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China staged a huge parade to celebrate 70 years of Communist rule. It involved more than 100,000 civilians, 15,000 troops and hundreds of weapons. Some of the equipment had not been shown in public before, including the DF-41 intercontinental ballistic missile, which can hit any part of America. But a "white paper" issued by China said the country had "no intention" of challenging the United States, or supplanting it.

In **Hong Kong**, meanwhile, thousands of people marked the occasion as a "day of mourning" by staging an unauthorised march. Some people later clashed with police in several locations. A policeman shot a teenage student in the chest—the first injury involving live ammunition since pro-democracy unrest broke out in the city four months ago.

Afghans voted in a presidential election. The Taliban had vowed to disrupt the polling, which nonetheless was relatively peaceful. Turnout was extremely low. The results will not be announced until November.

North Korea agreed to resume disarmament talks with America after a hiatus of eight months. It later tested a missile, which it said it launched from a submarine near its coast into Japanese waters.

A court in **Pakistan** sentenced the brother of Qandeel Baloch, a social-media star, to life in prison for her murder. He said he had killed her to preserve the family's honour, after she posted pictures of herself online. Activists for women's rights had feared he would be acquitted, since his parents had absolved him of blame, a factor Pakistani courts often take into account.

Vizcarra's victory

Peru's president, Martín Vizcarra, dissolved the country's congress, which has obstructed his legislative programme, and proposed to hold a congressional election in January. Congress refused to accept its dissolution and voted to suspend Mr Vizcarra as president. It installed the vice-president in his place, but she quit after just hours in the job.

Guyana is to hold elections on March 2nd. The government lost a vote of confidence last December. Next year Guyana is expected to begin receiving revenue from vast reserves of oil discovered off shore. The IMF thinks that its economy may grow by 85%.

Prosecutors in New York alleged that the younger brother of the **Honduran** president, Juan Orlando Hernández, had accepted $1m from Joaquín Guzmán, a Mexican drug baron known as "El Chapo", that was intended for the president. Mr Hernández said the claim was absurd, and noted that prosecutors never alleged that he had received the money.

On a mission

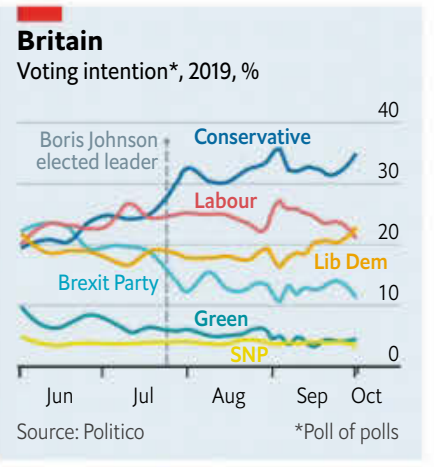
Democrats in the House of Representatives pushed ahead with an **impeachment investigation** of Donald Trump's request to the Ukrainian president to dig up dirt on the son of his rival, Joe Biden. Subpoenas were sent to Mike Pompeo, the secretary of state, and to Rudolph Giuliani, the president's lawyer. In a Twitter meltdown, Mr Trump claimed the Democrats were staging a "coup".

Bernie Sanders cancelled events in his campaign for the Democratic presidential nomination until further notice, after he had heart stents inserted to relieve some chest pains. The 78-year-old has kept up a gruelling campaign schedule.

In a closely watched case, a judge ruled that **Harvard** does not discriminate against Asian-Americans in its applications process, finding that it passes "constitutional muster". The plaintiffs argued that Harvard's affirmative-action policy favours black and Hispanic applicants. The matter will probably end up in the Supreme Court.

Two borders for four years

Boris Johnson, **Britain's** prime minister, made a new Brexit offer to the European Union. His proposal includes customs checks, but not at the border in Northern Ireland, plus a regulatory border in the Irish Sea. Mr Johnson is determined to leave the EU on October 31st, but is hampered by Parliament's legal stipulation that he must ask for an extension if there is no deal.



Brexit is not the only trouble for Mr Johnson. Hard on the heels of the controversy surrounding his relationship with an American businesswoman when he was mayor of London, a female journalist accused Mr Johnson of groping her thigh in 1999, when he was her boss. He denied it happened. Despite its leader's problems the **Conservative Party** holds a resilient lead in the polls.

Sebastian Kurz and his People's Party were the clear winners in **Austria's** snap election, caused after his government collapsed following a scandal connecting his coalition partners, the Freedom Party, and Russian money. However, he is still short of a majority, and is casting around for an alternative to join a new government.

Some 20,000 people took to the streets in **Moscow** to demand the release of those arrested in earlier demonstrations over the exclusion of opposition figures from a city council election.

A tinderbox

As many as 25 soldiers were killed and another 60 are missing after jihadists attacked two army bases in **Mali**. Separately al-Shabab, a jihadist group affiliated with al-Qaeda, attacked a convoy of Italian troops and an air base used by American forces in **Somalia**. The attacks highlight the deteriorating security across the Sahel and into the Horn of Africa.

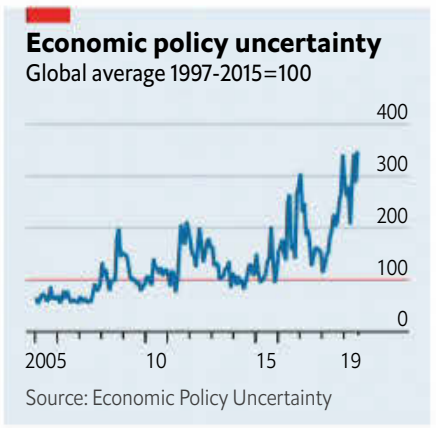
At a pre-trial hearing lawyers for **Binyamin Netanyahu**, Israel's prime minister, argued that he should not be charged with corruption. The attorney-general will decide whether to proceed with the indictments. Meanwhile, talks between Mr Netanyahu's Likud party and Blue and White, a centrist party, over forming a government have stalled.

Hundreds of people protested in **Lebanon** as the government grappled with a worsening economic crisis. Enormous debt and shrinking foreign investment have led to fears that the Lebanese pound will be devalued and prices raised. **Iraqis** also took to the streets to protest against unemployment and corruption. Security forces responded with live fire; at least 18 people were killed and hundreds wounded.

Software developers in Lagos, **Nigeria's** main commercial city, started a campaign against harassment by the police, who single out people carrying laptops or smartphones for extortion. The arrests threaten a boom in startups.

Uganda banned people from wearing red berets, which are associated with an opposition movement led by Bobi Wine. Mr Wine was recently charged with "annoying" the president.

A 15-year dispute over **subsidies in the aerospace industry** came to a partial climax when the World Trade Organisation ruled that America could levy $7.5bn-worth of tariffs on exports from the European Union because of the illegal aid given to Airbus. Next year the WTO will probably approve European penalties on America because of its aid to Boeing. The decision adds to already heightened trade tensions. America said it would start imposing the tariffs on October 18th, of 10% on aircraft and 25% on a range of other goods, including cheese, olives, wine and whiskey.



Earlier, the WTO said it now expects **global trade flows** to increase by just 1.2% this year, down from the 2.6% it forecast in April and the slowest pace since the financial crisis. Unresolved trade conflicts have led to greater uncertainty about policy, causing businesses to put off investment. The growth of exports and imports slowed across all regions in the first half of 2019. Meanwhile, an index of American **manufacturing** fell to its lowest level since June 2009.

Perils of the cocktail party

The chairman of **Credit Suisse** said the bank had been wrong to conduct surveillance on Iqbal Khan, a former executive, over fears he would lure away staff and clients. The bank's chief operating officer, who admitted to acting alone in ordering the operation, and the head of security, resigned. A review by a law firm called in by Switzerland's second-biggest bank cleared Tidjane Thiam, the chief executive, of any involvement. Mr Thiam had an acrimonious relationship with Mr Khan; the pair reportedly had a blazing row at a cocktail party in January.

Wells Fargo named Charles Scharf as its new chief executive, six months after Tim Sloan resigned in the aftermath of a mis-selling scandal. Mr Scharf has led Bank of New York Mellon and Visa and was a senior executive at JPMorgan Chase during the financial crisis.

India's central bank reassured the public that the banking system is "safe and stable and there is no need to panic" as another scandal emerged. Curbs had to be imposed on withdrawals by nervous savers from Punjab and Maharashtra Co-operative Bank as it came under scrutiny for financial irregularities. Another bank faced restrictions on its ability to make new loans.

Faced with a sharp downturn in the country's housing market, **Australia's** central bank cut its main interest rate by a quarter of a percentage point, to 0.75%, the lowest ever.

A drop in **Turkey's** annual inflation rate to 9.3%, the lowest in almost three years, increased the betting that the central bank would cut interest rates again, despite recent remarks by its new governor that there was limited room for manoeuvre.

PayPal became the first foreign company to enter **China's payments industry** when it took a 70% stake in a domestic digital-payments firm. American companies have been trying for years to break into a market that is dominated by Alibaba and Tencent.

Japan's sales tax rose from 8% to 10%. The increase had been postponed in 2015 and again in 2017 amid worries of a slump in consumer spending, which happened after a previous raise to the tax in 2014. Food and non-alcoholic drinks continue to be taxed at 8%.

Novartis announced a partnership with **Microsoft** to apply artificial-intelligence technology to medicine. In one of the biggest collaborations in the field, the Swiss drugmaker said the research would start with tackling personalised remedies for eye degeneration, cell and gene therapy and drug design.

Founded in 1969 by two men making surfboards in a garage, **Rip Curl**, an Australian surfing gear and clothing company, was sold to **Kathmandu**, a New Zealand outdoor specialist. The men, now in their 70s, sold their firm for A$350m ($235m).

A report from Kroll, a corporate investigations and consultancy firm, highlighted the reputational risk to businesses from **fake news on social media**. Across the company bosses surveyed in 13 countries, 84% felt threatened by attempts to manipulate markets with fake stories, either by competitors or short sellers. One American cosmetics company saw sales drop by a fifth after a campaign on Twitter falsely claimed it tested its products on animals.

The guru

The leaked transcript of **Mark Zuckerberg's** comments at a staff meeting provided a glimpse into the inner thoughts of Facebook's boss. Mr Zuckerberg said that Elizabeth Warren's proposal to break up big tech companies would "suck" and "you go to the mat and you fight" over something so "existential". When asked about brain-computer interfaces, he joked that disapproving headlines would say "Facebook wants to perform brain surgery".

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Masters of the universe

Forget Gordon Gekko. Computers increasingly call the shots in financial markets

THE JOB of capital markets is to process information so that savings flow to the best projects and firms. That makes high finance sound simple; in reality it is dynamic and intoxicating. It reflects a changing world. Today's markets, for instance, are grappling with a trade war and low interest rates. But it also reflects changes within finance, which constantly reinvents itself in a perpetual struggle to gain a competitive edge. As our Briefing reports, the latest revolution is in full swing. Machines are taking control of investing—not just the humdrum buying and selling of securities, but also the commanding heights of monitoring the economy and allocating capital.

Funds run by computers that follow rules set by humans account for 35% of America's stockmarket, 60% of institutional equity assets and 60% of trading activity. New artificial-intelligence programs are also writing their own investing rules, in ways their human masters only partly understand. Industries from pizza-delivery to Hollywood are being changed by technology, but finance is unique because it can exert voting power over firms, redistribute wealth and cause mayhem in the economy.

Because it deals in huge sums, finance has always had the cash to adopt breakthroughs early. The first transatlantic cable, completed in 1866, carried cotton prices between Liverpool and New York. Wall Street analysts were early devotees of spreadsheet software, such as Excel, in the 1980s. Since then, computers have conquered swathes of the financial industry. First to go was the chore of "executing" buy and sell orders. Visit a trading floor today and you will hear the hum of servers, not the roar of traders. High-frequency trading exploits tiny differences in the prices of similar securities, using a barrage of transactions.

In the past decade computers have graduated to running portfolios. Exchange-traded funds (ETFs) and mutual funds automatically track indices of shares and bonds. Last month these vehicles had $4.3trn invested in American equities, exceeding the sums actively run by humans for the first time. A strategy known as smart-beta isolates a statistical characteristic—volatility, say—and loads up on securities that exhibit it. An elite of quantitative hedge funds, most of them on America's east coast, uses complex black-box mathematics to invest some $1trn. As machines prove themselves in equities and derivatives, they are growing in debt markets, too.

All the while, computers are gaining autonomy. Software programs using AI devise their own strategies without needing human guidance. Some hedgefunders are sceptical about AI but, as processing power grows, so do its abilities. And consider the flow of information, the lifeblood of markets. Human fund managers read reports and meet firms under strict insider-trading and disclosure laws. These are designed to control what is in the public domain and ensure everyone has equal access to it. Now an almost infinite supply of new data and processing power is creating novel ways to assess investments. For example, some funds try to use satellites to track retailers' car parks, and scrape inflation data from e-commerce sites. Eventually they could have fresher information about firms than even their boards do.

Until now the rise of computers has democratised finance by cutting costs. A typical ETF charges 0.1% a year, compared with perhaps 1% for an active fund. You can buy ETFs on your phone. An ongoing price war means the cost of trading has collapsed, and markets are usually more liquid than ever before. Especially when the returns on most investments are as low as today's, it all adds up. Yet the emerging era of machine-dominated finance raises worries, any of which could imperil these benefits.

One is financial stability. Seasoned investors complain that computers can distort asset prices, as lots of algorithms chase securities with a given characteristic and then suddenly ditch them. Regulators worry that liquidity evaporates as markets fall. These claims can be overdone—humans are perfectly capable of causing carnage on their own, and computers can help manage risk. Nonetheless, a series of "flash-crashes" and spooky incidents have occurred, including a disruption in ETF prices in 2010, a crash in sterling in October 2016 and a slump in debt prices in December last year. These dislocations might become more severe and frequent as computers become more powerful.

Another worry is how computerised finance could concentrate wealth. Because performance rests more on processing power and data, those with clout could make a disproportionate amount of money. Quant investors argue that any edge they have is soon competed away. However, some funds are paying to secure exclusive rights to data. Imagine, for example, if Amazon (whose boss, Jeff Bezos, used to work for a quant fund) started trading using its proprietary information on e-commerce, or JPMorgan Chase used its internal data on credit-card flows to trade the Treasury bond market. These kinds of hypothetical conflicts could soon become real.

A final concern is corporate governance. For decades company boards have been voted in and out of office by fund managers on behalf of their clients. What if those shares are run by computers that are agnostic, or worse, have been programmed to pursue a narrow objective such as getting firms to pay a dividend at all costs? Of course humans could override this. For example, BlackRock, the biggest ETF firm, gives firms guidance on strategy and environmental policy. But that raises its own problem: if assets flow to a few big fund managers with economies of scale, they will have disproportionate voting power over the economy.

Hey Siri, can you invest my life savings?

The greatest innovations in finance are unstoppable, but often lead to crises as they find their feet. In the 18th century the joint-stock company created bubbles, before going on to make large-scale business possible in the 19th century. Securitisation caused the subprime debacle, but is today an important tool for laying off risk. The broad principles of market regulation are eternal: equal treatment of all customers, equal access to information and the promotion of competition. However, the computing revolution looks as if it will make today's rules look horribly out of date. Human investors are about to discover that they are no longer the smartest guys in the room. ■

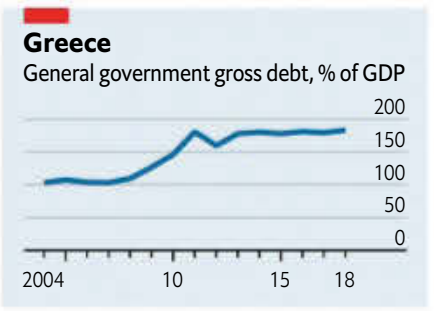
Greece's debt odyssey

Time to end extend and pretend

Greece wants freedom. Its creditors don't want it to have a free lunch. A new grand bargain is required

TEN YEARS ago this month George Papandreou, then the newly elected prime minister of Greece, announced to the world that the government's books had been cooked and that the budget deficit in 2009 was in fact double previous estimates. Investors panicked and Greece lost access to capital markets, eventually forcing it to seek help from the European Union and the IMF. A severe financial crisis, together with swingeing spending cuts demanded by the creditors, plunged Greece into one of the deepest downturns experienced by a rich country since the second world war.

Now another new prime minister, Kyriakos Mitsotakis, is trying to get Greece back on its feet (see Finance section). Though the economy has begun expanding again, growth is lacklustre and output is nearly a quarter below its level in 2007. The country left its third bail-out last year with a public debt of 180% of GDP. It is now subject to the terms of a debt-relief deal struck with its European creditors. This deal was designed to look tough in order to be palatable to electorates in the north of Europe, who hate the idea of bailing out southerners, but experts agree that it is wildly unrealistic. The time has come to stop pretending and settle Greece's finances once and for all.



The agreement of 2018 extends the maturities of some of Greece's loans and offers some interest-rate relief. In return, as well as continuing reforms, Greece must hit draconian fiscal targets. It must run a primary surplus (ie, before interest payments) of 3.5% of GDP a year until 2022, and of 2.2%, on average, until 2060. The question of debt relief is not to be revisited until 2032.

That these targets are fanciful is an open secret. Only a handful of countries have pulled off such a feat—most were resource-rich and thriving. To expect Greece to commit to such fiscal masochism for four decades is not sensible. As the IMF points out, it will eventually need real debt relief. And as the economy is still depressed, there is a strong case for some fiscal loosening now.

The penal terms of the deal of 2018 reflect mistrust. Northern politicians could not sell a deal at home that appeared to let Greece off the hook. As recent attacks in Germany on the doveish policies of the European Central Bank illustrate, suspicions in the north that they are underwriting the south are still alive.

For its part Greece has shirked the reforms needed if it is to start growing fast enough to catch up with the rest of the euro area. The previous government, led by Syriza, a left-wing party, hit its fiscal targets but slid back on reform. Banks are stuffed with dud loans and the framework for dealing with them is incomplete. Tax revenues rely on too narrow a base, in turn requiring high rates that deter hiring. In registering property or resolving business disputes, the World Bank's "Doing Business" report ranks Greece in the bottom third of countries.

There is a way out. When Greeks voted in July for Mr Mitsotakis, who stood on a platform of reform, they turned their back on populism. Creditors should take that as a sign of good faith. They should also set out a new goal—that, in exchange for more reforms, Greece should get a debt write-down that is big enough to allow it to service its debts sustainably without running a primary surplus. During this period, provided Greece passes milestones on reforms, its fiscal-surplus targets should gradually be relaxed. As a goodwill gesture, the EU could meanwhile release over €1bn a year of profits from a bond-buying scheme to give Greece extra fiscal space.

Yet Mr Mitsotakis has been slow to honour his promise of reform. He needs to roll up his sleeves. He has won public support and impressed the markets—the premium of Greek ten-year government bond yields over German ones has fallen by half this year. He must persuade northerners that Greece has earned some flexibility. This means facing up to the problems that hold back the economy. For ten years governments and creditors have muddled through. Greeks deserve better. ■

Kashmir

Vale of tears

The courts' refusal to curb repression in Kashmir should alarm all Indians

IT IS TWO months now since India's parliament abruptly amended the constitution to downgrade Jammu & Kashmir from a partly autonomous state to a territory administered by the central government. That means it is also two months since the Indian authorities detained some 2,000 prominent Kashmiris—politicians, businessmen, activists, journalists—to prevent them from protesting. They continue to be held without charge, many in unknown places. Meanwhile the 7m-odd residents of the Kashmir valley, the state's main population centre, are under a lockdown of a different sort. Mobile phones and the internet remain cut off; getting around is hard and getting in or out is possible only on the authorities' say-so. In theory the ruling Bharatiya Janata Party (BJP) is integrating Kashmir into the rest of India. In practice it has turned the valley into a vast open-air detention centre.

That the BJP has it in for Kashmiris is hardly news. The manifesto the party put out before it won its thumping victory in national elections earlier this year called for the scrapping of Jammu & Kashmir's special status. The state is the only one in India with a Muslim majority, and the Hindu-nationalist BJP dislikes anything that smacks of privileges for Muslims. The BJP also likes to parade its defiance of Pakistan, which controls a slice of ▸▸

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Kashmir and claims the rest, and has vehemently denounced the upheaval in the valley. For Narendra Modi, the prime minister and leader of the BJP, picking on Kashmir presents an easy opportunity to pose as a resolute nationalist who will not hesitate to confront his enemies.

But if Mr Modi's actions are not that surprising, the reaction of the courts has been (see Asia section). India's judges are notoriously meddlesome and difficult. No question is beneath their scrutiny: what destinations state-owned airlines should fly to, say, or just how close a liquor store can be to a highway. They have dealt all sorts of embarrassing defeats to the central government in recent years, inventing a previously unknown right to privacy that almost scuppered a huge biometric identification scheme, and voiding a lucrative auction of mobile-telephone licences. Yet on the many glaring abuses occurring in Kashmir they have remained resolutely—and shamefully—silent.

Although the courts in Kashmir are in theory functioning, lawyers are striking, making it hard for petitioners to get anywhere. The chief justice of the Supreme Court in Delhi has declared that he is simply too busy to hear all the cases related to the government's actions in Kashmir. He passed them to other benches of the Supreme Court, one of which gave the government a further month to contemplate its response. Conveniently enough, that pushes any ruling about whether or not the government's downgrading of Jammu & Kashmir from a state to a territory was constitutional until after the change takes effect, on October 31st. It will also mean, in all likelihood, a further month of detention without trial for the Kashmiris rounded up by the authorities and another month during which humbler Kashmiris will be deprived of rights that other Indians take for granted.

Few of those other Indians will care very much. The Kashmir valley is hemmed in by the Himalayas at the northern extreme of the country, far from most Indians' thoughts and experience. It has been in some degree of turmoil since partition and independence 71 years ago. It suffers separatist violence, now mostly home-grown rather than instigated by Pakistan, which demands a response from India's security services—though that does not justify today's wholesale lockdown. To the extent that the rest of the country gives Kashmiris any thought, it tends to see them as troublemakers, if not traitors. Many Indians are toasting Mr Modi for at last giving them their comeuppance.

Both gleeful and indifferent observers ought to be more worried. Mr Modi's authoritarian instincts are not confined to Kashmir. If the courts continue to let him, he will doubtless continue to reshape India in keeping with the BJP's plainly stated goals. That includes stripping 1.9m poor and illiterate residents of the state of Assam of their citizenship, for example, if they do not have the correct paperwork to prove that they are Indian citizens. Then there is the BJP's plan to finish the job begun by Hindu zealots in 1992 by building a temple on the site of the mosque they demolished. Events in Kashmir show that the government is ready to trample Indians' civil rights in order to squelch resistance to its actions. If the Supreme Court is willing to look away today, who is to say that the government will not feel free to carry on? ■

Technology and politics

Open season

The rise of open-source computing is good for competition—and may offer a way to ease the tech war

To the average capitalist "open source" software may seem like a pretty odd idea. Like most products, conventional computer software—from video games to operating systems—is developed in secret, away from the prying eyes of competitors, and then sold to customers as a finished product. Open-source software, which has roots in the collaborative atmosphere of computing's earliest days, takes the opposite approach. Code is public, and anyone is free to take it, modify it, share it, suggest improvements or add new features.

