.60	5.19

Source: Haver Analytics. †*The Economist* poll or Economist Intelligence Unit estimate/forecast. ~2015 §§5-year yield. †††Dollar-denominated bonds.

The Economist commodity-price index

Aug 30th 2018

The Economist commodity-price index

2005=100

	Aug 21st	Aug 28th*	% change on one month	% change on one year
Dollar Index				
All Items	140.4	139.1	-3.6	-4.1
Food	144.0	140.0	-5.7	-4.1
Industrials				
All	136.6	138.2	-1.3	-4.0
Nfa†	135.7	134.7	-1.8	+1.4
Metals	137.1	139.6	-1.1	-6.1
Sterling Index				
All items	198.5	196.4	-1.8	-3.5
Euro Index				
All items	151.5	147.6	-3.7	-1.5
Gold				
$ per oz	1,187.9	1,209.3	-1.0	-4.8
West Texas Intermediate				
$ per barrel	65.8	68.5	-0.3	+47.6

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.

The Economist

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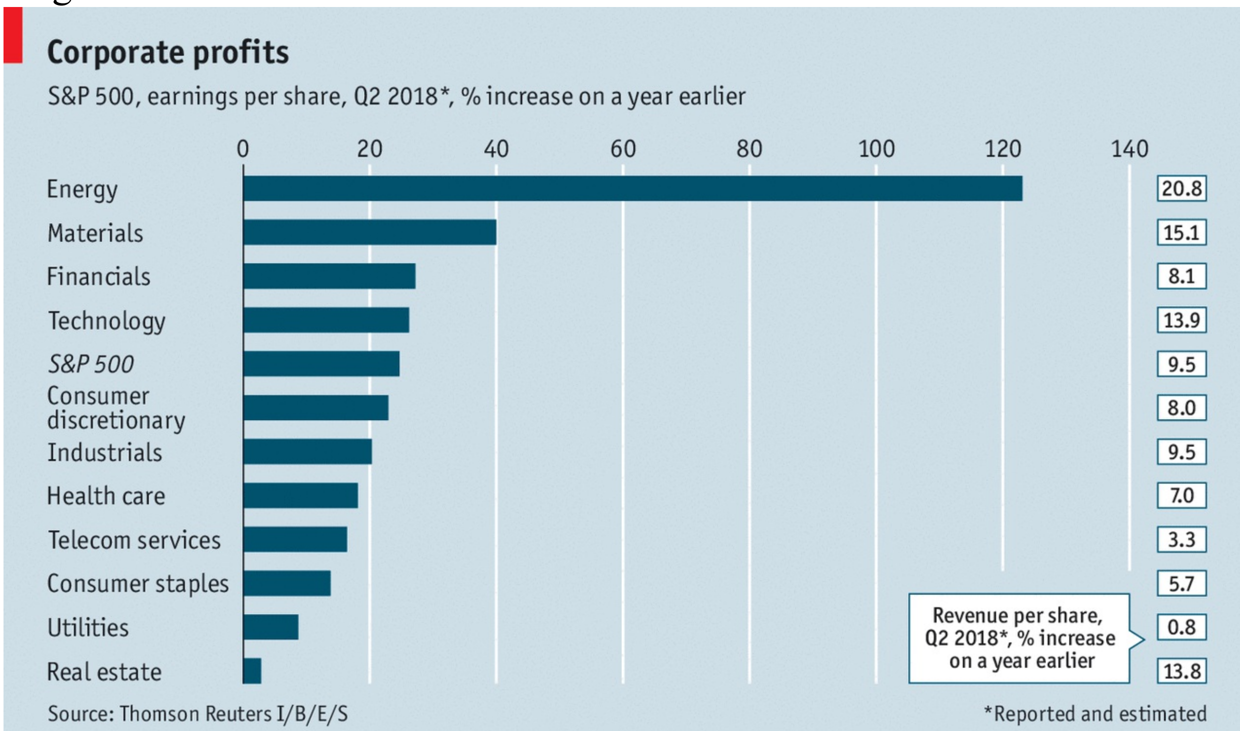
Corporate profits

Aug 30th 2018



The Economist

It has been a bumper earnings season for America Inc. Second-quarter earnings per share for S&P 500 companies are expected to be 25% higher than a year ago, boosted largely by a big corporate-tax cut. A healthy global economy has also helped—for those firms that break out revenue by country, 39% of sales are made outside America. But clouds loom. The direct impact of the tax cut will fade; turmoil in Turkey and concerns about tariffs have pushed up the value of the dollar, which may depress American multinationals’ overseas earnings. Profits in the oil industry, however, are likely to remain strong, reflecting the effect of production cuts on oil prices.