It has been a striking success. Open-source software runs more than half the world's websites and, in the form of Android, more than 80% of its smartphones. Some governments, including Germany's and Brazil's, prefer their officials to use open-source software, in part because it reduces their dependence on foreign companies. The security-conscious appreciate the ability to inspect, in detail, the goods they are using. It is perfectly compatible with making money. In July IBM spent $34bn to buy Red Hat, an American maker of a free open-source operating system, which earns its crust by charging for ancillary services like customer support and training.

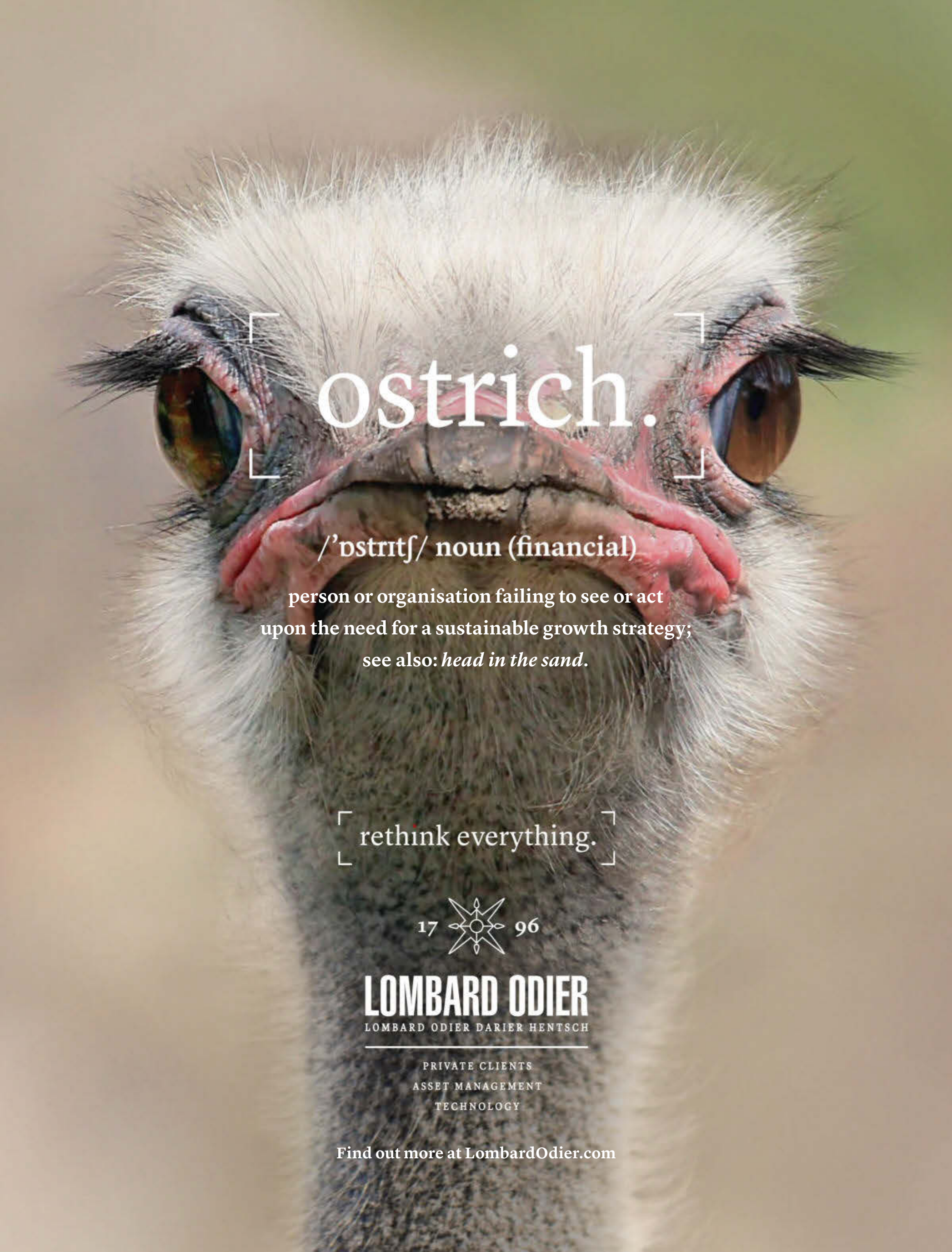
Now the model is spreading to chips. RISC-V is a set of open-source designs for microchips that was initially developed a decade ago at the University of California, Berkeley. These days it is attracting attention from many big technology firms, including Google, Nvidia and Qualcomm (see Science section). In August IBM made its Power chip designs open-source. These moves are welcome, for two reasons.

The first is economic. The chip business is highly concentrated. RISC-V competes with closed-source designs from Arm, a Japanese-owned firm which monopolises the market for tablet and smartphone chips, and is a dominant presence in the fast-growing "internet of things". IBM's Power will challenge Intel's grip on desktops and data-centres. A dose of competition could lower prices and quicken innovation.

The second reason is geopolitical. America and China are waging a technological cold war; it threatens to damage a computer industry that has become thoroughly globalised. The open-source model, were it to be widely adopted, might help defuse these tensions, by giving both sides at least some of what they want.

Start with China. In May America blacklisted Huawei, a Chinese tech giant which makes both smartphones and mobile-network equipment. That underlined, to other Chinese firms and to the country's leadership, the risks of a model in which Chinese tech firms build their products on American software and hardware designs. Under the label "Made in China 2025", the country is investing billions to try to boost its domestic capacity.

Open-source components offer an alternative supply chain, less subject to any individual country's control. Alibaba, a Chi-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/ˈɒstrɪtʃ/ noun (financial)
person or organisation failing to see or act
upon the need for a sustainable growth strategy;
see also: *head in the sand*.
rethink everything.
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nese e-commerce giant, has already shown off a machine-learning RISC-V chip. Xiaomi, a maker of smartphones and other consumer gadgets, is planning to use RISC-V chips in its fitness bands. Were Android not open source, Huawei would be in an even deeper hole than it already is.

Other countries are interested, too. India's government has been investing in RISC-V development in the past year; it is also keen to develop a technology ecosystem that minimises foreign dependence (see Asia section). In an effort to reassure the companies using its technology, the RISC-V Foundation is moving from America to neutral Switzerland.

Many in the West, meanwhile, see China's growing technological prowess as a malign development. One worry is that Chinese products may be Trojan horses, allowing a repressive dictatorship to steal secrets—or, worse, to sabotage societies that are increasingly dependent on networked computers.

Here too, open-source technologies can begin to change the mood. Most Chinese products remain closed-source "black boxes" containing software and hardware whose inner workings are unknown. Particularly for software, and to some extent with hardware, an open-source model would give buyers the ability to compare what they have with what they were promised. To the extent that they can verify, they will not have to trust.

The tech war is a battle for influence between an incumbent superpower and an aspirant one. A complete rupture would be extraordinarily costly and force most countries to take sides. Open-source computing can help calm tempers. That would be good for everybody. ■

Political rhetoric

Down with the people

Politicians who invoke "the people" are usually up to no good

SINCE THE first three words of the preamble to the United States' constitution thundered into the world's political lexicon, "the people" has been one of the favourite invocations of those in, or in pursuit of, power. It has also been one of the most abused. No state has been as undemocratic or unpopular as the Democratic People's Republic of Korea. The People's Movement for the Liberation of Angola has paid more attention to liberating the country's assets into its leaders' foreign bank accounts than to freeing Angolans from the oppression of poverty. In the media the formula signals a determination to ignore popular taste: the *People's Daily* makes no more effort to appeal to its Chinese readers than *Pravda* did to tell the truth to its Soviet ones. So when Downing Street frames the election Britons are expecting as "Parliament versus the people", the people should beware.

References to "the people" are standard fare in political speech. Emmanuel Macron, France's president, likes to bang on about the *mandat du peuple*, and the responsibility it confers. This is fine; the danger arises when "the people" are weaponised against a supposed enemy.

It is not just politicians who do this. Princess Diana said she wanted to be the "queen of people's hearts"—in implied contrast to the awkward husband who commanded the affections of nobody but his mistress. But with the rise of populism, the tactic is spreading among politicians. Sometimes the enemy is a foreign one. Hugo Chávez, Venezuela's late demagogue, called on the people to resist "the empire"—George W. Bush was unpopular worldwide, and thus a convenient target. Today Mexico's president, Andrés Manuel López Obrador (AMLO), unwilling to antagonise his northern neighbour, prefers the vaguer "mafia of power". Sometimes it is a religious minority, such as Muslims, who are clearly excluded from the ruling Bharatiya Janata Party's celebration of its success in India "in inciting amongst the people a desire for a unique cultural Indic renaissance". Any of these foes may be used to whip up support for a struggling politician.

But the target is usually the institutions that stand in the politician's way, especially the legislature, the courts and the media. Such checks and balances are essential to the proper workings of a democracy but, inevitably, inconvenient for presidents and prime ministers who are not particular about the means they use to achieve their ends. President Donald Trump has referred to the media as "enemies of the people"; Poland's ruling PIS party justifies its attacks on the legal system and the opposition by reference to its connection to the *narod*; Boris Johnson, Britain's prime minister, has set himself up as defending the will of "the people" against those in Parliament and the courts who are stopping Britain from leaving the European Union without a deal.

Once a politician has defined those who elected him as "the people", then he embodies their will and it is but a short step to defining his own enemies as the nation's. After Polish MPS called for an EU investigation of their government, the prime minister, Jaroslaw Kaczynski, called them traitors. Mr Johnson calls a law designed to avoid a chaotic departure from the EU "the Surrender Act", and accuses its supporters of "collaboration". Mr Trump tweets that "what is taking place is not an impeachment, it is a COUP, intended to take away the Power of the People, their VOTE, their Freedoms, their Second Amendment, Religion, Military, Border Wall, and their God-given rights as a Citizen of The United States of America!"

If "the people" are thwarted by the courts or parliament, they may be driven to unconstitutional action. That's what some Britons thought the Conservative Party chairman meant when he said that, if they were denied Brexit, they would "look at other ways of initiating change". And it is what some Americans concluded when Mr Trump retweeted a pastor's warning that impeachment would "cause a Civil War like fracture in this Nation". If "the people" take matters into their own hands, what is a president to do? At a recent press conference, AMLO declared, "I believe that not only you're good journalists but you're also prudent...And if you cross the line, well, you know what happens, right? But it's not me, it's the people." He did not specify what the people might do, but Mexico's journalists understand the risks: 12 have been murdered this year.

Voters should keep an ear cocked for this dangerous phrase. It marks the user out not as a democrat but as a scoundrel. ■


eagle.
/’iːg(ə)l/ noun (financial)
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It's time to leave

Clearly you have thrown caution to the wind regarding any reluctance to hold back on your ill-concealed bile regarding Boris Johnson ("The reckoning", September 28th). You say he is the worst prime minister in living memory, an opinion so grossly uncharitable that it could only emanate from rabid, Brussels-infatuated journalists, wholly given over to Remain propaganda. A few lines later, you say he is "inadequate" to the task and only in office because of Brexit. Is this surprising when one considers how deliberately the deep-state establishment has done its best to scupper Brexit altogether? It would dishonour the wishes of 17.4m of us stupid, brainless, moronic, uneducated, gormless half-wits, who want our government back, who want to control our own borders, make our own laws, spend our own money, and who do not wish to be ruled by France and Germany and their back-scratching bureaucrats, manipulating a hopeless crony capitalism.

You know very well that the euro is on life support and can only prosper if fiscal union is achieved, which implies the end of the nation state. The Lisbon treaty demands full compliance in fiscal and monetary policy, in defence and social interaction, of which the most economically damaging and socially divisive is uncontrolled immigration.

Is it right-wing to resist these negative developments? Is it wrong to want sovereignty returned? Is it unacceptable to wish not to be a continental European? You leave me almost speechless at your lack of patriotism (let me guess, you have a house in France and friends in Tuscany). For you democracy is dead, replaced by technocracy, the rule of Plato's golden souls who know (how do they?) all the outcomes, the ideal way forward, the prescriptions for universal happiness, unlike us benighted, dead-wood, has-beens.

DAVID MAPLES
Petersfield, Hampshire

Asking people to vote in a second referendum would be an incredible mark of disrespect. It would mean that democracy has been replaced with a pernicious kind of dictatorship where people are still allowed to speak up, but their voices are never heard.

KENJI OSHIGURU
Yokohama, Japan

Charlemagne has the cheek to mention "the EU's commitment to free trade" and the Doha round of multilateral trade negotiations (September 14th). In fact, the EU was the principal culprit in wrecking this round to defend the economic obscenity of the common agricultural policy, which you described as "disgraceful" at the time ("Deadlocked in Doha", March 29th 2003). That article foretold that the failure of Doha would result in "trade-diverting bilateral or regional trade deals". The EU is not committed to free trade. It is committed to managed trade to protect the CAP.

CHARLES EFFORD
London

NATO in Afghanistan

Regarding the stalled peace deal with the Taliban in Afghanistan ("Talking chop", September 14th), the overwhelming brunt of the fighting is conducted by the Afghan National Security Forces who, because of their limited training and capability, are taking huge casualties. The Afghan government stopped publishing the data in 2017 but one reliable estimate suggests some 20 are killed each day. This affects morale and recruitment; their NATO co-operation troops have to work hard to keep them going. Despite the collective effort, the Afghan government controls just over 50% of the country, at best.

This demonstrates that, although a peace settlement is ultimately the only way to settle Afghanistan, this is not the time to tinker with NATO force numbers. We should not forget that it was the withdrawal of Russian co-operation troops in 1992, not the Soviets' cessation of formal combat operations in 1989, that presaged the collapse of the Najibullah regime and the eventual Taliban takeover in 1996. The parallels are not encouraging.

In all this, Britain has responsibilities distinct from our duty as a NATO ally. These are to support and sustain the legitimate Afghan government and its security forces and to protect our partners in that struggle, especially our former interpreters. Our history and engagement with Afghanistan and the sacrifices of the campaign demand nothing less.

COLONEL (RET'D) SIMON DIGGINS
Defence attaché, Kabul 2008-10
Rickmansworth, Hertfordshire

The popes on capitalism

Schumpeter described Catholic social teaching as "pro-capitalist" (September 7th). True, the church has long rejected collectivism and championed private enterprise. But popes have also cautioned against capitalism, not least its neoliberal iteration. Pius XII blamed "the exploitation of private capital" (as well as "state absolutism") for working people's "servitude". Paul VI criticised the "unbridled liberalism" inherent in capitalism. John Paul II condemned the increasingly "intrusive, even invasive, character of the logic of the market". Benedict XVI called for "a new economic model". Pope Francis stands squarely in this tradition, which doesn't fit neatly on the secular left-right ideological spectrum.

DAN BRENDEL
Oceanside, California

Einstein's politics

It is interesting that the Albert Einstein exhibition in Shanghai ignores the fact that he supported some communist causes in the 1920s and 1930s, though not all ("Relatively revealing", September 21st). Einstein campaigned, for example, for the freedom of the Noulens couple, who had been arrested in Shanghai in 1931 for being leading members of the Communist International's liaison office with East and South-East Asian communist parties, all of them illegal at the time. He also supported, after an about turn, the Moscow show trials. Yet, in 1931 he had written in a private letter:

> I am not for punishment at all, but only for measures that serve society and its protection. In principle I would not be opposed to killing individuals who are worthless or dangerous in that sense. I am against it only because I do not trust people, ie, the courts.

Stalin seems to have become trustworthy to Einstein. His politics cannot be reduced to supporting free opinion; he may even sometimes have ignored that principle.

FREDDY LITTEN
Munich

Hello, Columbus

For those who may not be able to get to Columbus, Indiana, to check out its surprising Modernist buildings, I recommend an offbeat movie called, somewhat unsurprisingly, "Columbus" ("Modernism in the cornfields", September 14th). It features most of the architectural gems referred to in your article, and it got sparkling reviews. As *Rotten Tomatoes* says, "'Columbus'...balances the clean lines of architecture against the messiness of love."

NIGEL BRACHI
Edmonton, Canada

A legendary oil man

T. Boone Pickens didn't just show inefficient firms who was boss (Buttonwood, September 21st). When Drake, a hip-hop star, posted a humble brag on Twitter that making "the first million is the hardest", Pickens shot back: "the first billion is a helluva lot harder."

YACOV ARNOPOLIN
London

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March of the machines

NEW YORK

The stockmarket is now run by computers

FIFTY YEARS ago investing was a distinctly human affair. "People would have to take each other out, and dealers would entertain fund managers, and no one would know what the prices were," says Ray Dalio, who worked on the trading floor of the New York Stock Exchange (NYSE) in the early 1970s before founding Bridgewater Associates, now the world's largest hedge fund. Technology was basic. Kenneth Jacobs, the boss of Lazard, an investment bank, remembers using a pocket calculator to analyse figures gleaned from company reports. His older colleagues used slide rules. Even by the 1980s "reading the *Wall Street Journal* on your way into work, a television on the trading floor and a ticker tape" offered a significant information advantage, recalls one investor.

Since then the role humans play in trading has diminished rapidly. In their place have come computers, algorithms and passive managers—institutions which offer an index fund that holds a basket of shares to match the return of the stockmarket, or sectors of it, rather than trying to beat it (see chart 1, on the next page). On September 13th a widely watched barometer published by Morningstar, a research firm, reported that last month, for the first time, the pot of passive equity assets it measures, at $4.3trn, exceeded that run by humans.

The rise of financial robotisation is not only changing the speed and makeup of the stockmarket. It also raises questions about the function of markets, the impact of markets on the wider economy, how companies are governed and financial stability.

America is automating

Investors have always used different kinds of technology to glean market-moving information before their competitors. Early investors in the Dutch East India Company sought out newsletters about the fortunes of ships around the Cape of Good Hope before they arrived in the Netherlands. The Rothschilds supposedly owe much of their fortune to a carrier pigeon that brought news of the French defeat at the Battle of Waterloo faster than ships.

During the era of red braces and slide rules, today's technological advances started to creep in. Machines took the easier (and loudest) jobs first. In the 1970s floor traders bellowing to each other in an exchange started to be replaced by electronic execution, which made it easier for everyone to gather data on prices and volume. That, in turn, improved execution by creating greater certainty about price.

In portfolio management, algorithms have also been around for decades. In 1975 Jack Bogle founded Vanguard, which created the first index fund, thus automating the simplest possible portfolio allocation. In the 1980s and 1990s fancier automated products emerged, such as quantitative hedge funds, known as "quant" funds, and exchange-traded funds (ETFs), respectively. Some ETFs track indices, but others obey more sophisticated investment rules by automating decisions long championed by humans, such as buying so-called value stocks; which look cheap compared with the company's assets. Since their inception many of the quant funds have designed algorithms that can scour market data, hunting for stocks with other appealing, human-chosen traits, known in the jargon as "factors".

The idea of factors came from two economists, Eugene Fama and Kenneth French, and was put into practice by Cliff Asness, a student of Mr Fama, who in 1998 founded AQR Capital Management, now one of the world's largest hedge funds. Quant funds like AQR program algorithms to choose stocks based on factors that were arrived at by economic theory and borne out by data analysis, such as momentum (recent price ▸▸

rises) or yield (paying high dividends). Initially only a few money-managers had the technology to crunch the numbers. Now everybody does.

Increasingly, the strategies of "rules-based" machine-run investors—those using algorithms to execute portfolio decisions—are changing. Some quant funds, like Bridgewater, use algorithms to perform data analysis, but call on humans to select trades. However, many quant funds, such as Two Sigma and Renaissance Technologies, are pushing automation even further, by using machine learning and artificial intelligence (AI) to enable the machines to pick which stocks to buy and sell.

This raises the prospect of the computers taking over human investors' final task: analysing information in order to design investment strategies. If so, that could lead to a better understanding of how markets work, and what companies are worth.

The execution of orders on the stockmarket is now dominated by algorithmic traders. Fewer trades are conducted on the rowdy floor of the NYSE and more on quietly purring computer servers in New Jersey. According to Deutsche Bank, 90% of equity-futures trades and 80% of cash-equity trades are executed by algorithms without any human input. Equity-derivative markets are also dominated by electronic execution according to Larry Tabb of the Tabb Group, a research firm.

This must be the place

Each day around 7bn shares worth $320bn change hands on America's stockmarket. Much of that volume is high-frequency trading, in which stocks are flipped at speed in order to capture fleeting gains. High-frequency traders, acting as middlemen, are involved in half of the daily trading volumes. Even excluding traders, though, and looking just at investors, rules-based investors now make the majority of trades.

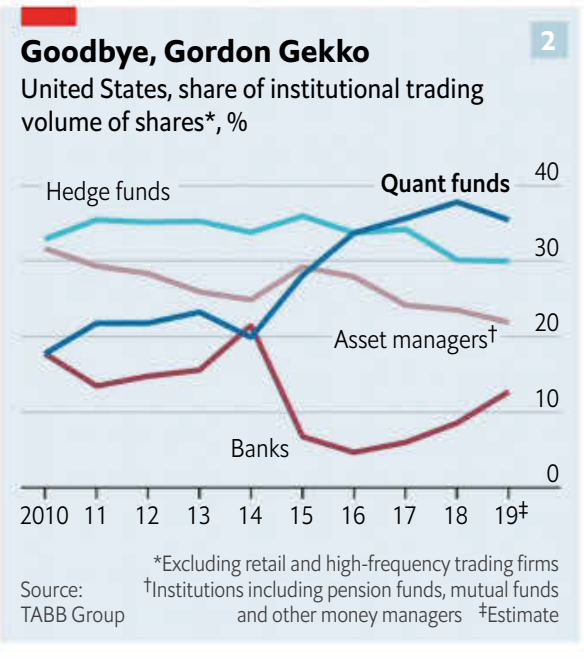
Three years ago quant funds became the largest source of institutional trading volume in the American stockmarket (see chart 2). They account for 36% of institutional volume so far this year, up from just 18% in 2010, according to the Tabb Group. Just 10% of institutional trading is done by traditional equity fund managers, says Dubravko Lakos-Bujas of JPMorgan Chase.

Machines are increasingly buying to hold, too. The total value of American public equities is $31tn, as measured by the Russell 3000, an index. The three types of computer-managed funds—index funds, ETFs and quant funds—run around 35% of this (see chart 3). Human managers, such as traditional hedge funds and other mutual funds, manage just 24%. (The rest, some 40%, is harder to measure and consists of other kinds of owners, such as companies which hold lots of their own shares.)

Of the $18trn to $19trn of managed assets accounted for, most are looked after by machines. Index funds manage half of that pot, around $9trn. Bernstein, a research firm, says other quantitative equity managers look after another 10-15%, roughly $2trn. The remaining 35-40%, worth $7 to $8trn, is overseen by humans.

A prism by which to see the progress of algorithmic investing is hedge funds. Four of the world's five largest—Bridgewater, AQR, Two Sigma and Renaissance—were founded specifically to use quantitative methods. The sole exception, Man Group, a British hedge fund, bought Numeric, a quantitative equity manager based in Boston, in 2014. More than half of Man Group's assets under management are now run quantitatively. A decade ago a quarter of total hedge-fund assets under management were in quant funds; now it is 30%, according to HFR, a research group. This figure probably understates the shift given that traditional funds, like Point72, have adopted a partly quantitative approach.

The result is that the stockmarket is now extremely efficient. The new robo-markets bring much lower costs. Passive funds charge 0.03-0.09% of assets under management each year. Active managers often charge 20 times as much. Hedge funds, which use leverage and derivatives to try to boost returns further, take 20% of returns on top as a performance fee.



The lower cost of executing a trade means that new information about a company is instantly reflected in its price. According to Mr Dalio "order execution is phenomenally better." Commissions for trading shares at exchanges are tiny: $0.0001 per share for both buyer and seller, according to academics at Chicago University. Rock-bottom fees are being passed on, too. On October 1st Charles Schwab, a leading consumer brokerage site, and TD Ameritrade, a rival, both announced that they will cut trading fees to zero.

Cheaper fees have added to liquidity—which determines how much a trader can buy or sell before he moves the price of a share. More liquidity means a lower spread between the price a trader can buy a share and the price he can sell one.

But many critics argue that this is misleading, as the liquidity provided by high-frequency traders is unreliable compared with that provided by banks. It disappears in crises, the argument goes. A recent paper published by Citadel, a hedge fund, refutes this view. It shows that the spread for executing a small trade—of, say $10,000—in a single company's stock has fallen dramatically over the past decade and is consistently low. Those for larger trades, of up to $10m, have, at worst, remained the same and in most cases improved.

Grandmaster flash

The machines' market dominance is sure to extend further. The strategy of factors that humans devised when technology was more basic is now widely available through ETFs. Some ETFs seek out stocks with more than one factor. Others follow a "risk parity strategy", an approach pioneered by Mr Dalio which balances the volatility of assets in different classes. Each added level of complexity leaves less for human stockpickers to do. "Thirty years ago the best fund manager was the one with the best intuition," says David Siegel, co-chairman of Two Sigma. Now those who take a "scientific approach", using machines, data and AI, can have an edge.

To understand the coming developments in the market, chess offers an instructive example. In 1997 Deep Blue, an IBM supercomputer, beat Garry Kasparov, the reigning world champion. It was a triumph of machine over man—up to a point. Deep Blue had been programmed using rules written by human players. It played in a human style, but better and more quickly than any human could.

Jump to 2017, when Google unveiled AlphaZero, a computer that had been given the rules of chess and then taught itself how to play. It took four hours of training to be able to beat Stockfish, the best chess

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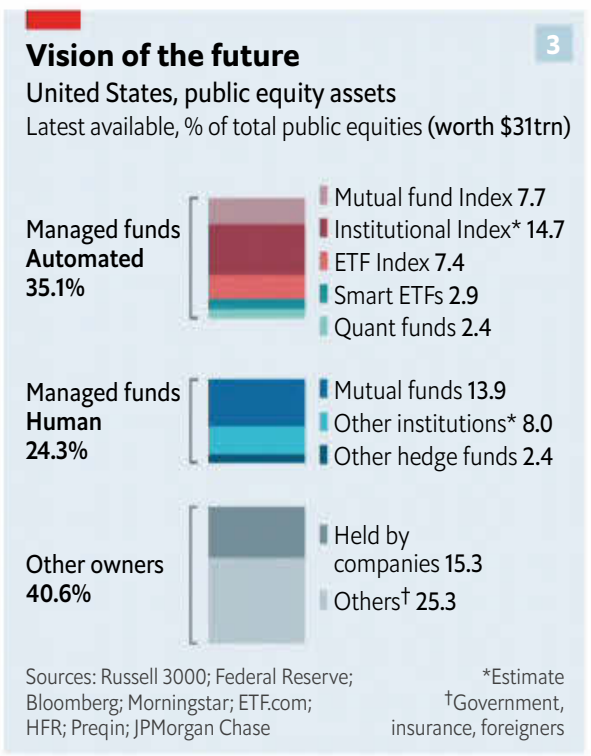


machine programmed with human tactics. Intriguingly, AlphaZero made what looked like blunders to human eyes. For example, in the middlegame it sacrificed a bishop for a strategic advantage that became clear only much later.

Quant funds can be divided into two groups: those like Stockfish, which use machines to mimic human strategies; and those like AlphaZero, which create strategies themselves. For 30 years quantitative investing started with a hypothesis, says a quant investor. Investors would test it against historical data and make a judgment as to whether it would continue to be useful. Now the order has been reversed. "We start with the data and look for a hypothesis," he says.

Humans are not out of the picture entirely. Their role is to pick and choose which data to feed into the machine. "You have to tell the algorithm what data to look at," says the same investor. "If you apply a machine-learning algorithm to too large a dataset often it tends to revert to a very simple strategy, like momentum."

But just as AlphaZero found strategies that looked distinctly inhuman, Mr Jacobs of Lazard says AI-driven algorithmic investing often identifies factors that humans have not. The human minders may seek to understand what the machine has spotted to find new "explainable" factors. Such new factors will eventually join the current ones. But for a time they will give an advantage to those who hold them.

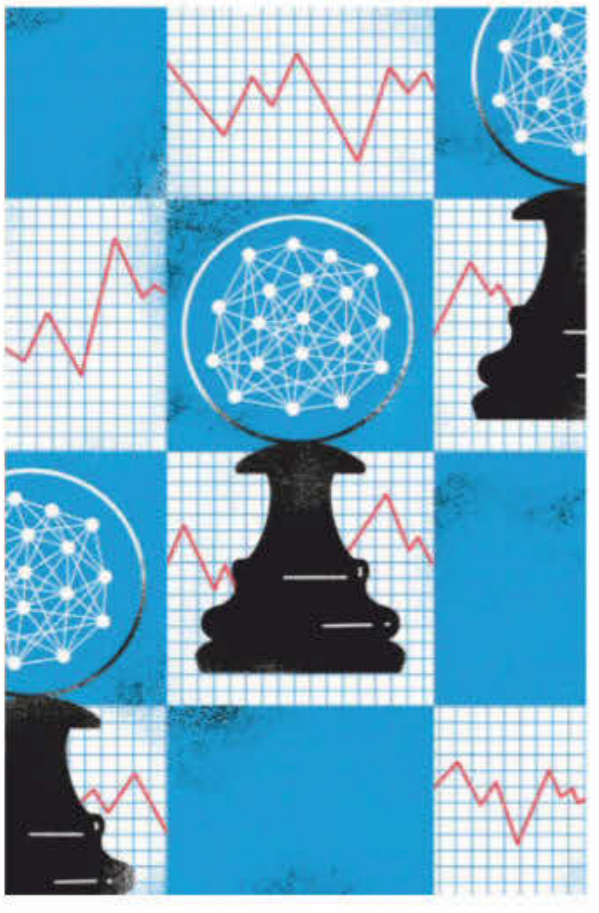
Many are cautious. Bryan Kelly of Yale University, who is AQR's head of machine learning, says its fund has found purely machine-derived factors that appeared to outperform for a while. "But in the end they turned out to be spurious." He says combining machine learning with economic theory works better.

Others are outright sceptics—among them Mr Dalio. In chess, he points out, the rules stay the same. Markets, by contrast, evolve, not least because people learn, and what they learn becomes incorporated in prices. "If somebody discovers what you've discovered, not only is it worthless, but it becomes over-discounted, and it will produce losses. There is no guarantee that strategies that worked before will work again," he says. A machine-learning strategy that does not employ human logic is "bound to blow up eventually if it's not accompanied by deep understanding."

Nor are the available data as useful as might initially be thought. Traditional hedge-fund managers now analyse all sorts of data to inform their stockpicking decisions: from credit-card records to satellite images of inventories to flight charters for private jets. But this proliferation of data does not necessarily allow machines to take over the central job of discovering new investment factors.

The reason is that by the standards of AI applications the relevant datasets are tiny. "What determines the amount of data that you really have to work from is the size of the thing that you're trying to forecast," says Mr Kelly. For investors in the stockmarket that might be monthly returns, for which there are several decades' worth of data—just a few hundred data-points. That is nothing compared with the gigabytes of data used to train algorithms to recognise faces or drive cars.

An oft-heard complaint about machine-driven investing takes quite the opposite tack. It is not a swizz, say these critics—far from it. It is terrifying. One fear is that these algorithms might prompt more frequent and sudden shocks to share prices. Of particular concern are "flash crashes". In 2010 more than 5% was wiped off the value of the S&P 500 in a matter of minutes. In 2014 bond prices rallied sharply by more than 5%, again in a matter of minutes. In both cases markets had mostly normalised by the end of the day, but the shallowness of liquidity provided by high-frequency traders was blamed by the regulators as possibly exacerbating the moves. Anxieties that the machine takeover has made markets unmanageably volatile reached a frenzy last December, as prices plummeted on little news, and during the summer as they gyrated wildly.



In 1987 so-called program trading, which sold stocks during a market dip, contributed to the Black Monday rout, when the Dow Jones index fell by 22% in a single day. But the problem then was "herding"—money managers clustering around a single strategy. Today greater variety exists, with different investment funds using varying data sources, time horizons and strategies. Algorithmic trading has been made a scapegoat, argues Michael Mendelson of AQR. "When markets fall, investors have to explain that loss. And when they don't understand, they blame a computer." Machines might even calm markets, he thinks. "Computers do not panic."

Money never sleeps

Another gripe is that traditional asset managers can no longer compete. "Public markets are becoming winner-takes-all," complains one of the world's largest asset managers. "I don't think we can even come close to competing in this game," he says. Philippe Jabre, who launched his hotly anticipated eponymous fund, Jabre Capital, in 2007, said that computerised models had "imperceptibly replaced" traditional actors in his final letter to clients as he closed some funds last December.

And there remains a genuine fear: what happens if quant funds fulfil the promises of their wildest boosters? Stockmarkets are central to modern economies. They match companies in need of cash with investors, and signal how well companies are doing. How they operate has big implications for financial stability and corporate governance. It is therefore significant that algorithms untethered from human decision-making are starting to call the shots.

The prospect of gaining an edge from machine-derived factors will entice other money managers to pile in. It is natural to be fearful of the consequences, for it is a leap into the unknown. But the more accurate and efficient markets are, the better both investors and companies are served. If history is a guide, any new trading advantage will first benefit just a few. But the market is relentless. The source of that advantage will become public, and copied. And something new will be understood, not just about the stockmarket, but about the world that it reflects. ■

Be The Storm

LEVANTE TROFEO

MASERATI

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Britain's new Brexit plan

An offer they can refuse

MANCHESTER

The prime minister's long-awaited Brexit proposal seems unlikely to produce a deal. Another extension beckons

FOR WEEKS the European Union has complained that, even as the October 31st deadline for Britain to leave drew nearer, Boris Johnson's new government was failing to offer clear proposals to amend Theresa May's failed Brexit deal. All Mr Johnson would say was that the hated backstop, an arrangement to avert a hard border in Ireland by keeping the United Kingdom in a customs union, had to go. This week, after a tub-thumping party conference speech in Manchester under the slogan "Get Brexit done", Mr Johnson at last put forward his plan. Yet despite his labelling it a "fair and reasonable compromise", it got a cool reception from the EU, which sees it as a breach of promises, not the basis for a new deal.

As expected, Mr Johnson's proposal would keep Northern Ireland under the EU's agri-food regulatory regime. He now wants to expand this to cover manufactured goods as well. But Great Britain would opt out of the rules, implying checks on goods moving between Northern Ireland and the mainland. And the plan would apply for only four years after the transition period ends in 2021, at which point the Northern Irish Assembly would decide whether to remain aligned with the EU or adopt British rules. Meanwhile, the whole UK would leave the customs union. This implies customs checks between Northern Ireland and the south—though Mr Johnson insists these could be automated and, when necessary, conducted away from the border. He also wants Northern Ireland out of the EU's value-added-tax regime.

The plan was welcomed by Tory Brexiteers and, more importantly, by the Northern Irish Democratic Unionist Party, which supports the Tories in Parliament. Yet it has little appeal in Brussels or, critically, Dublin. EU governments see it as a big step back from undertakings given by Mrs May in December 2017 to maintain an open, frictionless border in Ireland, preserve the all-island economy and avoid new customs or border controls anywhere on the island. They are unhappy about the proposed unilateral four-year time limit. And they do not believe that promises to use new technology, exemptions for small businesses and a system of trusted traders would be enough to avoid physical controls at or near the border.

British ministers were out in force this week selling the new plan as what one called a "landing zone" that could satisfy all sides. Mr Johnson suggested that, just as he had compromised, so it was now the EU's turn. Some in Brussels were relieved that he had not said it was his final, "take it or leave it" offer, as initial reports had suggested. A few even hoped it might be tweaked to include alignment on customs as well as on regulations, or to revert to a Northern Ireland-only backstop. Yet the signals from Downing Street suggest that the prime minister sees little scope for more compromise on his side.

His sales pitch to the EU ahead of the crucial European Council summit on October 17th-18th rests on two arguments. The first is that only a deal close to his can ever pass in Parliament. For evidence, he cites the Brady amendment, a version of Mrs May's Brexit deal minus the backstop, which MPs voted for in January. The second is that, if the EU is unwilling to accept his ▸▸

plan, he will have no alternative but to leave with no deal on October 31st. And although that may be bad for Britain, it will also hurt the EU, especially Ireland.

Yet in Brussels neither argument seems convincing. The EU knows that Mr Johnson has no parliamentary majority. He cannot rely even on his own Tory MPs, since some hardliners prefer no-deal to anything else. This means he needs at least some Labour backing to pass any deal. And although there are Labour MPs who share the Tories' desire to "get Brexit done", and many are nervous about no-deal, few will want to rescue a prime minister whom they mistrust as a populist popinjay.

As for no-deal, everyone is aware of Mr Johnson's repeated promises to take Britain out of the EU on October 31st, "do or die". His ministers loyally repeated this pledge in Manchester. Mr Johnson himself argued forcefully against any further dither or delay. Yet Brussels also understands the terms of the Benn act that was passed by Parliament last month. This requires the prime minister to seek the agreement of the EU to a three-month extension of the deadline if, by October 19th, he has neither secured a deal nor won parliamentary approval for a no-deal Brexit.

January is the new October

Mr Johnson says he will obey the law, but he also insists that Britain will leave the EU on October 31st, whatever happens. These two positions are clearly in conflict. Hence a favourite parlour game at the Tory conference: to hunt for loopholes in what Mr Johnson likes to call the "Surrender Act". Some suggest he might formally ask for an extension but secretly tell Brussels he does not want one. Or he could invite other EU governments to refuse an extension, so as to exert more pressure on MPs to accept a deal. He might invoke an emergency under the Civil Contingencies Act, to suspend the law. Some ministers claimed there was a secret wheeze to get round the Benn act, but that it was confidential.

Yet one of the act's authors, Dominic Grieve, a former Tory attorney-general, insists its drafting is legally watertight. He characterises the suggested tricks to try to get round it as "far-fetched and reputationally catastrophic". He and his supporters, who have a majority in Parliament, are ready to legislate again if need be. They would go to court at the slightest hint that Mr Johnson might flout their law. Some even talk of passing a "humble address" to invite the queen to sack her prime minister in such circumstances.

Any extension of the October 31st deadline would be a humiliation for Mr Johnson, which is why some suggest he should resign instead. Yet there could be ways to turn matters to his advantage. One idea is to attach a confirmatory referendum to some version of a Brexit deal, which might win over a majority of MPs. But the prime minister is averse to the notion of a second vote. He would prefer a general election which, after being forced against his will to request an extension, he could fight under the banner of backing the people who voted to leave the EU against an establishment determined to stand in their way.

The obstacle to this is the 2011 Fixed-term Parliaments Act. This requires a two-thirds majority of MPs to vote in favour of any early dissolution of Parliament. The effect has been to give the Labour opposition a veto over the prime minister's repeated calls for an early general election. The irony that it was a Conservative-led government, under David Cameron, that passed this particular piece of legislation is surely not lost on Mr Johnson. ■

Royals and the media

Duke it out

Prince Harry accuses the tabloids of hounding his wife as they did his mother

TRUE TO FORM, Britain's tabloid newspapers have been revelling in the Duke and Duchess of Sussex's ten-day tour of southern Africa, which came to an end on October 2nd. The flattering headlines—"Meg me smile", "Royals Duchy Feely in Africa" and "Tutu cute for words" (after baby Archie high-fived Archbishop Desmond Tutu)—came thick and fast, alongside pictures of Meghan meeting young fans. "She stunned in a cream midi shirt dress and statement heels," gushed a typical account.

But the real stunner came from Prince Harry. The day before the tour's end he launched an attack on the very same tabloids, accusing them of waging a "ruthless campaign" against Meghan that threatened to repeat the tragedy of his mother's death. Princess Diana died in a car crash in 1997, aged 36, after being pursued by paparazzi. As for Meghan, "I have been a silent witness to her private suffering for too long," Harry wrote.

Royal-watchers agree that the couple have had a bad run of stories since their wedding last year. Being skewered over the £2.4m ($3m) of taxpayer funds spent renovating their house particularly rankled. But the timing of Harry's statement, during their successful African tour, was unwise, says Dickie Arbiter, a former press secretary for the queen. It is thought that the statement took the press office at Buckingham Palace by surprise.

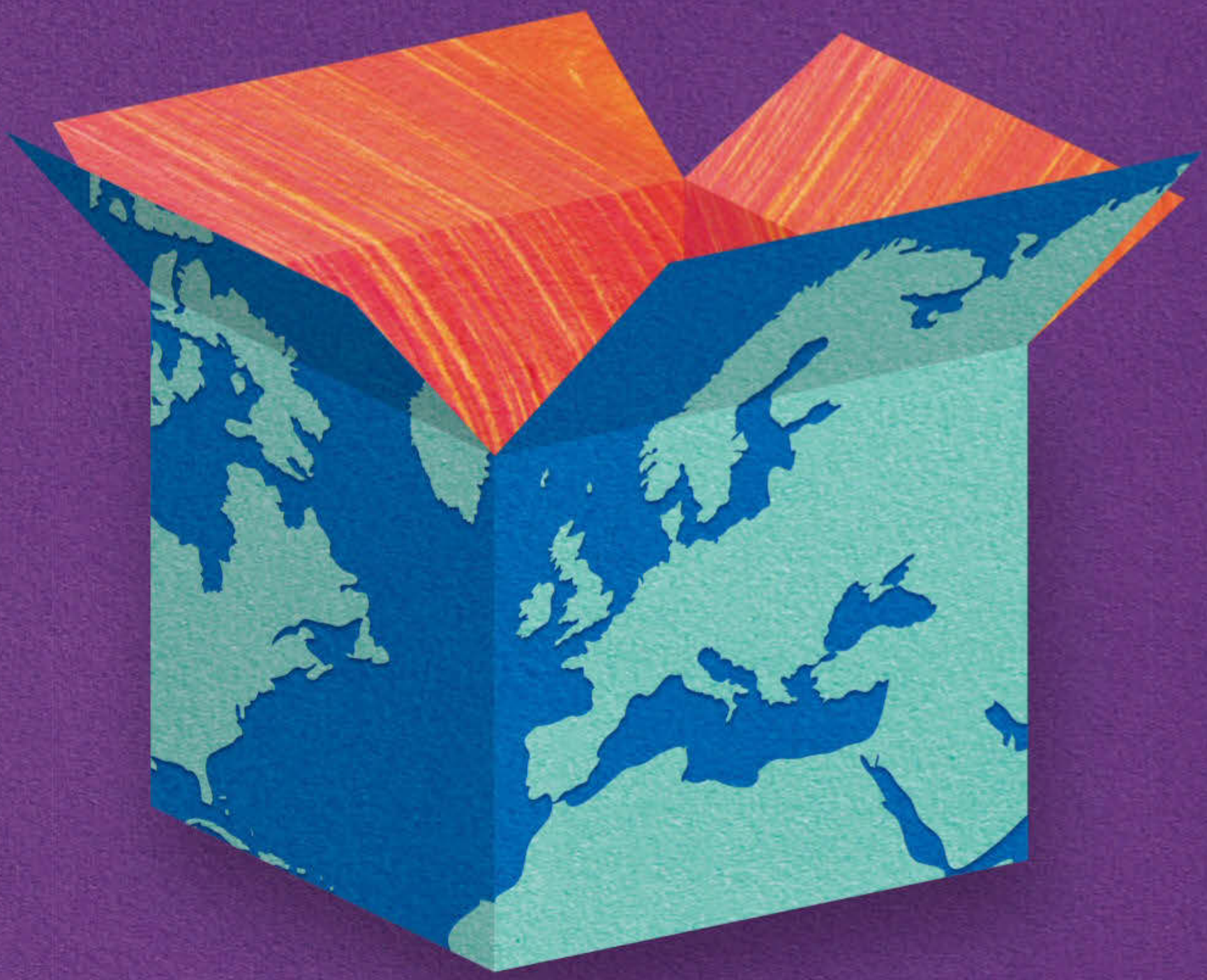
Battle royale

First among the accused newspapers is the *Mail on Sunday*, which Meghan is suing for copyright infringement, misuse of private information and violating data-protection law. In February the 1.2m-circulation tabloid published excerpts from a handwritten letter to her estranged father, Thomas Markle. Her letter asked him to stop talking to the media. But the reason the missive was known about was that Meghan's close friends had talked about it to *People*, an American celebrity magazine. Mr Markle then shared the letter with the *Mail*.

The Sussexes might go all the way to court, and win. English law decrees that the author of a letter retains ownership of its content, regardless of who possesses the piece of paper. Harry also charges the *Mail on Sunday* with selecting from the missive to mislead readers. The paper says it stands by its story and that it will defend the case "vigorously".

What worries tabloids more than the copyright issue is that Meghan might win on privacy grounds. That would be important for all papers, "because every two-bob celebrity would use that to assert privacy rights against us," says one newspaper editor. Britain has no clear privacy law, so precedent matters.

Not that the press is overly cowed by Harry's broadside. Editors say the Sussexes are operating outside the royal tradition of "never complain, never explain", and could be reined in. The case may end up being settled out of court. Meghan once played a paralegal in the courtroom drama "Suits", quips one newspaper executive, "but does she want to appear on the stand in real life?"



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The prime minister

Not such a ladies' man

MANCHESTER

A widening gender gap in the prime minister's approval ratings

BORIS JOHNSON arrived at the Conservative Party's annual conference in Manchester expecting questions on Brexit and how to fund his copious spending pledges. Instead the prime minister spent much of his trip denying that he groped a journalist at a dinner party two decades ago.

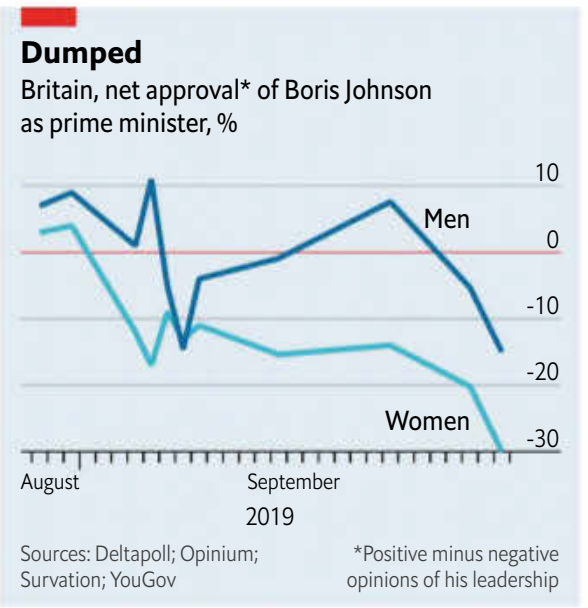
Charlotte Edwardes, now of the *Sunday Times*, said Mr Johnson squeezed her upper thigh under the table at a drunken lunch at the *Spectator*, which he edited at the time. The prime minister also faced more questions about how Jennifer Arcuri, an alleged former lover, was able to secure £126,000 ($155,000) in grants while he was mayor of London. Both Mr Johnson and Ms Arcuri have denied any impropriety.