Markets

Aug 30th 2018

Markets

	Index Aug 29th	% change on one week	% change on Dec 29th 2017 in local currency	% change on Dec 29th 2017 in $ terms
United States (DJIA)	26,124.6	+1.5	+5.7	+5.7
United States (S&P 500)	2,914.0	+1.8	+9.0	+9.0
United States (NAScomp)	8,109.7	+2.8	+17.5	+17.5
China (Shanghai Comp)	2,769.3	+2.0	-16.3	-19.9
China (Shenzhen Comp)	1,489.3	+2.4	-21.6	-25.0
Japan (Nikkei 225)	22,848.2	+2.2	+0.4	+1.7
Japan (Topix)	1,739.6	+2.4	-4.3	-3.0
Britain (FTSE 100)	7,617.2	+0.6	-0.9	-5.7
Canada (S&P TSX)	16,390.3	+0.3	+1.1	-1.9
Euro area (FTSE Euro 100)	1,200.8	+0.9	-0.7	-3.2
Euro area (EURO STOXX 50)	3,447.6	+0.8	-1.6	-4.0
Austria (ATX)	3,329.8	+1.0	-2.6	-5.0
Belgium (Bel 20)	3,816.0	+0.4	-4.1	-6.4
France (CAC 40)	5,485.0	+1.2	+3.2	+0.7
Germany (DAX)*	12,527.4	+1.1	-3.0	-5.4
Greece (Athex Comp)	737.5	+2.5	-8.1	-10.3
Italy (FTSE/MIB)	20,620.1	-0.4	-5.6	-8.0
Netherlands (AEX)	563.0	+0.7	+3.4	+0.9
Spain (IBEX 35)	9,606.5	+0.3	-4.4	-6.7
Czech Republic (PX)	1,079.6	+0.6	+0.1	-3.0
Denmark (OMXCB)	945.4	+1.2	+2.0	-0.7
Hungary (BUX)	36,818.9	+1.2	-6.5	-12.7
Norway (OSEAX)	1,038.4	+1.0	+14.5	+12.4
Poland (WIG)	61,426.7	+3.2	-3.6	-8.1
Russia (RTS, $ terms)	1,078.3	+1.2	-6.6	-6.6
Sweden (OMXS30)	1,671.2	+1.7	+6.0	-4.9
Switzerland (SMI)	9,084.3	+0.4	-3.2	-3.3
Turkey (BIST)	93,866.9	+4.1	-18.6	-50.6
Australia (All Ord.)	6,457.0	+1.3	+4.7	-1.5
Hong Kong (Hang Seng)	28,416.4	+1.8	-5.0	-5.4
India (BSE)	38,896.6	+1.6	+14.2	+3.9
Indonesia (IDX)	6,042.6	+1.7	-4.9	-11.8
Malaysia (KLSE)	1,820.6	+1.3	+1.3	+0.1
Pakistan (KSE)	42,544.5	+0.3	+5.1	-6.6
Singapore (STI)	3,243.9	+1.4	-4.7	-6.5
South Korea (KOSPI)	2,309.0	+1.6	-6.4	-9.7
Taiwan (TWI)	11,099.6	+2.7	+4.3	+1.0
Thailand (SET)	1,718.2	+1.2	-2.0	-2.0
Argentina (MERV)	25,460.9	-5.2	-15.3	-49.3
Brazil (BVSP)	78,388.8	+1.9	+2.6	-17.6
Chile (IGPA)	26,697.5	+0.2	-4.6	-10.9
Colombia (IGBC)	12,243.2	+0.7	+6.7	+7.7
Mexico (IPC)	50,143.7	+0.5	+1.6	+5.2
Peru (S&P/BVL)*	19,653.2	+1.0	-1.6	-3.2
Egypt (EGX 30)	15,606.2	+2.2	+3.9	+3.2
Israel (TA-125)	1,483.1	+2.0	+8.7	+4.1
Saudi Arabia (Tadawul)	8,036.6	+2.2	+11.2	+11.2
South Africa (JSE AS)	60,039.3	+3.3	+0.9	-11.6
Europe (FTSEurofirst 300)	1,507.8	+0.4	-1.4	-3.8
World, dev'd (MSCI)	2,182.5	+1.2	+3.8	+3.8
Emerging markets (MSCI)	1,070.6	+1.9	-7.6	-7.6
World, all (MSCI)	525.2	+1.3	+2.4	+2.4
World bonds (Citigroup)	936.6	-0.1	-1.4	-1.4
EMBI+ (JPMorgan)	785.6	-0.1	-6.0	-6.0
Hedge funds (HFRX)	1,266.8‡	+0.3	-0.7	-0.7
Volatility, US (VIX)	12.5	+12.3	+11.0	(levels)
CDSs, Eur (iTRAXX)†	65.7	-1.5	+45.6	+42.0
CDSs, N Am (CDX)†	58.6	-2.0	+19.4	+19.4
Carbon trading (EU ETS) €	21.1	+6.4	+158.9	+152.6

Sources: IHS Markit; Thomson Reuters. *Total return index.
†Credit-default-swap spreads, basis points. ‡Aug 27th.