Unfortunately for the prime minister, his problems with women go well beyond these two cases. Female voters have doubts about him. On the surface, the latest polls show men and women are about equally likely to vote Conservative. But when the questions turn to Mr Johnson himself, big gaps emerge (see chart). Among men, Mr Johnson has an approval rating of minus 15, according to YouGov, a pollster. Among women it drops to minus 30.

After Mr Johnson's suspension of Parliament was judged unlawful by the Supreme Court last month, men were almost evenly split on whether he should resign, with 49% in favour and 48% against, in polls by Survation. Yet among women, 53% thought he should quit, whereas only 36% wanted him to fight on. Mr Johnson's Brexit strategy may also leave women voters cold. Although there was no real gender split in the referendum result, women are in general more cautious about the terms of departure, being less gung-ho about no-deal and less likely to support ruses such as suspending Parliament.

Political parties fall over themselves to woo female voters. In 1997 Labour talked of "Worcester woman", an imagined median voter who lived in the marginal Midlands seat. By 2010 she had evolved into "Asda mum", matriarch of the hard-working families whom all parties scrapped over. Women are more likely to be undecided going into elections and make up their minds close to election day, points out Rosie Campbell of Kings College London, in "Sex, Lies and Politics", a recent book.

Historically, women were more likely than men to vote Conservative. But under Tony Blair and Gordon Brown, Labour whittled away the Tories' lead among women until it barely existed. It was David Cameron's success in regaining a clear lead among women at the 2015 general election that helped the Conservatives to their only majority since 1992. Two years later this trend reversed, when Labour won the popular vote among women (but lost overall).



Some Tories are unbothered. One MP hails the Conservatives' new image as "the macho party". At the party's conference this week, where Mr Johnson went down a storm with members, the most notable demographic gap was not age but gender. Whereas the number of young men strolling around in smart blue suits felt higher than in previous years, there was still a dearth of women. In a typical fringe event, bald blokes outnumbered women.

The Tories have some cause to be bullish. Women may mistrust Mr Johnson, but they still prefer him to Jeremy Corbyn, Labour's leader. Mr Johnson has a 25-point lead over Mr Corbyn when men are asked to pick who they would prefer as prime minister, according to Opinium. With women, the lead drops to a still-comfortable 18.

Women tend to favour higher public spending, particularly on health and education, whereas men are more moved by promises of tax cuts, according to Ms Campbell. Given the government's recent expensive promises, the Tories may yet win over wavering women. But the run of scandals around the prime minister will make that task harder. ■

Political violence

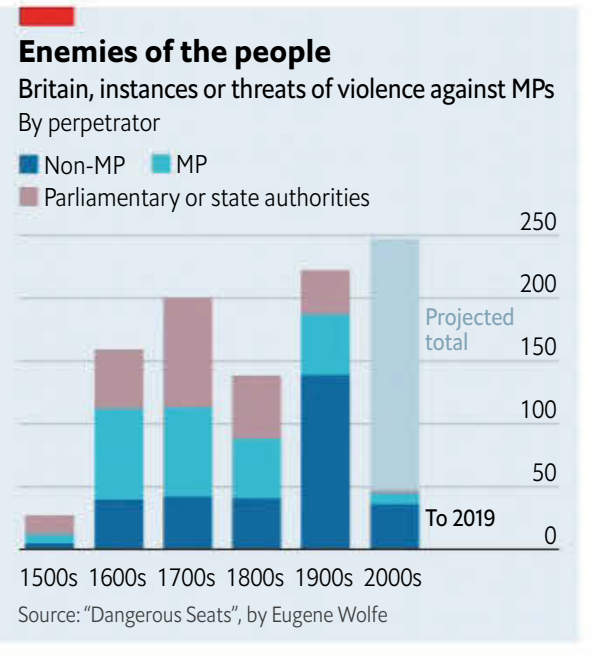
Fighting talk

The threat to MPs from the public is greater than ever

THAT THE punch allegedly thrown by a Conservative MP at his party's conference in Manchester this week made headlines is a sign of how rare that sort of thing has become. Until the 19th century, parliamentarians were a rowdy bunch, challenging each other to duels over matters including the pronunciation of a Greek word, whether a window should be open or shut, and an insult to a dog. It is only since the dawn of the 20th century that physical fights among MPs have declined, in part because violence came to be associated less with aristocratic honour than with the lower classes.

Yet just as the danger to MPs from each other, and from state authorities, began to recede, a growing threat emerged from another source: the people in whose name they governed. Between the 17th and 19th centuries, a quarter of all incidents of violence or threatened use of force against MPs involved members of the public. In the 20th century that jumped to nearly two-thirds. Over the past 19 years the proportion stands at three-quarters, according to data gathered by Eugene Wolfe, the author of "Dangerous Seats", a new book on parliamentary violence in Britain (see chart). Until the 19th century it was typically angry mobs that set upon politicians. Since the 20th, violence has tended to come from individuals or organised groups.

The first such campaign was organised by the suffragettes, who knocked politicians' hats off, attacked them with whips and hatchets, and threw bricks into Downing Street. Measured by the number of attacks on parliamentarians, rather than by ▸▸



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their severity, the suffragettes were more active even than Irish republicans.

Two parallel trends contributed to the rise of these "outsider" attacks on MPs. The first was the rise of constituency surgeries, which exposed politicians to their electorate more frequently and intimately than in the past. The second was the use of violence as a tactic to attract media attention to a cause—what the suffragettes started, Fathers4Justice and other fringe groups have carried on. "The irony," says Mr Wolfe, is that "people are less tolerant of violence than they used to be, but they make an exception for politicians."

Much of this has been relatively harmless: eggs, flour bombs, custard pies and chocolate éclairs are the weapons of choice, along with, more recently, milkshakes. By and large, politicians have taken it in their stride. "Obviously not one of my fans," said Ed Miliband, then the leader of the opposition, after getting egged in 2012.

That changed in 2016 after the murder of Jo Cox, a Labour MP, by a far-right fanatic, days before the Brexit referendum. Her killing caused politicians to rethink their approach to online threats. Opposition MPs have called on Boris Johnson, the prime minister, to stop using words such as "surrender" and "betrayal" in relation to Brexit, arguing that it puts them at risk. Mr Johnson has dismissed this as "humbug".

Women and ethnic minorities suffer "the lion's share of the abuse", Eric Hepburn, head of parliamentary security, has said. Social media have made it easier to send violent threats. "The amount of abuse has definitely gone up," Adrian Usher of the Metropolitan Police told a parliamentary committee in April, adding that it was unclear whether there was more abuse in society at large, or a greater willingness to abuse MPs. The answer, if current trends are any indication, is probably both. ■

Europe's textile trade

Cut from the same cloth

FLORENCE

Brexit casts a shadow over a commemoration of historic ties

In an elegant palazzo on the banks of the river Arno on September 26th, Ian Gardner unfolded a "half-yard" (46cm square) of serge to show his Italian hosts. Their predecessors, he told them, gave it its name: perpetuana. Woven from the wool of hardy sheep from the west of England, perpetuana was so called because of its almost endless durability.

Mr Gardner, a retired fashion retailer, is Master of Exeter's Incorporation of Weavers, Fullers and Shearmen, one of the last craft guilds outside London. With just weeks before Brexit and the loss of preferential trading terms between Britain and the European Union, Mr Gardner and a party of his members were in Florence to commemorate a pan-European trade in cloth that helped lay the foundations of Western civilisation.

Starting in the 15th century, galleys from Florence, having delivered embroidered cloth to Sluis on the Dutch coast, would dock at Southampton and Dartmouth to take on bales of wool and perpetuana. The cloth was further processed and embellished in Florence before re-embarcation for sale across Europe. The Florentines with whom the English traded had their own professional association, the Arte di Calimala, which was subsumed in the 18th century into the Camera di Commercio. Last week's modest ceremony, one of several events to mark the 400th anniversary of the Exeter Incorporation's royal charter, was held at the Camera's headquarters.

All sides benefited handsomely from the triangular wool trade. By the 18th century, Exeter was one of Britain's richest cities. Among the many by-products of the trade was Barings Bank, brought down by a rogue trader only in 1995. In Florence the cloth trade helped enrich the Medici family and finance the Italian Renaissance, creating a link between the sample of beige cloth unfurled last week and the masterpieces hanging in the Uffizi gallery a few hundred metres away.

The Incorporation's activities today are largely ceremonial and charitable. Its members no longer have to be in the textiles business. Like other Britons, said its unofficial historian, Simon Whewell, they divide more or less evenly on Brexit. But Remainers seemed to be in the majority among those visiting Florence. "I think it's a terrible mistake," said Roger Persey, a farmer, as he stood with a glass of Italian wine at an open-air reception atop the Camera's headquarters.

Mr Whewell called it "just bizarre". But, taking the long view, he was moderately sanguine. "Over the centuries, we've been through plagues and wars yet trade has always found a way around barriers," he said. "It's a bit like water flowing downhill."

Florentine fashionista

Trans rights

A new gender agenda

Draft guidelines regarding transgender pupils have angered women's groups

The ongoing struggle within Western civilisation over who is a boy and who is a girl took another small twist in September with the leak of new guidelines for English and Welsh schools regarding transgender pupils. The draft rules, drawn up by the Equality and Human Rights Commission (EHRC), which enforces non-discrimination laws, are expected to be sent to schools this month. But after the Scottish government cancelled similar guidelines in June, activists in England have launched a campaign to halt the EHRC's new guidance, saying that it would put girls at risk.

Under the new framework, schools would be advised and sometimes required to open up areas of school life that have until now been separated by sex to those who identify with that gender. So a male child who identifies as a girl could be allowed to use girls' changing rooms, or be admitted to an all-girls school. The guidelines mean that, on school trips, trans pupils could lawfully be placed in a bedroom with a child of the opposite sex.

Trans-rights groups say new, inclusive guidance is necessary. Stonewall, one such lobby, says it is "vital all schools take active steps to create inclusive environments for trans pupils." Mermaids, a support group for transgender children, opposes any delay to the new guidelines: "Organisations have been working for years to build a constructive source of information on best practice for schools," it says.

Yet some women's organisations argue that the new guidelines uphold trans people's rights at the expense of those of girls. The legislation that the EHRC is bound to uphold is the Equality Act of 2010. Seven of the act's "protected characteristics" apply

in schools: sex, religion, sexual orientation, race, disability, pregnancy and gender reassignment. Schools must weigh up how any policy affects people in those groups—for instance, how building works affect the disabled, or how food in a cafeteria might suit Muslim or Jewish children.

Nicola Williams of Fair Play for Women, a rights group, says that whereas transgender children's interests are consistently protected in the EHRC's guidelines, the rights of girls are not given equal weight. "It must be made explicit that sex and gender identity are different," she says. "It is especially important for girls to be able to recognise and name the male sex, otherwise the right to assert their boundaries is taken away." If a girl feels uncomfortable that a male child who identifies as a girl is using the girls' changing room, the new guidance says that the girl who feels awkward, not the trans child, should go and change elsewhere. "We need to be sympathetic to kids with gender dysphoria but without impinging on the rights of other children," says Tanya Carter of the Safe Schools Alliance, another rights group. "There are horrendous safeguarding issues around these guidelines."

Another criticism concerns procedure. The EHRC said in 2017 that it would draw up new guidelines in partnership with two trans-rights groups. Yet organisations advocating for girls' rights say there has been almost no consultation with them. "They only seem to be listening to the trans lobby groups," says Ms Carter. The EHRC insists that it has consulted with women's groups.

The guidelines are due to be released amid a steep, unexplained increase in the number of children identifying as transgender. The Gender Identity Development Service (GIDS), the NHS's only clinic for young transgender people, says the number of children referred there has risen more than 30-fold in the past decade, reaching 2,590 in 2018-19. Some were as young as three.

Marcus Evans, a governor of the NHS trust under which GIDS operates, resigned in February over concerns that its "affirmative" model, which the EHRC also espouses, can lead too quickly to the prescription of puberty blockers and cross-sex hormones. He wants the process to slow down. "A high number of kids with autism and mental-health issues, as well as kids who may just be gay, are now identifying as trans, as if they believe this identity will solve their difficulties," he says.

Parliament's Women and Equalities committee published a report in July proposing that future EHRC guidance on sex and gender should be approved by MPs. The EHRC reiterates that the recently leaked guidelines were still in draft form. But critics are having none of it. Ms Carter warns: "This is complete regulatory capture." ■

The BBC

Any answers?

Everyone agrees that the BBC should be impartial. But what does that mean?

Television critics as improbable as Jeremy Corbyn, the Labour leader, and Sajid Javid, the chancellor, have been chewing over a row about race and impartiality at the BBC. It began on September 25th when Naga Munchetty, a breakfast-show presenter, was rebuked by a BBC tribunal for speaking on air of her fury at Donald Trump's insistence that four non-white congresswomen should "go back" to where they came from. Tony Hall, the corporation's director-general, defended the tribunal's ruling, only to overturn it after five days of criticism. The affair was covered live, not least by the BBC's own reporters.

All British broadcasters are bound by rules on impartiality. But the BBC in particular, funded as it is by a tax on viewers, is regarded as "public property", says Sir Peter Bazalgette, an ex-BBC man who is now chairman of ITV, a commercial rival. This makes such disputes tricky territory for the corporation. Its 3,000-word impartiality guidelines distinguish between issues that are merely "controversial" and those that are "major matters". "Advice on whether a subject is 'controversial' is available from Editorial Policy," they state.

It has not been impartial on every hot topic. John Ryley, now head of Sky News, remembers a grandee telling him, as a trainee at BBC News in the late 1980s, that impartiality applied universally. Was the corporation therefore impartial on apartheid, he asked? "He said, 'Of course we're not.' So things aren't quite as binary as he suggested." The rules do not require giving anti-Semites airtime. Nor need facts be "balanced" by those who do not believe them. Fran Unsworth, director of news, reminded staff last year that reports on climate change need not feature "deniers", "in the same way you would not have someone denying that Manchester United won 2-0 last Saturday. The referee has spoken."

Naga's saga comes to an end

But the rules are clear that viewers should not be able to discern journalists' views on political issues. John Simpson, a foreign correspondent, and Andrew Neil, a presenter, have got into hot water for sounding off on Twitter. Some journalists think Ms Munchetty's remarks fell into this category. She appeared uncomfortable as her co-presenter, Dan Walker, prompted her to comment. "I'm not here to give my opinion," she said, after doing just that.

Others argue that racism is so beyond the pale that these rules do not apply. Sir Peter argues that, since society deems racism unacceptable, it must be acceptable for a presenter to say so. "This is a question of asserting public morality, not impartiality," he says, "as it would be with child abuse, theft or terrorism." The BBC's initial ruling reflected both viewpoints, endorsing Ms Munchetty's decision to say that Mr Trump's phrase was "embedded in racism", but criticising her for saying she was "absolutely furious" with the president.

The spread of identity politics will make such decisions trickier. Some broadcasters reckon journalists' "lived experience" adds insight to their reporting. One cites Frank Gardner, the BBC's security correspondent, who spoke of his frustration over long waits on empty planes to be helped to the ground in his wheelchair. It is absurd, they argue, that a presenter can criticise racist language but not its speaker.

In such circumstances, impartiality can seem robotic or even offensive. Yet editors will continue to defend it. "We have a lot of youngsters in our newsroom who see the world slightly differently," says Mr Ryley, 57. "They say, 'Why can't we say this? It is what I believe.' But I think you should be able to articulate that being impartial is good for the brand. By being impartial, people will trust us." ■

Bagehot | Richard Milhous Johnson

The prime minister has a striking amount in common with America's 37th president

THE MAN who this week fulfilled his lifelong dream of addressing the Conservative Party's annual conference as prime minister is routinely compared to Donald Trump. They both have crazy hair. They were both born in New York. They both have the ability to send their supporters into paroxysms of delight. But a more intriguing comparison is with the original architect of the Republican Party's populist turn, Richard Nixon.

This might sound far-fetched. In terms of personality, the two men could hardly be more different. Nixon was a pessimist who liked to brood alone with a bottle of whisky, whereas Mr Johnson is a gregarious optimist. Yet when it comes to their wider political personalities and strategies, the similarities are striking.

Nixon is remembered today as a hardline conservative. He made his reputation as a communist-baiting member of the House un-American Activities Committee and destroyed his reputation as president with the Watergate burglaries and the White House tapes of his ranting against the elites. Yet for much of the time he governed as a liberal. He pioneered a wide range of liberal policies: affirmative action, with the Philadelphia Plan; environmentalism, with the Clean Air Act; and workplace regulation, with the Occupational Safety and Health Administration. He chose as his chief adviser on domestic policy Daniel Patrick Moynihan, a lion of liberalism. Perhaps most importantly of all, he opened diplomatic relations with China.

Nixon's great aim was to fuse conservative and liberal themes, to produce a new governing philosophy. Combine the Democrats' commitment to big government with the Republicans' belief in traditional values—and throw in a bit of demagoguery—and he would be invincible. A seminal moment in his intellectual evolution came when Moynihan encouraged him to read Robert Blake's biography of Disraeli and he came to the conclusion that "Tory men with liberal policies" held the key to progress.

Mr Johnson represents the same confusion of reactionary and liberal impulses. His journalism is full of dogwhistles about Muslims' "letterbox" burqas and the like. A Downing Street spokesman has accused prominent Remainers of "colluding" with the European Union. Yet Mr Johnson was also a popular mayor of Britain's most liberal city, who supported gay rights and amnesty for illegal immigrants. He continues to regard himself as a liberal globalist who opposes the EU because it is a protectionist trading bloc.

Mr Johnson tries to reconcile these tensions by supporting a combination of big government and old-fashioned patriotism. His mantra is that Britain needs to "get Brexit done" so that it can turn to the real work of lavishing money on hospitals, schools and the police. In private he justifies his bulldog stance as the only thing that can save Britain from a nativist backlash if Brexit does not happen, or a far-left Labour government if austerity is maintained.

When it came to putting his philosophy into practice, Nixon was dragged relentlessly to the right. He pursued a "Southern strategy" of recruiting into the Republican fold Southern whites who had voted Democrat since the civil war but were alienated by Lyndon Johnson's Civil Rights Act. This was part of a wider national strategy of recruiting members of the "great silent majority", alienated by those "limousine liberals" who were soft on crime and friendly with foreign powers. He surrounded himself with hardmen who understood that making omelettes meant breaking eggs. He foamed with contempt for establishment types such as businessmen ("those farts") and university professors ("those assholes"), and unleashed his vice-president, Spiro Agnew, to denounce the "nattering nabobs of negativism". He lived in fear that he would be outmanoeuvred on the right by George Wallace, who preached a purer version of his anti-establishment backlash.

The same is happening with Mr Johnson. He intends to pursue a northern strategy in the next election, targeting pro-Brexit seats in the historically Labour-voting Midlands and north, to make up for the loss of pro-Remain seats in Scotland and the south-east. This is part of a wider national strategy of appealing to voters who are tired of being condescended to by metropolitan elites. He has deployed inflammatory rhetoric about Parliament's "Surrender Act" to stop a no-deal Brexit. He has surrounded himself with hardmen such as his chief adviser, Dominic Cummings, who seems willing to do whatever it takes to make Brexit happen, and Sir Lynton Crosby, a master of the political dark arts. His establishment-bashing has extended to normally pro-Tory groups such as company bosses ("fuck business") and even to the institution of Parliament itself. Completing the Nixon analogy, Mr Johnson has his own George Wallace to worry about in the shape of Nigel Farage and his Brexit Party.

Defeated, but not finished

Nixon's strategy destroyed the man himself but revolutionised his party. By the early 2000s the Republicans were a big-government party with a Southern president, George W. Bush, and a Southern House majority leader, Tom DeLay. In 2016 Mr Trump won the presidency with votes from the Republican South and from blue-collar workers in swing states. The fate of Mr Johnson and his Nixon-like strategy is still to be written. He may be the shortest-serving prime minister in history. There is even talk of prosecuting him. The northern strategy will be harder to pull off than the Southern strategy: Mr Johnson is an Eton-educated Tory trying to appeal to working-class voters, whereas Nixon was a self-made Californian; the north is scarred by its industrial past whereas the sunbelt was rising. But if he can pull off a remarkable election victory by offering certainty—or the illusion of certainty—while his opponents offer dither and delay, the result would be a long-term change in the nature of the Conservative Party, just as far-reaching as the one that Nixon began in the Republicans. Then Britain really would be in with a chance of producing its own Donald Trump. ■

Europe's right-wingers

Populists under pressure

BUDAPEST, ROME AND VIENNA

After a series of reverses they are down, though certainly not out

LOOK BACK a year, and remember how disquieting European politics seemed. Matteo Salvini, by far the most popular politician in Italy, and France's equally xenophobic Marine Le Pen had just teamed up with Steve Bannon, Donald Trump's former strategist, as part of what Mr Bannon called The Movement. This alliance of nativist parties of the right, soon to acquire a "gladiator school" based in a monastery near Rome, intended to sweep the forthcoming European elections and tilt the continent's politics firmly away from the liberal centre ground. They had their difficulties, of course. The Eurosceptic and anti-migrant Alternative for Germany (AfD) decided to steer clear of Mr Bannon, and other right-wingers were wary too. But, with or without the American Svengali, populists seemed in the ascendant. In France the *gilets jaunes* (yellow jackets), who drew support from the radical right and left, were about to explode onto the streets.

The scene today is rather different. The European Parliament elections in May dashed Mr Bannon's hopes. Mr Salvini's Northern League did do well. But elsewhere the parties of the hard right fell back, or at best marked time. Since then, things have on the whole got worse for them. Mr Salvini is out of Italy's government, having bungled an attempt to secure uncontested power, and has fallen back in the polls; in Hungary, Viktor Orban's populist ruling party faces the threat of losing control of the country's capital, Budapest, and perhaps other cities at local elections later this month. The *gilets jaunes* have been tamed by President Emmanuel Macron. And this week came the news that another key component of the populist right, Austria's, has come to grief at the ballot box.

Gloating is not advised

All of these setbacks are partial and reversible. Even where the right-wingers have fallen back in places, they are far from a spent force. In Poland, for instance, the Law and Justice party, another example of the populist right, is expected to be re-elected on October 13th; the AfD also did well in state elections in Germany last month.

But liberals can be excused a little satisfaction as they look at recent events. Take **Austria** first. In May the government collapsed after two German newspapers revealed footage from a video shot inside an Ibiza villa in 2017, showing Heinz-Christian Strache, Austria's vice-chancellor and the leader of the hard-right Freedom Party (FPÖ), discussing corrupt deals with a woman posing as a Russian oligarch's niece. The election on September 29th, triggered by the scandal, was a disaster for the FPÖ. It took just 16% of the vote, almost ten points less than in the 2017 election, and lost 20 MPs. Many voters defected to the centre-right People's Party (ÖVP), which until Ibiza-gate was the FPÖ's senior partner in government. Its young leader, Sebastian Kurz, will now sound out the Greens, the other big winner, as a coalition partner. Mr Strache has quit politics.

Mr Kurz had invited the FPÖ into coalition in 2017, telling concerned European leaders that he could tame its worst impulses. That seems to have been optimistic. The government was scarred by scandal during its short life, ranging from racist incidents involving FPÖ officials to an illegal raid on the domestic intelligence agency orchestrated by Herbert Kickl, an FPÖ hardliner who served as interior minister.

Being out of office does not, of course, mean that the FPÖ has vanished. The party hopes to recuperate in opposition. History suggests it will do so. It has been a fixture of Austrian politics for over 60 years, exploit- ▸▸

ing popular frustration with the long duopoly of the ÖVP and the Social Democrats, and the corporatist *Proporz* system that divvied up public jobs and doled out patronage between the parties. Its xenophobia has been less of an electoral handicap in a country that did not go through a German-style post-Nazi reckoning. So when one or other mainstream party has grown tired of grand coalitions it has usually had nowhere to turn but to the FPÖ. Expect to hear from the party again in due course.

The same is true in **Hungary**. Mr Orban's Fidesz party remains all-powerful in villages and small towns, but faces a strong challenge from the (almost) united opposition in Budapest and larger provincial cities at local elections due on October 13th. The Fidesz party machine has responded with both the potato and the stick: in Budapest's 11th district, 10 kilo sacks of potatoes were sold for less than a euro, with a picture of the local Fidesz mayor attached, and a recipe for *rakott krumpli*, a Hungarian potato, egg and sausage delicacy.

There have also been fierce attacks on Gergely Karacsony, the united opposition candidate for mayor, who is running neck and neck with Istvan Tarlos, the Fidesz-backed incumbent, according to polls. After coming to power in 2010, Mr Orban changed Hungary's electoral law to create a system that favours the strongest party—his own. It has taken the other parties, from left to right, years of squabbling and infighting to realise that the only way to challenge him is to band together, using primaries. Now they have done so. If they succeed, they will have a useful platform from which to challenge Mr Orban at the next parliamentary elections, due in 2022.

But it is in **Italy** that the fortunes of the populists have suffered the most consequential reverse. The European election was a resounding success for Mr Salvini. His party took more than a third of the votes in Italy. His non-stop campaigning and uncompromising stance on immigration helped his party to unprecedented heights in the polls. By early July, it was averaging 37.5%—a level of support that tempted him to take the misguided decision the following month to bring down the government of which he was part in the hope of forcing an election.

Strache's end: another one bites the dust

The effect, instead, was to catapult his coalition partners in the anti-establishment Five Star Movement (M5S) into the arms of the centre-left Democratic Party (PD), creating a new parliamentary majority that underpins Giuseppe Conte's second government. Since it was sworn in last month, Mr Salvini has plainly shrunk in stature. Deprived of power and the attention it attracts, he can no longer force himself to the top of the news agenda. Support for the League has fallen to below 32%.

Still, the League remains Italy's biggest party, more than ten points ahead of either the PD or the M5S in the polls. Though down, Mr Salvini is certainly not spent. By removing himself from office, he has avoided having to reconcile his extravagant promises to the electorate with the reality of Italy's public finances. On September 30th the new government approved a framework document that proposes an increased budget deficit of 2.2% of GDP. That may yet prove too much for Brussels, provoking a fresh showdown.

Mr Salvini's prospects will depend on two factors. The first is immigration. The new government has scrapped his policy of closing Italian ports to the NGOs that rescue migrants from the Mediterranean. It is hoping instead to extend a scheme agreed last month with France, Germany and Malta for the voluntary redistribution of asylum seekers landing on Italian shores. But a surge in arrivals would boost Mr Salvini's popularity. Though still low, the number has risen sharply since he left office.

However popular Mr Salvini becomes, the League will not get back into power unless the current coalition falls. So how the government manages the tensions between its component groups will be decisive. The PD and the M5S have a long record of mutual animosity, and a split in the PD caused by Matteo Renzi, a former prime minister, has not helped. The new government is trying to change an electoral system that, thanks to its large number of first-past-the-post seats, helps the League. Much depends on whether the new coalition lasts long enough to do it.

As for Mr Bannon, he now faces being kicked out of his monastery by the authorities who say his associates there, who deny any wrongdoing, have failed to meet their financial obligations. But in Italy, as elsewhere, the battle is never over. ■

Culture war in France

One tummy, two mummies

PARIS

Fertility treatment for lesbians pits progressives against traditionalists

SINCE BELGIUM legalised the use of IVF by gay female couples in 2007, its fertility clinics have been overwhelmed by demand—and not only from its own citizens. At one Belgian clinic in the French-speaking region of Wallonia roughly a third of patients are now from over the border in France. The reason is simple: strict French laws still restrict the use of IVF to heterosexual couples only.

France is now liberalising those rules. The consequence is a new skirmish in its hard-fought culture war.

The draft law, which went to parliament on September 24th, will for the first time give gay female couples and single women the right to use IVF and other forms of assisted reproduction. This will end rules that put France at odds with most of its neighbours (though Germany still applies similar restrictions). France will also let both mothers be identified on a birth certificate. For women under the age of 43, the cost of treatment will be fully reimbursed by the state.

During his election campaign in 2017 Emmanuel Macron said he favoured liberalisation, denouncing the existing rules as a form of "intolerable discrimination". Around 25,000 children in France each year, or 3% of the total, are born thanks to fertility treatment, at a cost to the taxpayer of about €300m ($328m). The government estimates that another 2,000 women a year would be treated after the change in the ▸▸

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law, at an extra annual cost of no more than €15m. France, it argues, needs to catch up with the times. "The criterion that defines a family," declared Agnès Buzyn, the health minister and a medical doctor, "is the love that unites a parent and a child."

Such views have cracked open the old division between liberals and family-values traditionalists. Having mobilised hundreds of thousands onto the streets against the legalisation of gay marriage six years ago, protesters are now planning their first big demo against Mr Macron's law on October 6th. A group of over a dozen associations, including the *Manif pour Tous*, which organised the rallies in 2013, argues that "one cannot deliberately deprive a child of a father". Their slogan, *naturellement*, is "liberty, equality, paternity".

The issue has agitated the political right. Marine Le Pen, leader of the National Rally (formerly the National Front), claimed that "the state is going to lie" to a child by stating it has two mothers. Her niece, Marion Maréchal, a young former deputy and unofficial champion of ultra-Catholic conservatives, organised a "convention of the right" in Paris, where one speaker railed against the "extermination of the white heterosexual male". Giving gay couples access to IVF, says Ms Maréchal, is part of a "stupid injunction to 'be modern'". Her pitch echoes the views of the Catholic church. "I'm not sure that the figure of the father is optional," Michel Aupetit, the Archbishop of Paris, told French radio this week, claiming that "most psychiatrists today say there is a need for a male reference, who is not just an uncle."

The bill's opponents claim it is the first step towards granting broader rights to gay couples, notably over surrogacy, which is illegal in France. During his campaign Mr Macron ruled that out, though he did promise to grant clear legal status to children born through surrogacy abroad. Marc-Olivier Fogiel, a well-known French broadcaster, has done much to help normalise such families by publishing a book last year about his and his husband's quest to become parents via surrogacy in America. Mr Macron has yet to fulfil his promise.

Recent French presidents have tended to pass their own piece of landmark progressive social legislation. Valéry Giscard d'Estaing legalised abortion in 1975; François Mitterrand abolished the death penalty in 1981; François Hollande legalised gay marriage. This is Mr Macron's signature bill: a way for him to distinguish his liberal, centrist politics from those of the conservative right. Yet France remains fragile after the civil disorder of the *gilets jaunes* protests, and Mr Macron has already delayed the bill for fear of fresh unrest. Those fighting France's culture wars are a somewhat different crowd, but no less determined to make their voices heard. ■

Belgium

Tiny democracy

EUPEN

A Belgian experiment that Aristotle would have approved of

In a sleepy corner of Belgium, a democratic experiment is under way. On September 16th, 24 randomly chosen Germanophones from the country's eastern fringe took their seats in a Citizens' Council. They will have the power to tell elected officials which issues matter, and for each such issue to task a Citizens' Assembly (also chosen at random) with brainstorming ideas on how to solve them. It's an engaged citizen's dream come true.

Belgium's German-speakers are an often-overlooked minority next to their Francophone and Flemish countrymen. They are few in number—just 76,000 people out of a population of 11m—yet have a distinct identity, shaped by their proximity to Germany, the Netherlands and Luxembourg. Thanks to Belgium's federal system the community is thought to be the smallest region of the EU with its own legislative powers: a parliament of 25 representatives and a government of four decides on policies related to issues including education, sport, training and child benefits.

This new system takes democracy one step further. Based on selection by lottery—which Aristotle regarded as real democracy, in contrast to election, which he described as "oligarchy"—it was trialled in 2017 and won enthusiastic reviews from participants, officials and locals.

Under the "Ostbelgien Model", the Citizens' Council and the assemblies it convenes will run in parallel to the existing parliament and will set its legislative agenda. Parliamentarians must consider every proposal that wins support from 80% of the council, and must publicly defend any decision to take a different path.

Some see the project as a tool that could counter political discontent by involving ordinary folk in decision-making. But for Alexander Miesen, a Belgian senator who initiated the project, the motivation is cosier. "People would like to share their ideas, and they also have a lot of experience in their lives which you can import into parliament. It's a win-win," he says.

Selecting decision-makers by lottery is unusual these days, but not unknown: Ireland randomly selected the members of the Citizens' Assembly that succeeded in breaking the deadlock on abortion laws. Referendums are a common way of settling important matters in several countries. But in Eupen, the largest town in the German-speaking region, citizens themselves will come up with the topics and policies which parliamentarians then review, rather than expressing consent to ideas proposed by politicians. Traditional decision-makers still have the final say, but "citizens can be sure that their ideas are part of the process," says Mr Miesen.

Some in the community's pocket-sized parliament in the town of Eupen are sceptical. If they are to surrender their agenda-setting powers to the masses, their manifestos seem pointless. And it seems odd that a project to promote citizens' power was not a grassroots initiative but was instigated from above. The organisers admit that they are delving into the unknown, but for David Van Reybrouck, of G1000, a group promoting the scheme, it is a game-changer. "Small countries are reinventing democracy," he says. ■

Eupen's engaged citizens point the way

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The European Commission

Parliamentary privilege

Two nominees fall at the first hurdle. Will others follow?

FEW PEOPLE expected the European Commission's proposed new team to emerge intact from the confirmation hearings that started in the European Parliament this week. Claiming the scalp of at least one aspiring commissioner has become a tradition for the EU's elected legislature. But the decision of a parliamentary committee to rule out two nominees before the full hearings had even started, an unprecedented move, suggests that the parliament's vetting process will be even spikier this time round. By the time *The Economist* went to press the fate of three more nominees, including France's Sylvie Goulard (a close associate of President Emmanuel Macron) appeared uncertain.

The first casualty was Laszlo Trocsanyi, Hungary's former justice minister. In a secret ballot the parliament's legal-affairs committee, charged with poring over the nominees' financial declarations before hearings begin, declared him unfit to be commissioner. The committee's digging revealed that a law firm bearing his name had been contracted to provide legal services to Hungary's state-owned nuclear power plant while he was minister. Mr Trocsanyi says that he no longer owns shares in the firm, adding that it had not won any new government contracts during his ministerial term. But parliamentarians also pounced upon the appointment of one of the firm's owners as his personal adviser in the justice ministry.

Eyebrows were raised higher when it emerged that the power plant's main contractor was Russia's state-owned nuclear energy corporation. This is not Mr Trocsanyi's first flirtation with Moscow: as justice minister, he ignored an American request to extradite a Russian father-and-son arms-dealing duo. Instead, he sent the pair back home, where they were promptly released. As his portfolio, enlargement policy, was supposed to include cultivating diplomatic ties in the western Balkans, Russia's backyard, parliamentarians fretted about a conflict of interest.

Rovana Plumb, Romania's candidate for the transport portfolio, was also summoned before the committee after failing to declare two loans worth nearly €1m ($1.1m). One was intended to cover a donation to her party, whose former leader was imprisoned in May for putting party loyalists on the public payroll. Her aspiration to become Europe's transport commissioner was dashed when she could not explain how she intended to pay back her debts. She strongly denies any wrongdoing.

At first, the leaders of Hungary and Romania stood by their candidates. Viktor Orban said Mr Trocsanyi's only sin was withholding support for Brussels-backed proposals to share responsibility for refugees. Viorica Dancila blamed Romania's opposition for mounting a character assassination. But Ursula von der Leyen, the new commission's German president-elect, swiftly demanded that new candidates be picked, a request both prime ministers have now met.

As the two rejects hail from the parliament's centre-right and socialist groups, rumours swirled that a liberal, preferably from western Europe, would be next. In her hearing on October 2nd, parliamentarians took Ms Goulard to task over an ongoing probe into the alleged use of European Parliament funds to pay party employees. Equally incendiary was her role as a paid adviser to an American think-tank.

Along with the nominees from Poland and Sweden, she faces another round of questioning. Her supporters suspect she is being scapegoated to pay back Mr Macron for thwarting the centre-right group leader's ambition of running the commission. The process could get bloodier yet. ■

Gambling in Finland

Unlucky numbers

HELSINKI

Finland has a problem with gambling

FOR DECADES, Finns had their Saturday ritual. They would have a sauna, then watch the lottery draws on TV. They would never feel bad about losing, because they knew that the gaming proceeds would be channelled to good causes. Things have changed a bit, but gambling, like voting, is still widely considered a civic duty.

Nowadays, around a third of adults gamble every week. A survey in 2016 found that 83% had gambled at least once in the past year. The lottery was legalised as long ago as the 1920s to discourage Finns from playing Swedish lotteries, and from sending money to their former rulers. After the second world war, football pools were seen as a way to foster a sense of unity and thwart the threat of communism.

Veikkaus, the state agency that holds the exclusive right to operate all gambling in Finland, is well thought of. In 2017 its earnings of over €1bn ($1.1bn) were redistributed, half of them to sports, physical education, science, arts and youth works, and most of the rest to health and social welfare.

Every path has its puddle, however. In the case of Finland, it is a dangerous addiction to gambling, in two senses. The Finnish state has come to rely on gambling money. The former centre-right government, formed in 2015, slashed the budgets of social and healthcare services, in the expectation that Veikkaus would help make up the difference through backing good causes. Gambling revenues rose by over 30% between 2006 and 2016.

At the same time, 3.3% of the adult population is reckoned to have a gambling problem, compared with under 1% in neighbouring Norway. Half of the state's gambling revenue comes from a mere 5% of the players.

Norway has taken action to curb the number of its problem gamblers by introducing mandatory identification for all games. This helps exclude minors from gambling. To date, Finland has done very little. That may now be about to change. Following a public outcry over a controversial radio ad perceived to encourage gambling, Veikkaus said in August that it would establish an ethics board. The prime minister has hinted at reform, and an online petition asking for the removal of some of the country's 20,000 slot machines from stores and restaurants, among other places, has garnered over 30,000 signatures. Finns may end up spending a bit more time in the sauna.

Texas

The magenta mammoth

AUSTIN

Democrats think they might win Texas in 2020. They are likely to be disappointed

It is a sweltering day in Austin, but that has not deterred Emily Clark from spending hours registering students at the University of Texas to vote, dressed in a banana costume. Ms Clark is a volunteer for MOVE Texas, a group that registers and campaigns for young people and minorities in state politics. Democrats have high hopes that groups such as MOVE can help them win statewide elections in what they see as a battleground state. *The Economist*'s number-crunching suggests such thoughts are, as Texans say, too big for their britches.

For years Democrats have predicted that Texas was just a few election cycles away from becoming a toss-up state. At an event in Austin on September 28th Nancy Pelosi, the Speaker of the House, said that Texas is Democrats' "hope for the future" of the party. Texas is more racially diverse and younger than the country at large. Non-whites lean heavily Democratic and young Americans are the most Democratic generation of all.

Both groups are less likely to find their way to the polls, though, which is why Texas has so far been a lesson in why demography is not necessarily destiny. Still, the trend is promising for Democrats. In 2016 Hillary Clinton won nearly 600,000 more votes than Barack Obama did in 2012. In 2018 Democratic congressional candidates picked up two House seats, and Beto O'Rourke lost in a closer-than-expected Senate race to Ted Cruz. Since then six of the state's Republican representatives in the House have decided to retire before the next congressional elections. Will Democrats catch their white whale in 2020?

Those who foresee a "blue Texas" point to demography as the primary reason for the state's supposed competitiveness. While increasing turnout among minority and young voters has helped Democrats rack up big margins in cities, moderates in the suburbs—especially women—have been moving leftwards too. These patterns combined to make the state competitive in last year's mid-term elections. According to our analysis of precinct-level election results, voters in the state's four largest metropolitan areas, Houston, Dallas, Austin and San Antonio (also referred to as the "Texas Triangle" because of their position in the state), cast 96% as many votes in 2018 as they did in 2016. That is unusual, because the drop-off from presidential elections to mid-terms is normally much higher. The Texas Triangle has also become more Democratic; Mr O'Rourke's share of the vote was six percentage points higher within it than Mrs Clinton's was in 2016.

Republicans draw much of their strength from the state's vast rural and exurban areas, as well as from affluent suburbs. Voters living outside the triangle are predominantly loyal to conservative politicians; Mr Cruz beat Mr O'Rourke by 24 percentage points in these areas last year. And although these voters were less likely than ▸▸

urban and suburban ones to show up at polls in 2018—they cast just 89% of their 2016 votes last year—they will be back in force next year. So-called "drop-off" voters typically come back in presidential years.

Most election handicappers calculate the partisan lean of a state by comparing overall vote share in the state with what happened nationwide. This method can skew things, because not all members of Congress have an opponent. This distorts the numbers, because would-be Republican voters who live in a district where there is no Republican candidate do not count (the same is true of Democratic voters where a Republican runs unopposed).

Scaling Guadalupe Peak

Fill in the blanks by predicting what a Republican or Democrat running in such a place would probably have won if they had contested these seats, and the state's partisan lean is a little stronger. Texas was 13 points more Republican than the nation as a whole in the 2018 House mid-terms. That is a lot to overcome, especially with Republican voters returning to the polls in 2020.

We reckon a Democratic presidential candidate would have to perform nine percentage points better in Texas than Mrs Clinton did in 2016 in order to win. According to data from Civiqs, a pollster, the president's net approval rating is still positive in the state. It will take a lot of votes to close the gap. Drew Galloway, MOVE Texas's executive director, predicts that Democrats would need to register 500,000 new voters to make the state a true toss-up. Abhi Rahman, a spokesman for the Texas Democratic Party, says that only 160,000 new Democrats voted in 2018 compared with 2016.

Texans will not just be voting for the president next year, though. Thirty-six congressional representatives, one senator and 150 members of the state House will also be up for re-election. According to Julie Oliver, a Democratic candidate in Texas's 25th congressional district who also ran for the seat in 2018, progressives have tangible hope in a handful of these down-ballot races. "People care about health care, education and the economy, and they want the incumbents out," Ms Oliver says of voters in the 25th district, a massive area that stretches 200 miles from the majority-minority precincts of East Austin to suburban towns just south of Fort Worth. Her success hinges on the same registration-based strategies on which groups like MOVE have led the charge. Though optimistic, Ms Oliver is "not taking anything for granted"—she lost by nine percentage points last time round. It is rare for districts to shift so suddenly in such a short amount of time.

Six of the state's Republican House members have so far decided to call it quits before the 2020 election even gets started. Three represent competitive districts. One of those retiring is Will Hurd, who represents the 23rd district, a broad sweep of sagebrush between El Paso and San Antonio. Voters in Mr Hurd's district voted for Mrs Clinton by 3.4 percentage points in 2016 and chose to re-elect him by less than one point last year.

In a speech in June to a gathering organised by gay Republicans, reported by the *Washington Blade*, Mr Hurd appeared pessimistic about his party's future. "This is a party that is shrinking. The party is not growing in some of the largest parts of our country," he said. "Why is that? I'll tell you. It's real simple: Don't be an asshole. Don't be a racist. Don't be a misogynist, right? Don't be a homophobe. These are real basic things that we all should learn when we were in kindergarten." This view is not widely shared, however. In both the 22nd and 24th districts, where incumbents are retiring, Mr Trump won by 8 percentage points in 2016, which this far out from polling day looks like a comfortable cushion.

Yet these downballot efforts may run into the sand in a presidential year. Democratic efforts have not gone unanswered by Republicans, resulting in an arms race in campaign-finance spending. Engage Texas, a political action committee (PAC), has raised $10m to register Republican voters throughout the state. According to Mr Rahman, Democrats plan to spend similarly.

But resources allocated to Texas deprive candidates in other, more competitive states of crucial fundraising dollars. Handicappers at the University of Virginia predict that Senate races in nine other states will be more competitive than those in Texas. And since ads there are more expensive than they are elsewhere—Texas has separate media markets for each of its metro areas—the price of competing is high. As long as the state remains a reddish shade of purple, magenta perhaps, there is a risk for Democrats that, in dreaming of Texas, they may overlook states where their prospects are better. ■

Impeachment

Call and response

WASHINGTON, DC

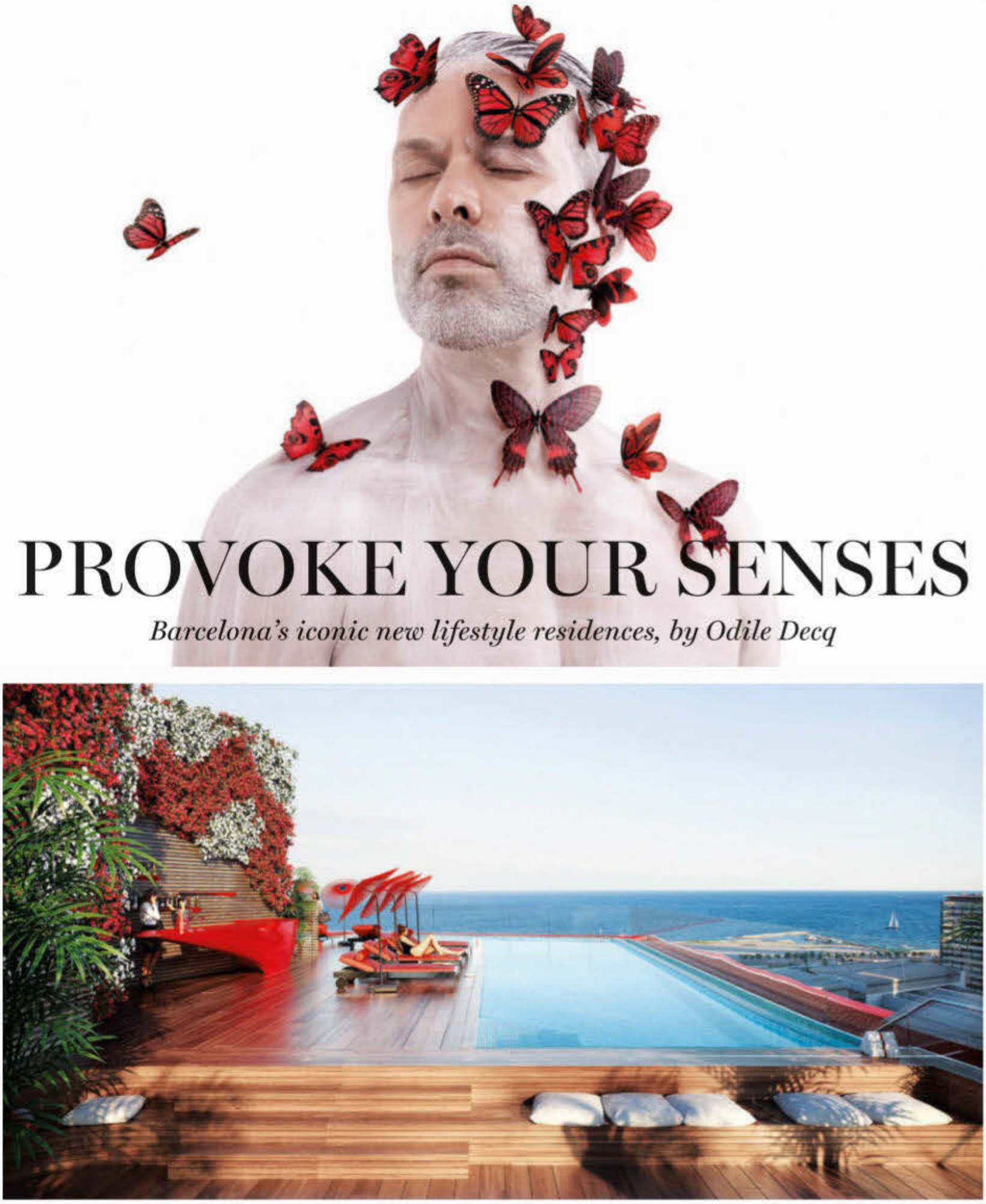
Are the president's tactics up to scratch?

DONALD TRUMP's style of political crisis-management is straightforward: admit nothing, counter-attack, obfuscate, ride it out and wait for public attention to wane. That got him through the release of the Access Hollywood tape—on which he boasted about grabbing women between the legs a month before the 2016 election—and also through Robert Mueller's report, which identified acts that could amount to obstruction of justice. But past success is no guarantee of future performance.

Nancy Pelosi, the Speaker of the House, announced on September 24th that the House was beginning a formal impeachment inquiry into Mr Trump over allegations that he abused his power by encouraging Volodymyr Zelensky, the president of Ukraine, to investigate Hunter Biden, who served on the board of a Ukrainian energy firm, and his father Joe, a front-runner in the Democratic primaries. Since then Mr Trump has seemed rattled. He has decried impeachment as "a COUP intended to take away the Power of the People" (it is a constitutional process that would still leave America with a Republican president if it removed Mr Trump).

He has said that Adam Schiff, chairman of the House Intelligence Committee, should be "questioned at the highest level for Fraud & Treason" for unfavourably paraphrasing his phone call with Mr Zelensky (legislative immunity protects Mr Schiff). He has spoken of "a Civil War like fracture in this nation" if he is removed from office. He has warned that he is "trying to find out" the identity of the whistleblower whose complaint inspired the impeachment inquiry—and whose anonymity federal law protects. He has falsely

Interference on the line



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claimed that whistleblower rules changed just before this one acted—drawing a rare rebuke from the intelligence community's inspector-general. And he accused Mr Schiff, without evidence, of helping to write the whistleblower's complaint.

The number of officials drawn into the inquiry is growing. On October 2nd Mike Pompeo, the secretary of state, said that he was on the phone call between Messrs Trump and Zelensky; he has also been subpoenaed. House Democrats are looking into Rick Perry, the energy secretary, who travelled to Ukraine in May. They are also interested in William Barr, the attorney-general, whose Justice Department initially blocked the release of the whistleblower's complaint, and who Mr Trump implicated in his efforts to enlist foreign governments' help in investigating Mr Biden. The House has also subpoenaed Rudy Giuliani, Mr Trump's personal lawyer, for documents and communications related to Ukraine.

So far no House Republicans have backed Ms Pelosi's inquiry. Two say they support "oversight", but not impeachment hearings. Most have offered arguments—the whistleblower was not on the call, there was no direct quid pro quo, the call was consistent with American concerns about corruption in Ukraine—that are not quite a full-throated defence of the president. Mr Trump, meanwhile, has used the threat of impeachment to turbocharge fundraising. In the days after Ms Pelosi's announcement his campaign pulled in $15m and, according to his campaign manager, at least 50,000 new donors.

Conventional wisdom says that Senate Republicans are Mr Trump's bulwark—that the 20 Republicans required will never vote for removal, even if the Democrat-controlled House impeaches. That will probably hold. Although some Republican senators will trash Mr Trump off-the-record, so far only Mitt Romney and Ben Sasse have come near to publicly rebuking the president; Mr Romney said he was "deeply troubled" by Mr Trump's behaviour.

But politicians respond to public opinion. The latest YouGov/*Economist* poll finds that half of all registered voters, including 11% of Republicans, believe the House should "try to impeach" Mr Trump, and 51% of voters, including 13% of Republicans, think that if the House impeaches Mr Trump, the Senate should vote to remove him from office. Over two-thirds of registered voters believe that abuse of power and obstruction of justice warrant removal. This doubtless sets Democratic hearts aflutter. But broad support for the notion that Mr Trump's conduct was impeachable is not enough to convince a critical mass of Republican senators. Mr Trump often turns politics into a loyalty test. And Republicans usually let him have his way. ■

Organised labour

In retreat

BLACK LAKE, MICHIGAN

A woodland resort symbolises unions' diminishing fortunes

On the face of it, unions are more emboldened today than they have been for years. About 50,000 members of the United Auto Workers (UAW) continued a national shutdown at General Motors this week, amid unusually hard bargaining over pay and conditions. The strike has now become the union's longest at the car company since the 1970s (see Schumpeter). Sensing how public attitudes to unions are warming, Democratic presidential candidates have been taking turns to pose with the striking workers, notably at car plants in Detroit.

Drive four hours from the Motor City, however, to the woodlands of northern Michigan, and an alternative symbol of union fortunes exists. The UAW's Black Lake resort is in an idyllic, if largely forgotten, spot. On its thousand-acre grounds deer step gingerly between oaks and maples. A few golfers swish along the 18 holes of its tree-lined course. In forest clearings there are sun-dappled log cabins, pine-clad lodges, tennis courts, bars, modernist sculptures and lecture halls.

An indoor Olympic-size swimming pool is a few steps from a lakeside slipway where holidaymakers may launch speedboats. In a small museum visitors can dutifully study the white hard hat and other memorabilia that belonged to Walter Reuther, the revered president of the UAW in its mid-century heyday, when it had three times as many members as it does today. Mr Reuther's ashes are spread around the property.

Yet the resort, owned by the union since 1967, is in dire straits. A worker recalls how, three decades ago, the place bustled with visitors who dined on Alaskan king crab on Tuesdays, then rib-eye steaks and shrimp on Thursdays. During a recent visit the fare was more meagre and the place mostly empty. Few union workers take holidays in the woods any more. And though the resort is open to the public—if visitors drive cars built by union labour—it is run at a steep loss. It is said to owe the union over $61m.

After the FBI raided the resort in August, union members may conclude its charm has been lost. The feds were investigating a long-running corruption scandal that involves bribery and lavish spending by car companies on the UAW's recent leaders. One site of interest is a home for a former boss that is still only half-built at Black Lake.

Other unions have enjoyed similarly grand retreats. Anyone keen on 18 holes and vintage architecture can still book a spot at the United Steelworkers' splendid-looking mansion at Linden Hall in rural Pennsylvania. The Teamsters had their own golf course and holiday camp in Missouri until they sold the place four years ago. Like the UAW, Teamster membership has fallen from its peak. Unions need to modernise themselves to prove more relevant to the members. Getting rid of rustic retreats could be one small way to do that.

Watch the livestream

open future festival 2019

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6:00PM— 9:30PM local time (GMT+8)

Speakers include: Joshua Wong, Regina Ip, Neha Dixit, Nurul Izzah Anwar and Thanathorn Juangroongruangkit

Manchester

11:00AM—6:00PM local time (GMT+1)

Speakers include: Chimamanda Ngozi Adichie, Guy Standing, Sam Gyimah MP, Grace Blakeley and Hoesung Lee

Chicago

10:50AM— 4:30PM local time (GMT-5)

Speakers include: Patrick Collison, Gabby Giffords, Mellody Hobson, Raghuram Rajan and Amani al-Khatahtbeh

The Economist

Dynasties

Kennedy 4.0

BOSTON

A Kennedy may be a hard sell in Massachusetts, of all places

SEEING A MAN with plentiful red hair talking in front of a small crowd and several television cameras in Villa Victoria housing development in Boston's South End, a young man stopped and asked what was going on. Someone told him, "He's running for election." "For president?" he inquired. "No, Senate," he was told. "Is he famous or something?" "He's a Kennedy." The young man nodded, turned around and carried on with his day.

Joe Kennedy, a congressman who announced last month he was going to run for Senate, has a certain amount of recognition in Massachusetts. His famous surname will help fill fundraising tables and may even get the old faithful to knock on doors. But for many young voters the name does not have the same resonance it once did. It may even end up being a drag.

Mr Kennedy surprised his fellow-Democrats when he decided to take on Ed Markey, a well-liked Washington veteran. Mr Markey may not be flashy (Thomas Whalen, a political historian at Boston University, says he makes John Kerry, a stiff former senator and secretary of state, look like Mick Jagger), but he is diligent. An environmentalist before it was "cool", he teamed up with Alexandria Ocasio-Cortez to introduce the Green New Deal in Congress. Some wonder why Mr Kennedy, who is 39, did not wait his turn. After all, Mr Markey is 73. Or why he did not wait to see how Elizabeth Warren, the state's other senator, does in the Democratic primary.

An average Joe

"For him, it's a smart gamble," says Scott Ferson, a political consultant and Ted Kennedy's former press secretary. In the past Mr Kennedy would have been a shoo-in for the next available open slot, but the politics and demography of Massachusetts have changed in the decade since Mr Kennedy's great-uncle Teddy was the Senate's liberal lion. Mr Kennedy probably thinks Mr Markey easier to defeat in a primary than the plethora of talented young politicians in the state, who include Maura Healey, the state attorney-general; Michelle Wu, a Boston city councillor; Ayanna Pressley, a congresswoman with a national profile; and Seth Moulton, who recently dropped out of the presidential race. But, says Mr Ferson, it is still questionable whether the gamble will pay off.

Mr Kennedy may have hoped the more seasoned Mr Markey would retire rather than take on a richer and younger challenger. Instead he is digging in. Although Mr Kennedy is ahead in early polls, Mr Markey has the endorsement of most of the powerful Democrats in the state and the majority of the state's congressional delegation, as well as Ms Ocasio-Cortez. He also has the backing of Ms Warren. She knows Mr Kennedy well; he met his wife in Ms Warren's law-school classroom.

Some suspect Mr Kennedy feels entitled to the seat because, in a way, he was bred for politics. His great-great-grandfather was a congressman and a Boston mayor. His father served in Congress for 12 years. His grandfather, Robert, was attorney-general and a senator. He is the great-nephew of a president, and his great-uncle Ted was a Massachusetts senator for 47 years.

Mr Kennedy's reluctance to risk waiting may not sit well with many in the party, but that does not mean he is not well-liked or that he has not been a good worker for his constituents. He is an ardent supporter of gay rights and a campaigner for improved mental-health treatment. He has been an outspoken critic of Donald Trump, which pleases rank-and-file Democrats. He and Mr Markey are both progressive. Indeed, on paper there is very little difference between the two men, apart from age.

So far, Mr Kennedy has not articulated a good reason why voters should vote for him over the incumbent. Instead, he mostly targets Mr Trump in stump speeches. He calls the moment too urgent for "sitting on the sidelines". For many state Democrats, next year's presidential election has vital ramifications, so to have an "insider fight among Democrats and a primary seems beneath the moment," says Erin O'Brien of University of Massachusetts, Boston. People will be more willing to spend time and resources knocking on doors to beat Mr Trump, she says, than to "defeat someone you like, but you like the other guy more."

Mr Kennedy launched his campaign in the basement of a community centre, in Boston's East End, very near where his ancestors disembarked after fleeing the Irish famine in the 1840s. Members of his family lived and worked in the neighbourhood and later represented it in office. The site of the launch was a reminder that his family was not always privileged. The clan has been remarkably resilient—despite scandals galore, no Kennedy has lost a race in the state since 1946. That streak may come to an end next year. "If he loses this race," predicts Mr Whalen, "it's all over for the Kennedy dynasty." ■

University admissions

Making a meritocracy

WASHINGTON, DC

Harvard wins, for now

THE WORLD'S most prestigious universities are primarily in two countries: America and Britain. Strangely, though, the more aristocratic, less meritocratic system of admissions is found not in the country with a House of Lords and a hereditary monarchy, but in the land of rugged individualism. The American system is under attack, however. In a closely watched case that began in 2014, a group of Asian-American students are suing Harvard, claiming discrimination relative to whites. This has shed light on the inner workings of the admissions process, which has been tightly guarded by Harvard.

Many of the disclosures, such as the preferential treatment given to mostly white and wealthy "legacy students" (those with relatives who attended the university), look embarrassing. Yet on October 1st a federal judge in Boston ruled in the university's favour. This will be merely the prologue to a protracted legal battle.

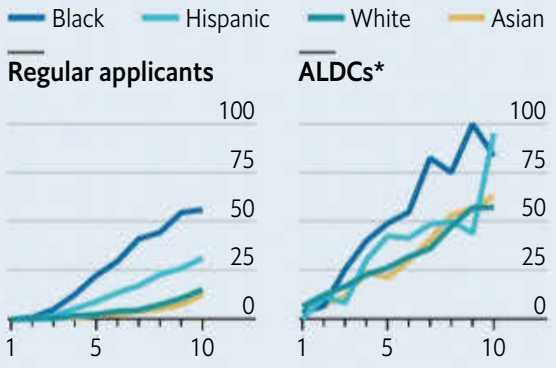
Most of the interest in the case stems from the possibility that it could up-end the system of affirmative action for "under-represented racial minorities" (chiefly blacks and Hispanics) at elite American universities. This certainly seems to be the goal of Edward Blum, the conservative legal activist funding the case, who has brought other high-profile challenges to the reigning system. The Supreme Court has previously held that universities may engage in affirmative action—though it bans quotas—in the interests of promoting a racially diverse body of students. Mr Blum's aim is plainly to appeal the case all the way to the ▸▸

Points for preppies

United States, Harvard University

Admission rate by academic decile (10=best), %

Graduating classes of 2014 to 2019



Source: "Legacy and Athlete Preferences at Harvard", by P. Arcidiacono, J. Kinsler and T. Ransom, NBER Working Paper (2019)

*Athletes, legacies, dean's interest list and children of faculty

highest court. His previous attempt, over admissions to the University of Texas, was narrowly decided by the Supreme Court in 2016, before President Donald Trump appointed two new conservative justices, Neil Gorsuch and Brett Kavanaugh.

The most interesting thing that has come out of court documents is detail on the programme of affirmative action for wealthy students maintained by Harvard and other universities of its stature. A recent working paper by three economists, one of whom was an expert witness for the plaintiffs, shows that 43% of white students attending received some sort of preferential treatment in admissions (because they were legacies, recruited athletes, on the "dean's interest list" or the children of faculty). They estimate that most of these would not have got in otherwise.

The boost for these applicants is as high as the one given to blacks. Asian-Americans, who receive the fewest admissions preferences, are squeezed as a result. A white student who is in the middle of the pack academically, but has legacy status, has a higher chance of getting in than a typical Asian applicant in the top tenth.

Race-conscious admissions programmes are constitutionally valid only if they are the least obtrusive means to attain diversity. Allison Burroughs, the judge in the case, acknowledged that removing the preferences would increase the number of non-white students. But she concluded they could still remain because "Harvard would be far less competitive in Ivy League intercollegiate sports, which would adversely impact Harvard and the student experience" and that top-notch faculty may not join without a promised leg-up for their progeny. (Never mind that sailing competitions are not the central focus of university life; and a few academics may still want to work at the place.) Judge Burroughs displayed a remarkable level of deference to the university's argument. The Supreme Court, should the case make it there, probably will not. ■

Border deterrence

Build the swamp

Totting up the costs of the White House's schemes

THE PRESIDENT frequently boasts that his Mexican border wall will be beautiful. "Border Wars: Inside Trump's Assault on Immigration", a new book by two journalists from the *New York Times*, suggests it will be menacing, too. The authors claim that Mr Trump asked his advisers about including a moat, infested with snakes or alligators. Aides have reportedly looked into the cost of such a deterrent. Mr Trump denies having said any of this. But to work out the expense to American taxpayers (or Mexican ones, since they are meant to be paying), *The Economist* totted up the structural and zoological requirements of the plan.

The president may not catch enough water snakes to patrol the border. But he could call on alligator farms in Louisiana and Florida. In 2015 the Southern Regional Aquaculture Centre estimated that the industry rears 350,000 animals a year for leather and meat. That is more than enough gators to patrol a moat 1,000 miles (1,600km) long. (The border's remaining 1,000 miles are already blocked by the waters of the Rio Grande.) A fat subsidy for Floridian reptile farmers to supply Customs and Border Protection (CBP) could also win votes in the swing state next year. Perhaps $150m a year would be enough to breed and feed 300,000 fully grown gators (they would need to be much bigger than the three-foot tiddlers killed for handbags).

Building the moat would be tougher. Few firms make neo-medieval water features. Matt Boring of Texas Ponds, which builds "ecologically balanced ecosystem ponds" for clients in and around Austin, quotes $3m to dig a pond five feet (1.5m) deep and an acre in area. The moat would need constant topping up to counter the effects of evaporation in the Sonoran Desert. If Mr Trump wanted his moat to be 60 feet (20 metres) wide, he would need to dig and line about 8,000 acres' worth of trench. That would cost about $24bn.

Of course, the Sierra Madre's peaks are unsuited to flat canals, and Arizona's heat might slowly broil the crocs. But the president could surely order a series of pumps to keep the system flowing. After hiring CBP officers to feed the gators, and building a second fence to keep them in, perhaps he could deliver the project for less than $30bn.

That might seem reasonable for a man who has already accrued about $10bn of public money to build his wall. However, the new book also claims that Mr Trump wants to adorn the barrier with electrified, flesh-piercing spikes, and asked aides whether officers can shoot migrants in the legs to slow them down. Treating that number of gunshot wounds and settling the lawsuits would cost even more. It is almost as if the president is more interested in showing how ferocious he is on immigration than in providing efficient border security.

I'm here from the government

Lexington | The labours of Doug Jones

A prophet of Deep South moderation illustrates liberalism's present pains and future promise

NIKI'S WEST, where Senator Doug Jones and his wife Louise arranged to meet your columnist, is the sort of place a glad-handing southern politician would love to frequent. A canteen-style institution in the middle of Birmingham, it serves catfish, liver and onions and turnip greens to a vast, fast-flowing lunch crowd. Yet Mr Jones, a 63-year-old newcomer to politics when he produced a stunning upset in a special election two years ago, appeared oblivious to the occasional glance he drew and only interested in the prospect of lunch. "You're about to be assaulted by food," he said with relish, while queuing for a tray.

His modesty reflects his unusual profile; but also how unloved elected Democrats are in Alabama. Donald Trump is more popular here than in any other state. Notwithstanding Mr Jones's strong record as a prosecutor and civil-rights campaigner, he was able to become Alabama's first Democratic senator in a quarter of a century chiefly because his Republican opponent was a scandal-plagued religious crank. And even then Roy Moore won 48% of the vote. This ensured Mr Jones always faced a battle for re-election—and a full six-year term—next year. And that prospect looks even more remote following his party's move to impeach Mr Trump. "I'm really disappointed in the Democratic Party and I'm very much proud of the president," a woman interrupted Mr Jones's lunch to tell him. He nodded glumly, as though he had been expecting worse.

To try to placate his moderate Republican supporters, whose votes he will again need next year, the senator is trying, as he always does, to find common ground. He says he supports investigating Mr Trump's alleged abuses. But he also chides his fellow Democrats for rushing to judgment. "I have seen too many cases where what appears to be an incredibly damning piece of evidence turns out to be not so damning when you look at the bigger picture." At the same time he frets that impeachment proceedings could crowd out the Senate's legislative work—including the passage of Mr Trump's redo of NAFTA, which he supports.

This is classic Jones. In his maiden Senate speech, shortly after a gunman massacred 17 people in a school in Florida, the senator defended the South's gun culture ("I'm a gun guy," he says) even as he called for background checks and other sensible restrictions. And he has since thrown himself into lawmaking with gusto, putting his name to over 200, mostly bipartisan, bills, on issues as diverse as road-building and money-laundering. That bespeaks more than a freshman's naive enthusiasm. Though Democrats are mostly uncompetitive in congressional elections in the South, a few have clung on to state-level office there on the strength of their reputations for getting stuff done and voters' greater pragmatism as politics moves closer to home. Mr Jones, who had chaired a pre-lunch panel on human trafficking in Birmingham with knowledge and enthusiasm, is trying to persuade Alabamans to extend that pragmatic view to the federal government. "Farmers in Alabama are more dependent on federal than state government," he says. How much better, then, to have a diligent pragmatist representing them in Washington, DC, than a conservative firebrand.

The potential flaws in this effort at supra-partisanship were obvious even before Mr Trump's impeachment loomed into view. On the most divisive issues, including the president, America's political tribes seem beyond accommodation. And it is hard to improve Alabamans' view of Washington when most of their representatives and media outlets are bent on rubbishing it. Especially when the Senate's Republican leadership is so happy to corroborate them. Mitch McConnell has brought hardly any of Mr Jones's sober, life-enhancing bills to the floor. In such a dispiriting environment, it is no wonder many Democrats, following a path most conservatives have already taken, are now giving up on a moderation altogether. But that conclusion is also politically flawed.

A leftward turn might not stop the Democrats winning the White House. But it might make it impossible for them to regain control of the Senate, given the disproportionate weighting it gives to relatively small and conservative states. Besides Alabama, they include Arizona, Colorado and North Carolina, which will hold Senate races next year that the Democrats must win to have a hope of unified government. Those on the left who try to deny this reality should note that Mr Jones—who knows more about winning in conservative states than they do—was one of the first congressmen to endorse Joe Biden for president. The moderate former vice-president was also the only senior Democrat he permitted to campaign with him. Constrained though moderation is in the Trump era, ambitious Democrats cannot afford to abandon it.

To do so in despair would also be to ignore much quiet liberal progress. Mr Jones won on the back of a rising coalition of non-whites and college-educated liberals, as well as disenchanted conservatives. A proponent of gay and abortion rights, he is also markedly more liberal than traditional Democratic moderates, such as Joe Manchin of West Virginia. This suggests such positions need not be as implacably divisive as is often assumed. Beneath the Trump-related clamour, opinions are changing. Asked to list the most polarising issues, Mr Jones says: "Trump-Trump-Trump, abortion—then it really drops off. Guns and gay marriage are nowhere near as big an issue these days."

Gimme Moore

To those Democrats who ask him how to win in Trump country, Mr Jones urges a combination of respectful candour about differences—because voters detest a phoney—and patience. "We're playing long ball for Alabama and the South because things are changing." Even if they don't change fast enough for his re-election hopes, he will have contributed to that process. And so, to give the devil his due, will Mr Moore, who could yet provide another twist in this tale. Not content with getting Mr Jones elected once, he says he is running again. The Lord works in mysterious ways. ■

Peru

The president, and the people, against the parliament

LIMA

Martín Vizcarra has won his duel with congress

EVER SINCE he became president in March 2018, Martín Vizcarra has been at war with Peru's congress. This week, on September 30th, their rocky relationship came to a farcical turning point. Mr Vizcarra dissolved congress. The legislature struck back by suspending him from office and choosing the vice-president, Mercedes Aráoz, to replace him. But this looked more like a gesture of defiance than a well-judged counterattack. Ms Aráoz quit within 36 hours. Peru now looks headed towards congressional elections in January. What is not clear is whether this constitutional crackup will break the political deadlock or damage Peru's democracy.

Peruvians cannot help but be reminded of the last time congress was closed down, in 1992 by President Alberto Fujimori. His "self-coup" led to more than eight years of authoritarian and often brutal rule. He is now serving a 25-year sentence in a Peruvian jail for human-rights abuses.

Although Mr Vizcarra's disbanding of congress is legally questionable, he has not carried out a coup. Unlike Mr Fujimori he has not sent tanks into the streets or dismissed the supreme court. If congress disbands, as now looks likely, a 27-member "permanent committee" will remain to act as a check on him. Most Peruvians share Mr Vizcarra's view that the legislature is corrupt, obstructive and overdue for dissolution. Nearly 90% disapprove of it.

The confrontation between powers predates Mr Vizcarra's promotion to the presidency. It began with the general election of 2016, when Pedro Pablo Kuczynski, a former investment banker, became president. He narrowly defeated Keiko Fujimori, Alberto's daughter, but her Popular Force party (FP) won a majority in congress. FP and its allies sought to paralyse Mr Kuczynski's government.

Corruption allegations have sidelined both protagonists. Ms Fujimori is in prison while she is investigated on suspicion of receiving undeclared campaign donations from Odebrecht, a Brazilian construction company that bribed politicians across Latin America. Mr Kuczynski is under house arrest while prosecutors investigate claims that he had corrupt dealings with the firm when he was finance minister. He resigned as president under threat of impeachment. Mr Vizcarra, then one of two vice-presidents and Peru's ambassador to Canada, took over.

His arrival sharpened the conflict and changed its nature. A former governor of the southern department of Moquegua, proud of his provincial roots, Mr Vizcarra entered office determined to reform politics and combat the corruption that has discredited the governing class. All four of his immediate predecessors have been accused of corrupt dealings with Odebrecht.

What did not change was congress's determination to thwart the president. Mr Vizcarra used drastic measures to push through his policies. He held a referendum last year on a package of anti-corruption measures, which congress then grudgingly enacted. Congress has since blocked or diluted proposals to improve the quality of Peru's party system. Many of the country's two-dozen parties exist just to sell their in- ▸▸

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53 Bello: Argentina's agony

fluence. These include a reform of campaign financing and a requirement that parties hold primaries. In May congress prevented the creation of an independent body that could strip congressmen of their immunity from prosecution.

Hostilities came to a head last month when congress tried to appoint six judges to the constitutional court from a hastily assembled list, to replace a group whose mandates had expired in June. Mr Vizcarra sought to prevent their appointment by seeking a vote of confidence in his government. A negative vote would have allowed him to dissolve congress. The legislators did not take the bait. So when they voted to appoint the first judge, Mr Vizcarra took that as a denial of confidence in the government and dissolved congress.

Many constitutional lawyers question whether he had a right to use that pretext. But he will probably get away with it. The heads of the armed forces and the police have publicly backed him, as have the associations representing governors and mayors. His dismissal of a despised congress may lift his approval rating from just under 50%. Preparations for a congressional election in January have already begun.

The results are unpredictable. The (expired) constitutional court may rule on the legality of congress's dissolution, perhaps after a new one is elected. That might cause chaos. It is possible that voters will choose a more biddable congress, willing to back Mr Vizcarra's reforms. But there is little reason to believe that a caretaker congress, which would serve until July 2021, will be more public-spirited than the current one. The dark days of 1992 have not returned, but the future is looking cloudy. ■

Chile and lithium

Just-in-brine production

SANTIAGO

Can lithium charge up the economy?

CHILE'S ECONOMIC boom is copper-bottomed. Since pre-colonial times people have worked the metal. Today Chile produces 28% of the world's output. The industry accounts for almost 10% of GDP, 48% of exports and a third of foreign direct investment. Copper has helped make Chileans the richest people in South America.

Politicians, however, dream of doing more than exporting unrefined commodities. In 2016 Michelle Bachelet, then the president, announced a plan to encourage manufacturing and innovation at home through the use of another metal that Chile has in abundance: lithium. This is used in batteries for mobile phones, laptops and electric cars. The idea was for Chile not only to mine the metal but also to make components for car batteries, the fastest-growing part of the market.

Salt, but no battery

A recent slump in global lithium prices, caused by growth in supply outstripping demand, has sharpened the incentive to move up the value chain. In June Ms Bachelet's successor, Sebastián Piñera, said that a new national lithium plan is in the works. So far, these ambitions have been unfulfilled, showing how hard it is for small countries to ascend global supply chains.

Both presidents' plans involve renegotiating deals with miners to oblige them to help the battery industry. In 2017 Chile's economic-development agency, Corfo, renegotiated its contract with Albemarle, an American firm that is the world's biggest lithium producer. The new deal allowed it to expand production at its brine operation in the Salar de Atacama salt flat in northern Chile. In return, the firm agreed to sell up to 25% of its output at low prices to makers of car batteries operating in Chile.

In July, however, Corfo confirmed that three corporate investors, including Samsung, a South Korean giant, would not go ahead with plans to produce battery cathode materials in the country. Chile is trying again. Under a new contract, SQM, a Chilean firm, is offering a quarter of its production at a discount to buyers who invest in technology for more types of battery, not just the ones used in cars. It is not clear that this plan will fare any better.

Chile is too far from the manufacturers that are hungriest for batteries, many of which are in China. Carmakers especially need producers close by to co-operate on improving battery capacity. And lithium is only one of the materials required. Chilean battery-makers would have to import other components like nickel and cobalt.

It does not help that almost nobody in Latin America is yet producing, or indeed buying, electric cars. It might be wiser to focus on producing simpler lithium-rich battery parts for energy-storage systems that could take advantage of the Atacama desert's large solar-power potential, suggests José Lazuen of Roskill, a consultancy.

Regulations are another problem. Chile classifies lithium as "strategic", because it can be used in nuclear fusion. The nuclear-energy commission limits the quantity of metal that can be mined. That is a worry for battery-makers that might want to expand. In the past decade Chile's share of global lithium production has dropped from 40% to 20%. Although Chile has dozens of salt flats, only a few have been studied for their lithium-bearing potential. Brine-based lithium, of the sort mined in Chile, is more difficult to convert into the chemicals used for car batteries than is Australia's output, extracted from rock. Mining also risks wrecking salt flats' ecosystems.

Even as Chile strives to create a lithium-battery industry, scientists are trying to invent better batteries that use other materials. Moving up from mining is harder than it seems. ■

Indigenous languages

Northography

OTTAWA

The Inuit agree on a writing system

THE 47,000 Inuit who live in Canada's Arctic speak five dialects of Inuktut and use nine writing systems. The dialects are similar enough that an Inuk from one group can puzzle out what a speaker from another is saying. The writing systems, invented by Christian missionaries starting in the 18th century, are bigger barriers to comprehension. Three use syllabics—characters to represent syllables—rather than the roman alphabet. Both systems can be supplemented with diacritical marks that modify pronunciation and meaning. Communication is difficult and translating textbooks and government documents expensive.

Partly because of these difficulties, Inuktut, a group of languages spoken by 39,000 Inuit, is giving ground to English. In Nunavut, the northernmost Canadian territory, where most Inuit live, not all schools offer classes in Inuktut even though the territory has mandated bilingual education by 2020. Most phones and keyboards need extra software to handle syllabics, so

young Inuit text and email mainly in English, says Crystal Martin-Lapenskie of the National Inuit Youth Council.

On September 26th Inuit Tapiriit Kanatami, the national Inuit organisation, decided to mitigate these difficulties by adopting a unified writing system. Inuktut Qaliujaaqpait will use combinations of roman letters to represent the sounds in all five dialects. It is a writing system created by Inuit for Inuit, says Natan Obed, the group's president.

Getting to this point was not easy, for the Inuit aim for consensus. A task-force took eight years to achieve it. Elders who grew up with syllabics fretted that the shift to roman letters would erase part of their culture. Linguists had to devise ways to distinguish between sounds, like different ways of pronouncing "r", without using diacritics, which add an extra step in typing. The Inuit in Labrador, who use the roman alphabet, were reluctant to replace their capital "K" with the lower-case "q" used elsewhere. Every sound had to be represented. There could be "no dialect left behind", says Michael Cook, a linguist who worked on the project.

The new writing system will "keep our language strong", says Ms Martin-Lapenskie, but the old ones will not disappear quickly. The *Nunatsiaq News*, a newspaper that circulates in the eastern Arctic, will continue to use syllabics in its Inuktut text, says its editor, Jim Bell. The governments of Nunavut and of Canada, the newspaper's biggest advertisers, still want adverts set in syllabics and in the roman orthography now used for Inuinnaqtun, an official language in the territory. Mr Bell "can foresee a long transition period". In the north, change can come at a glacial pace. ■

Bello Crises past and present

Argentina's difficult road to redemption

On Calle Florida, in the centre of Buenos Aires, the money-changers are back, offering dollars at a black-market exchange rate. In the *villas miserias* (shantytowns) on the periphery of the metropolis, demand for food handouts at *comedores* (soup kitchens) has risen sharply, prompting congress to approve emergency food aid. Poverty now afflicts 35% of Argentines, up from 27% in January-June 2018, say official figures. Even the solidly middle-class districts in a city of slowly fading grandeur are feeling the pinch. "Before, local people helped more," says Sister Norma Arronda, who runs the Madre Camila *comedor* in Recoleta, which helps the homeless in late middle-age. "Now we get fewer donations."

For the sixth time since the 1980s, Argentina is suffering an economic crisis. Memories are still fresh of the collapse of 2001-02, when after a slump the country defaulted on its debts, savings were frozen, the economy contracted by 15% and the poverty rate reached 56%. In many ways this crisis is less severe and easier to escape. But in others it is more challenging.

It began last year when investors jibbed at continuing to finance the pro-market but fiscally lax government of Mauricio Macri, prompting a run on the peso. After the IMF stepped in with a $57bn loan, the biggest in its history, things seemed to stabilise. But with inflation at over 50%, real wages falling and the economy in recession, Mr Macri's chances of winning a second term in an election on October 27th waned.

In simultaneous primaries on August 11th, he won only 32% of the vote. A Peronist slate headed by Alberto Fernández, whose running mate is Cristina Fernández (no relation), a populist former president, won 48%. The prospect of Ms Fernández returning to high office, even if only as vice-president, prompted panic. The peso has fallen by 25% against the dollar since August 11th. Faced with political limbo, the IMF has suspended disbursements. To alleviate the pain, Mr Macri has reluctantly imposed exchange controls, export taxes and price freezes and offered electricity subsidies.

Mr Macri's people insist they still have a chance, because turnout will rise and because of fear of a return to leftist populism. But most insiders in Buenos Aires assume the Fernándezes will win. The big question is what sort of government would emerge. Some fear the worst, with hyperinflation and the expropriation of savings. But Mr Fernández is a pragmatist and a skilled political operator. He has been sounding increasingly moderate.

He has little choice. "Argentina has exhausted its credit," says a former official whom Mr Fernández consults. "We finally have to face reality." Many economists think that requires a comprehensive plan to bring down inflation and generate fiscal and external surpluses. A new IMF agreement and the restructuring of private debt are inevitable.

"Exporting more is the only way to get dollars," Mr Fernández told a business audience last month, saying that neither controls nor debt were solutions. His advisers talk, too, of a social pact that would freeze wages, prices, pensions and utility tariffs for at least six months. That is a way of finessing the indexation of pensions to past inflation, for which the government will lack the money.

Argentina's macroeconomic plight is less severe than in 2002. The banks are sound. After a belated fiscal squeeze this year, the fiscal deficit will be about 4% of GDP (compared with 6.3%). The recession is shallower and the peso is not wildly overvalued as it was back then. The IMF is more flexible, partly because of the opprobrium it attracted last time. "I think the politicians are a bit more responsible now," says Daniel Marx, who was the finance secretary in 2001.

He worries less about Mr Fernández's intentions than about whether the new government's economic plan will be sweeping enough and competently executed. If all goes well, the recession could end within a year.

But in some ways, Argentina is worse off than it was at the beginning of the century. Decades of economic stop-and-go have turned into stagnation since 2010. This is partly because so many people now live, one way or another, off the state. Despite Mr Macri, the economy remains over-protected and many businesses are cheerfully uncompetitive. "It's sad to see Argentina like this," says Sister Norma. "We have the memory of our parents and grandparents who worked hard and made progress. We lost the idea of work and of values."

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Lebanon's economy

Falling apart

BEIRUT AND CAIRO

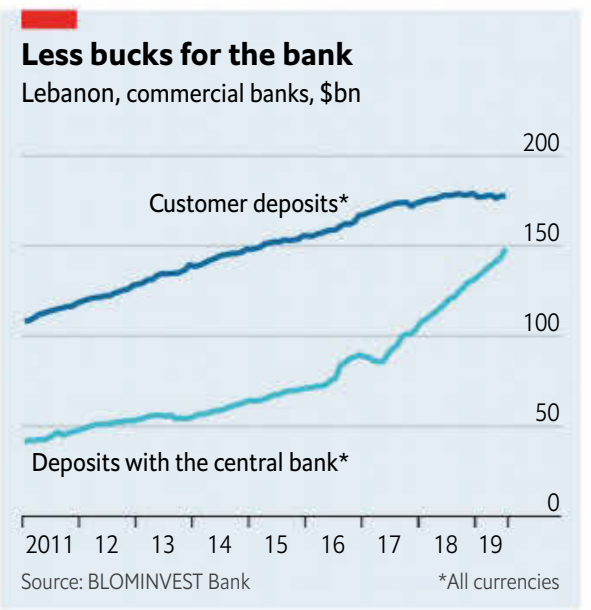
A long-feared currency crisis has begun to bite. Worse is still to come

IN THE LOBBY of a Beirut bank, three customers stuff wads of $100 bills into plastic bags. Each note has its serial number recorded on a receipt, as local law requires. One man's receipt was so long it trailed on the ground as he left the branch. Surreal as it seems, this scene would be common—if banks had dollars to spare. Over the past few weeks customers have queued for hours only to learn that they cannot access their money. One was told that his branch had less than $2,000 in the vault.

Long an immutable fixture of life, the dollar has become an obsession. Lebanon's currency, the pound, has been pegged at 1,500 to the dollar since 1997. Receipts are printed in both currencies; shopkeepers make change with a mix of dollars and pounds. Officially nothing has changed. But the panic points to a different reality. Protests in Beirut on September 29th heightened the sense of crisis.

Many ATMs have stopped dispensing dollars. Banks have quietly lowered withdrawal limits to $1,000 a day and imposed arbitrary rules, like banning dollar transactions after 5pm and on weekends, that in effect bar workers from using their accounts. Businesses are forced into a black market, where a dollar now fetches 1,600 pounds, and occasionally up to 1,750. The government insists the situation is under control. The value of such reassurances is depreciating almost as fast as the pound.

First to suffer are businesses that need hard currency. Petrol stations, for example, sell fuel in pounds but buy it in dollars. They briefly went on strike on September 26th to protest against a dearth of dollars at the official rate. Worried drivers queued in bumper-to-bumper traffic. Wheat millers have the same problem and have warned of possible bread shortages.



On September 30th the central bank promised to provide dollars at the official rate for firms that import fuel, medicine and wheat. The guarantee should prevent any immediate scarcity. It could also leave Lebanon with, in effect, a two-tier exchange rate. A shortage of dollars is not all bad news, since it should discourage imports and trim a current-account deficit that was 25% of GDP last year. But it will be painful for a country that relies so much on imported goods.

Such a decision is well beyond the mandate of most central bankers. Not Riad Salamé, who has run the Banque du Liban (BDL) since 1993. Admirers praise him for keeping the currency stable through years of political chaos. The BDL looks well-capitalised, with $37bn in foreign reserves at the end of July. It should have no trouble financing essential imports, which run between $4bn and $5bn a year.

Yet the bank's assets are in fact dwarfed by its liabilities, say former bank officials. To preserve the currency peg it borrows dollars from commercial banks at above-market rates. For a few years this was a viable arrangement. Banks, many controlled by politicians and their relatives, made healthy profits and the BDL had a supply of ▸▸

dollars to cover Lebanon's cavernous twin deficits. Last year's fiscal shortfall was 11% and public debt is more than 150% of GDP, among the highest in the world.

Like a pyramid scheme, however, this works only with a constant supply of new money. After a decade of steady growth, deposits in commercial banks have begun to shrink (see chart on previous page). Interest rates as high as 20% fail to attract dollars. But banks keep pouring money into the BDL. They had $147bn (in dollars and pounds) deposited with the central bank at the end of July, a 23% year-on-year jump. About 57% of the banking sector's total assets are now at the BDL, up from 51% a year ago and the highest level this decade.

The country needs economic growth and a smaller deficit. Neither is likely to happen. A 2019 budget approved in July is meant to trim the deficit to 7.6%. Much of this looks to be an accounting gimmick: the Lebanese Centre for Policy Studies, a think-tank, estimates that 46% of the savings comes from postponing payments to contractors. The government has made little progress trimming the bloated public sector or reducing subsidies to the state electric firm of $2bn a year (or 4% of GDP).

The spending plan is also based on projected 1.2% growth. That may be optimistic: Last year GDP rose by just 0.3%. The IMF expects a deficit above 9%. Few industries are doing well. Retailing is grim. Construction, which accounts for about 10% of jobs, has stalled. The number of new building permits issued in the first eight months of 2019 was down by 17% from last year. High interest rates make loans unaffordable for many businesses. (A rare bright spot is tourism, which had its best summer since 2011.)

In years past wealthy Gulf states might have offered a bail-out. They are less generous today, in part because of frustration with a Lebanese government seen as too tolerant of Hizbullah, the Iranian-backed militia and political party. An international aid package of $11bn (mostly in concessional loans) agreed to last year is frozen until Lebanon implements promised reforms. The government will find it increasingly hard to raise capital abroad. Fitch, a ratings agency, recently downgraded Lebanon's debt to CCC, deep into junk territory. On October 1st Moody's put its junk status under review for a possible downgrade.

As ever, the warlords and oligarchs who run Lebanon are busy bickering. The cabinet did not even meet for six weeks this summer after two ministerial aides were killed in a shoot-out. And the prime minister, Saad Hariri, was embarrassed by a *New York Times* report that he gave $16m to a South African bikini model he met at a party. Hundreds of employees of Mr Hariri's businesses have been laid off this year or had their salaries delayed. Needless to say, the model was paid in dollars. ■

The war in Iraq

Roads to ruin

Did American road-building in Iraq lead to more violence?

DRIVERS CALLED it the "highway through hell". Attacks on the road linking Baghdad to Amman occurred so often in 2014 that truckers were paid three times the normal rate to haul goods along the artery. Gangs and militias were a constant threat. The jihadists of Islamic State set up roadblocks, charged drivers a tax of around $300 and even handed out receipts. The road, officially called Highway 10, was recently secured by the Iraqi army. But those who drive on it still face the threat of extortion or attack.

America spent loads improving Highway 10 after 2003, the year it toppled Saddam Hussein, Iraq's former dictator. Over the next decade, as the war in Iraq dragged on, America spent nearly $12bn on infrastructure in the country. President George Bush touted the improved roads, hoping they would boost the local economy and lead to a reduction in violence. But a working paper presented at this year's meeting of the European Economics Association suggests that the effort may have had the opposite effect.

The paper's author, Tamar Gomez, a doctoral student at Imperial College London, had plenty of data with which to work. Digitised maps showed where new roads were built (the length of the road network increased by 21% between 2002 and 2011). American agencies kept track of spending on reconstruction. And a research centre at the University of Maryland logged the location and timing of attacks. Ms Gomez gathered the material and used regression analysis, a statistical technique, to look for relationships between road-building, economic progress and violence in Iraq.

She found that, far from stabilising Iraq, road-building led to more political violence. Even as GDP rose as a result of reconstruction, so too did the number of attacks. "In other words, the political and military mechanisms linked to road-building overpower the wished-for economic effects," writes Ms Gomez. (Oddly, she did not find a correlation between spending on roads and violence, but this is probably because much of the money was lost to corruption.)

Why did road-building in Iraq lead to more attacks? One explanation is that roads are important not just for commerce, but also for military operations. American soldiers used the new roads to mount missions and transport supplies—becoming targets for insurgents' ambushes and improvised explosive devices. The insurgents, too, used the roads to move around and launch attacks. A study in 2010 of America's war logs from Afghanistan found that 86% of insurgent violence took place near a road. There is little reason to think that the Iraq war was much different.

Ms Gomez also offers another explanation, rooted in the politics of reconstruction. "Roads are a politically charged infrastructure," she says. Those funded by America were viewed by insurgents as the embodiment of an unwelcome occupation and became "privileged targets". American officials have admitted that they often failed to win local support for their big projects. The roads to hell were, as ever, paved with good intentions.

Israel

Bibi makes his case

JERUSALEM

An embattled prime minister's last chance to avoid indictment

THE FIRST ten days of the Jewish new year, between Rosh Hashanah and Yom Kippur, are known as the days of atonement. It is a time in which observant Jews take stock of their sins in the preceding year. That Israel's attorney-general, Avichai Mandelblit, a deeply devout man, decided to hold the country's most important legal proceeding during this period hardly seems coincidental.

On October 2nd lawyers representing Binyamin Netanyahu, the prime minister, began making the case that their client should not be charged with corruption. Mr Mandelblit, who will make the final decision, has already said there is enough evidence for indictments on counts of bribery, fraud and breach of trust. The hearing, spread over four days, is Mr Netanyahu's first chance to challenge that evidence—and last chance to avoid going on trial. He would be the first sitting prime minister put in the dock.

The potential charges stem from three cases assembled over three years. In two Mr Netanyahu is accused of trading, or attempting to trade, regulatory favours for positive press coverage. In the third case prosecutors assert that Mr Netanyahu accepted gifts from wealthy businessmen in return for political favours. Three former close aides to the prime minister will serve as witnesses for the state. Mr Mandelblit himself was Mr Netanyahu's cabinet secretary before the prime minister appointed him attorney-general.

The hearing is closed, but Mr Netanyahu's lawyers are expected to claim that there is no evidence he traded favours, that most politicians seek better press coverage and that the prime minister's wealthy patrons are also friends. "The hearing has the potential to change everything," says Uri Korb, a former state attorney who successfully prosecuted Ehud Olmert, a former prime minister, on corruption charges. "The strength of the state witnesses' testimony has yet to be tested and the evidence is largely circumstantial." (Mr Korb says he declined a request from Mr Netanyahu to help with his defence.)

Even if he is indicted, Mr Netanyahu intends to stay on as prime minister. The law does not require him to step down until a final conviction. His opponents or public watchdogs, however, may ask the Supreme Court to intervene. As it is, Mr Netanyahu is holding on by his fingertips. In an election on September 17th his coalition of right-wing and religious parties failed to win a majority, a near-repeat of the result of an election in April. But the fractured opposition also lacks the seats needed to form a government and remove Mr Netanyahu.

The political and legal timelines are converging. The attorney-general is expected to announce his decision within weeks. It would be a shock if he does not indict Mr Netanyahu on at least some charges. Around the same time Mr Netanyahu will face a deadline to form a government. His remaining supporters may begin to have second thoughts about sticking with a prime minister about to stand trial. His day of judgment is drawing close. ■

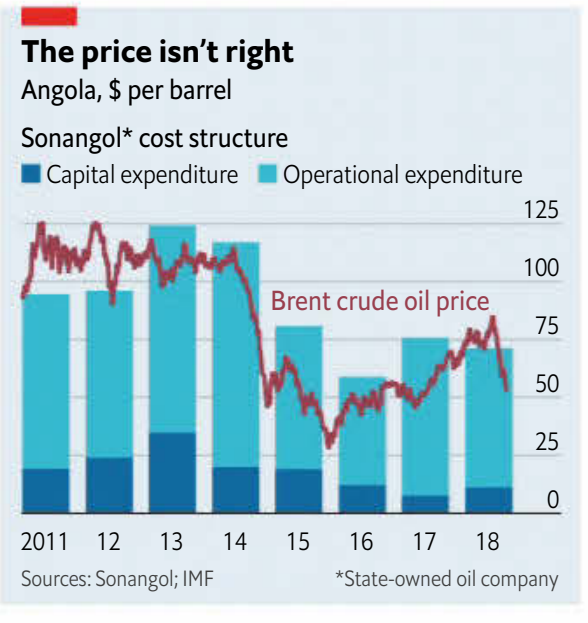
Angola's oil decline

After the flood

Angola's main source of wealth is in steep decline

A HUGE JET of flame bursting from the Kaombo Norte oil platform lights up the sea some 260km (160 miles) off the coast of Angola. The processing platform, part of a $16bn project that takes oil from wells drilled under nearly 2km of water, ought to be one of the crowning achievements of an industry that has endured 27 years of civil war. Instead, it may be a swansong for sub-Saharan Africa's second-biggest oil producer: Angola's offshore oil fields are running dry.

Daily oil production has tumbled from its high of almost 2m barrels a day in 2008 to around 1.4m today. Since oil provided 95% of export revenues and almost two-thirds of government revenues, the fall in output—as well as a slump in the price of crude—has thrashed the economy. GDP has shrunk for three years in a row. This year the IMF expects growth of just 0.3%. The fall in output is not because the country has no oil—its reserves are second only to Nigeria in the region—but because of underinvestment.



The government is trying to reverse the decline in oil production. It has slashed the tax rates on smaller oilfields from 20% to 10%. And the agency in charge of auctioning oil blocks recently went on a roadshow, hoping to drum up investor interest. Meanwhile Sonangol, the state-owned energy giant, plans to sell off some of its eclectic collection of assets—which include a convent in Portugal and stakes in the state diamond miner and state airline—in order to free up money to invest in oil production.

Yet no matter how much Angola might sweeten the terms of new investment, it may not be able to lure back all of the international oil companies that once flocked to the country's oil-rich offshore basins. Firms including ExxonMobil and France's Total spent freely, ordering hulking offshore rigs in the 2000s when oil prices approached and then exceeded $100 per barrel. Prices crashed in 2008, but were back above $100 by 2011. In 2014 they plummeted to less than half that. Most oil firms retreated from big risky projects in deep waters to focus on the shale fields of Texas and North Dakota, where capital investments are smaller and operating costs are lower.

By contrast production and capital costs in Angola have been stubbornly higher than the oil price (see chart). Unless high prices return, oil companies may not, either. "From the moment oil prices go down or flirt with $50, deep and ultra-deep offshore investments such as the ones that Angola has been offering become less attractive," says Gonçalo Falcão, head of the Angola practice at Mayer Brown, a law firm. A handful of new projects are in the works, but America's Energy Information Administration expects their completion merely to sustain current levels of output.

Angola's government has not prepared the country for this slump. Between the end of its civil war in 2002 and 2014, GDP rose from $15bn to $146bn. José Eduardo dos Santos, president for 38 years, squandered the wealth, turning Luanda into a gleaming capital but investing in little else. João Lourenço, who took over as president in September 2017, is trying to diversify the economy, but progress is slow.

Last December the IMF agreed to lend Angola $3.7bn on condition that it implement tough economic reforms. The fund has already handed over more than $1.2bn, but the reform programme has fallen far behind schedule. For instance, the government promised that it would introduce a value-added tax in January, but delayed the implementation twice before finally bringing it into force on October 1st. With oil production falling steadily, it does not have time to waste. ■

Ethiopia's Somali region

Lessons from an open-air prison

JIGJIGA

The most dramatic change in Ethiopia is happening in the least expected place

"HOW IS DEMOCRACY?" asks Bashir Ahmed Hashi, smiling broadly, as he bounds out of his jeep towards the gates of Jigjiga prison. Entering the courtyard, the commissioner is greeted by a loud cheer. Excitable inmates jostle to shake his hand and pat him on the back. "For 24 hours a day we are happy now," says one. Bashir, who was appointed prison chief for eastern Ethiopia's Somali Regional State less than a year ago, looks a little bashful. "I'm popular here," he explains.

Before August 2018 the Somali region was the most ill-treated place in all of Ethiopia, tyrannised by its then state president, Abdi Mohamed Omar, who had waged a scorched-earth campaign against secessionist rebels for more than a decade. Backed by the central government, Abdi and his heavily armed special police force, the Liyu, murdered and raped civilians, imprisoned and tortured tens of thousands of alleged rebels, and, according to Human Rights Watch, committed crimes against humanity. "It was like a giant prison," says Mohammed Gurey, one of hundreds of thousands of Ethiopian Somalis to have fled abroad in recent decades.

That all changed last year when Abiy Ahmed became Ethiopia's prime minister. Abiy, who deposed Abdi and put him on trial in Addis Ababa, the capital, invited Mustafa Omer, an exiled activist and UN staffer whose own brother had been killed by the Liyu, to take over as acting state president. Dissidents and rebels returned in droves. Mohammed became the region's deputy security chief. The infamous central prison in Jigjiga, the state capital, was closed. Thousands of prisoners were freed.

Since then Mustafa has overseen the most dramatic turnaround in the region's recent history. "It is the safest place in Ethiopia right now," says Kamal Hassan, another recent returnee. When your correspondent visited Jigjiga in the final months of Abdi's rule, former detainees refused to meet in public for fear of reprisals. Today many of them are in government. The old prison is to reopen as a museum, and Bashir takes visiting journalists and human-rights workers on tours—revealing, for example, the toilet cubicles where political prisoners huddled in solitary confinement and the underground pit where human waste was dumped on them as punishment. Meanwhile separatist leaders of the Ogaden National Liberation Front (ONLF) have ditched their weapons and plan to contest elections next year.

The contrast with other parts of Ethiopia, where recent democratic reforms have been accompanied by a surge in violence and lawlessness, is striking. But even in the Somali region, the process is imperfect and fragile. Some critics allege that Mustafa is keener to take revenge on the old guard than to strengthen state institutions. "He treats everyone who worked for Abdi like they are Hitlers," complains an associate of the former regime. Locals bristle at a government dominated by well-heeled diaspora types. Others resent a lack of consultation. "Transparency is not very strong," sniffs Abdirahman Mahdi, the ONLF's secretary-general. Some worry about a return to strong-arm tactics: in recent days nearly 600 youngsters were indiscriminately rounded up in Jigjiga on vague allegations of criminality and taken out of the city for "rehabilitation". About a tenth have since been released.

Reforming such an authoritarian set-up is tricky. Take the Liyu. One of Mustafa's first moves was to recall its top commanders to Jigjiga to undergo a two-month evaluation. The most notorious were fired, the rest given lessons in human rights and the constitution. Rubber batons replaced live ammunition for crowd control.

These days reports of serious abuses are rarer. But reforms will need to go further. In the past the Liyu answered only to the president, in effect acting as a private army. Reeducating the troops is a "very cursory" solution, notes the ONLF's Abdirahman. A more lasting one is likely to involve integrating them into the state's regular police. In recent years all of Ethiopia's regional governments have built up special police forces which they are loth to give up.

Even more vexing is the question of justice for past crimes. Only Abdi and some of his closest associates have been put on trial. Mustafa calls it a "moral dilemma". Stability, he says, was the priority when he took office: "We had to balance the need for justice with the pragmatic reality that we need a special force here to keep peace."

Yet many Ethiopian Somalis are demanding that those responsible for atrocities be held to account. "Everywhere you go this is the complaint: people who committed crimes are still living among them," says Mustafa's human-rights adviser, Jemal Kalif Dirie. Mohammed Mohamud Mohammed, a former detainee, recalls seeing one of his tormentors working for the Liyu as a security guard at the ONLF's homecoming ceremony last year. "I couldn't believe my eyes," he says. "I just froze."

To this end the government plans to establish a regional commission to investigate atrocities going back decades. And it has set up a committee with the ONLF to work out how best to pursue what lawyers call "transitional justice". So far, a few people have been identified to go on trial. "You cannot have reconciliation without having accountability," says Mustafa.

Such challenges are found throughout Ethiopia. In February Abiy's government established a national reconciliation commission, the first in the country's history. But what happens in the Somali region in the coming months and years may be instructive. "What we want the commission to recommend is how to get out of this mess," says Jemal. "There has to be a departure from this cycle of killing." ■

Abiy Ahmed, heeding the call

India's courts and Kashmir

State of disgrace

DELHI

The judiciary seems determined to ignore the government's abuses

TWO MONTHS ago Narendra Modi, India's prime minister, boldly scrapped seven decades of legal precedent. Voiding Jammu & Kashmir's semi-autonomous status, his government abolished its legislature, sliced the state in two and demoted the new parts to "union territories", subject to direct rule by the national government in Delhi. The move prompted cheers in much of India, and fury in the former state. It also, inevitably, raised pressing constitutional questions.

But pressing to whom? The 7m people of the Kashmir valley certainly feel some urgency. Since August 5th this overwhelmingly Muslim slice of the state has been under virtual siege, painfully squeezed between some 500,000 itchy-fingered Indian troops and a few hundred armed militants. Wielding draconian anti-terror laws, the government has arrested hundreds, not for any crime but to prevent protests. It has also restricted movement into, out of and around the state and imposed a total block on mobile phones and the internet. Militants and their supporters are enforcing their own blockade in response, forcing schools, shops and markets to close in an open-ended protest strike. "It is suffocating and unbearable," says a Kashmiri civil servant who is opting to stay with relatives in Delhi. "Young people especially are going crazy, with nothing to do except dream of revenge."

To the Supreme Court, however, none of this seems particularly urgent. When it met in late August to consider a batch of petitions challenging the constitutionality of Mr Modi's moves, it gave the government a month to reply. When the judges took the matter up again on October 1st, the government's lawyers received not even a tap on the wrist for failing to prepare a response. Instead, the judges graciously yielded more time. The next scheduled hearing is now set for mid-November, which is to say, two weeks after the Jammu & Kashmir Reorganisation Act is due to come into force, on October 31st.

With equal unconcern, another bench of the Supreme Court on the same day postponed—for the seventh time in one case—an even bigger batch of petitions regarding unfair imprisonment and suspension of communications. It has shunted petitions for *habeas corpus*—which in legal theory are urgent matters—back to the high court in Jammu & Kashmir, in full knowledge that it has been swamped by more than 250 such protests against illegal detention, yet has only two judges to hear them all. The reason why the state's top court is so cripplingly undermanned, with eight of its 17 judgeships vacant, is that the Supreme Court has for months neglected to ratify any new appointments for the state. (Lawyers in Kashmir are also on strike, to protest arbitrary arrests.)

The Supreme Court has at times stood up to the government, through rulings that expanded the public right to information, for instance, or strengthened ordinary citizens' right to privacy. Legal experts concur, however, that this record has notably dark- ▸▸

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ened in recent years. Gautam Bhatia, a lawyer who writes on legal issues, describes one of the Supreme Court's recently favoured tactics as a "doctrine of constitutional evasion". Rather than rule against Mr Modi's government, the top court has repeatedly waffled just long enough for matters to resolve themselves in its favour.

In the midst of a general election last April, for example, the court declined to hear a case challenging the legality of electoral bonds, an instrument devised by Mr Modi's government that allows for unlimited, anonymous donations to political parties. It argued that there was no time before the election results, ignoring the fact that it had already sat on the docket for a year. In the case of Aadhaar, a national biometric identification scheme, the Supreme Court waited five years to pronounce that it should be scaled back, by which time more than 1bn people had been enrolled. It took two years to rule that Mr Modi's government had overstepped its powers by interfering in the local politics of Delhi, by which time the opposition party that runs the city had been bullied and harassed into near irrelevance.

But the court is not always so sleepy. In at least one case that raises obvious questions about infringements of rights, the top judges have been more aggressive than the government. It was the Supreme Court that ordered the state of Assam to update a "register of citizens". In a clear reversal of the presumption of innocence, the ruling forced all 33m residents of the state, many of them poor and illiterate, to furnish decades-worth of official documents proving their citizenship. The fate of some 1.9m who failed to show the right papers is unclear, but the state government is busy building internment camps. Mr Modi's government now wishes to expand this hunt for interlopers to the entire country. "What it resembles more", writes Mr Bhatia of the Supreme Court, "is a branch of the executive, enabling and facilitating the executive, instead of checking and balancing it, and reviewing its actions for compliance with fundamental rights."

One of the pleas before the Supreme Court, for example, questions Mr Modi's sleight-of-hand in having Jammu & Kashmir's governor, whom he appointed, act as a surrogate for the state's legislature, which Mr Modi suspended, in giving assent to the state's demotion to a territory, as required by law. The central government, the petition explains, used "a temporary situation meant to hold the field until the return of the elected government, to accomplish a fundamental, permanent and irreversible alteration of the status of the state of Jammu & Kashmir without the concurrence, consultation or recommendation of the people of that state." Such dodges work only with the connivance of the courts. ■

Elections in Afghanistan

Umpire state-building

ISLAMABAD

The presidential poll looks likely to be disputed, just as in 2014

AFGHAN ELECTIONS are never quick and never easy. The presidential poll that took place on September 28th will be no exception. Voters were choosing a leader for the fourth time since the Taliban regime was toppled in 2001. Full results are not expected until November 7th. A run-off may then follow. Disputes are already rife.

The contest is a repeat of the previous election, in 2014. The incumbent, Ashraf Ghani, is favourite; his closest rival is likely to be the man he defeated last time, Abdullah Abdullah. Campaigning was wan. Until America abruptly called off talks with the insurgents of the Taliban in early September, polling had widely been expected to be postponed, since it would have distracted from the negotiations.

Afghanistan's rugged terrain and atrocious roads would make even a peaceful election tricky. But the country is also racked by the 18-year-old war between the Taliban and the government, which is backed by America. American officials estimated last year that the Afghan government controlled barely half the country. The number of polling stations had to be cut by more than a quarter, partly because of insecurity.

The Taliban had vowed to stop the vote. Widespread violence was expected on polling day. In the end, casualties were lower than feared, though at least five people were killed and 80 wounded in attacks on polling stations. Even so, the threat of bloodshed, along with the Taliban's grip on rural areas and widespread apathy, led to an embarrassingly low turnout. Some 2.6m people cast ballots. That is about 27% of registered voters and roughly 15% of people of voting age.

A feverless campaign

Violence was not the only source of trepidation ahead of polling. Previous elections have been mired in fraud. The lack of security has hampered monitoring and so helped the cheats. Sceptics have warned that a disputed result could lead to a dangerous political stand-off, with losers refusing to accept the outcome, as happened in 2014. Several candidates denounced the vote as unfair before a single ballot was cast. Others, such as Gulbuddin Hikmatyar, a bloodstained warlord, threatened to resort to violence if they concluded the poll had been rigged.

Mr Ghani insisted that the election would strengthen the state and give him a mandate to talk to the Taliban. Afghanistan's international backers agreed, at least publicly, and stumped up millions to pay for the poll. New biometric voting machines were brought in and new voter lists drawn up in an effort to curb cheating.

It will take weeks for the results to come through. There has already been confusion over how many polling stations opened and how many people voted. Since the Taliban sabotaged mobile-phone networks, hundreds of polling stations were unable to communicate with the capital. Mr Ghani's opponents say the security services invisibly influenced the vote, by declaring that areas that supported opposition candidates were too insecure to allow voting to proceed.

The biggest flare-up is likely to be between Mr Ghani and Dr Abdullah. The latter claimed he was cheated of victory in 2014; only American wrangling to cobble together a unity government ended the argument. Mr Ghani became president, while Dr Abdullah took a hastily created new post of chief executive.

The unity government brought little unity. "Abdullah has a particular bitter vendetta, given that he believes he defeated Ghani in 2014," says Michael Kugelman of the Wilson Centre, an American think-thank. "So he certainly won't back down easily, especially if he is declared a loser to his rival Ghani once again." Foreign diplomats pleaded for candidates to wait patiently for results. Instead, the two camps both swiftly declared that their own tally showed that their man had won.

It is unclear what America will do if the result is disputed again. In 2014 it was only American arm-twisting that resolved the row—but President Donald Trump makes no secret of his desire to disentangle America from Afghanistan. ■

Depopulation in Japan

Brides for bumpkins

AKITA

Rural areas are trying to seduce nubile young urbanites—quite literally

EVEN AFTER years of attending match-making parties, a professional in Tokyo explains, she has not found any suitable marriage prospects. "I'm tired of going to these events and not meeting anyone," she gripes. So she has decided to expand her pool of prospective partners by looking for love outside the capital. To that end she has filled out an online profile detailing her name, job, hobbies and even weight on a match-making site that pairs up single urbanites with people from rural areas.

Match-making services that promote *iju konkatsu*, meaning "migration spouse-hunting", are increasingly common in Japan. They are typically operated by an unlikely marriage-broker: local governments. In Akita, a prefecture near the northern tip of Japan's main island, the local government has long managed an online match-making service to link up local lonely-hearts. It claims to have successfully coupled up more than 1,350 Akita residents since it launched nine years ago. It recently began offering a similar service to introduce residents to people living outside the prefecture and is optimistic about its prospects. "By using the *konkatsu* site, we hope that more people from outside will marry someone from Akita to come and live here," says Rumiko Saito of the Akita Marriage Support Centre.

Along with online matching services, municipalities across Japan host parties to help singles mingle. They also organise subsidised group tours in rural prefectures, in which half the participants are locals and the other half from cities, to encourage urbanites to marry and move to the countryside. Hundreds of singletons participate in these tours every year.

The rural bureaucrats are playing cupid in the hopes of stemming emigration. The population is shrinking in 40 of Japan's 47 prefectures. Young people move from the countryside to cities to go to university or look for a job. As a result, the dating pool in rural areas is becoming ever tinier—a situation that encourages even more young people to move away. The same singletons keep showing up at all the local *konkatsu* events; there is little prospect of meeting new people. "The size of the rural *konkatsu* market is small; it's nearly non-existent," says Koki Goto of the Japan Konkatsu Support Association.

The difficulty of finding true love in the countryside is compounded by a gender mismatch. In 80% of prefectures with declining populations, young women are more likely than men to relocate to cities. This means that whereas there are more single women than men in big cities like Tokyo, bachelors outnumber spinsters in rural areas. Many men in the countryside are "left behind", laments a government official in Akita.

So much for the theory. Most *iju konkatsu* schemes are quite new, making it hard to assess whether they work in practice. Only a handful of urban-rural couples have tied the knot using Akita's match-making system. The professional in Tokyo has not yet met the one either. But she is willing to try anything that might improve her chances of doing so.

Indonesia's pious consumers

This magazine is certified halal

BOGOR

Or at least in Indonesia, it might soon have to be

IVON WIDIAHTUTI's job is, on the face of it, straightforward. As an auditor at the Food, Drug and Cosmetics Assessment Agency (LPPOM), an organisation in the leafy city of Bogor, Ms Widiahtuti reviews the applications of companies hoping their products will be deemed *halal*, meaning that their consumption or use does not break any of the strictures of Islam. Lately, however, her job has acquired an absurd streak. *Halal* is a concept most commonly applied to diet, and Ms Widiahtuti spends most of her time considering applications from food and beverage companies which want to assure Muslim consumers that their products are free of pork and alcohol, which devout Muslims eschew. But some applications concern products that aren't edible. As she lists the musical instruments and sex toys that she and her team have inspected recently, she giggles at the absurdity of asking: is this vibrator *halal*?

Ms Widiahtuti does not believe that CEOs are becoming more pious. But ordinary Indonesians are. The country is home to more Muslims—some 230m—than anywhere else in the world. They, in turn, consume more products that have been certified *halal* than Muslims anywhere else. Companies spy opportunity. The number of products that received *halal* certifications quadrupled between 2012 and 2017. A small but growing share of such companies ▸▸

Is this the way good Muslims roll?

do not make goods that can be digested. Over the past five years the Indonesia Ulema Council (MUI), a government-funded body that issues spiritual guidance to the devout and runs LPPOM, has given its seal of approval to the makers of a fridge, a frying pan, sanitary pads, cat food and laundry detergent.

Yahya Staquf, a prominent Muslim cleric, does not understand how such things can be *halal*. Many share his consternation. When Sharp, a Japanese electronics giant, announced in 2018 that a fridge it was selling in Indonesia had received *halal* certification, it was widely ridiculed. In fact, the mockery in that case was misplaced: according to Ms Widiahtuti, the process of making the plastic parts of fridges can involve products derived from pigs. Owing to Sharp's *halal* certification, Muslims who purchase the appliance can now be confident that their food will not come into contact with contaminated plastic.

When more and more companies like Sharp started approaching MUI, it issued guidance stipulating that any product related to food preparation or prayer—no matter whether it can be consumed—is eligible for certification. Pianos and sex toys do not fall under that rubric, Ms Widiahtuti notes, so she rejected those applications.

In an effort to boost exports and pose as pious, Indonesia's lawmakers have expanded the scope of certification yet further, however. They have approved a law requiring all consumer goods to be certified as *halal* from October 17th. Ms Widiahtuti suspects that, in practice, the law will be applied only to certain products, but that is only an assumption. "The scope is very general. What is the limit?" she wonders. Ms Widiahtuti may have to decide whether pianos and vibrators are godly goods after all. ■

India's IT industry

Fab in India

The government tries to create indigenous chip-makers

INFORMATION TECHNOLOGY can make a good claim to being India's biggest and most successful industry. Tech hubs such as Bengaluru and Hyderabad contribute more than 13% of GDP. The country's computer-science graduates are lauded worldwide: the bosses of two of America's biggest tech firms, Satya Nadella of Microsoft and Sundar Pichai of Google, were born and educated in India. It is also home to the fast, cheap Jio phone network which has made Indians the world's biggest consumers of mobile data.

Yet although many Indians work with computers, very few are employed in building them. All the components used to create Jio's network were imported. Bengaluru and Hyderabad live off dull business-process outsourcing and back-office management. Last year India imported $55bn of electronic goods. It exported just $8bn. The fact that India's most celebrated industry depends entirely on imports in an era in which many countries are increasingly capricious about what goods they will allow to be exported makes some officials nervous. So India is attempting to build its own chips.

It is starting from close to zero. The only factory in India that makes semiconductors—the processors at the heart of all electronic gadgets—is a government-run outfit in the city of Chandigarh. It was built in 1983 in partnership with an American chip company that no longer exists. The fab, as chip-making factories are called (it is short for fabrication plant), is managed by the Department of Space, and makes specialised chips for military use. The Centre for Development of Advanced Computing (CDAC), another government body, has designed some chips of its own, but got foreigners to make them.

In 2017 the Indian government approved $45m of funding for CDAC to design a new collection of chips that would be built on top of a set of open-source technologies called RISC-V. Unlike the chip designs of Intel or Arm, which are proprietary, RISC-V designs are available to anyone with an internet connection to download free of charge, and to incorporate into their chip designs without a licence (see Science and Technology section). This means any resulting chips will be cheaper for CDAC to produce, as they don't have to pay royalties to Western companies. Their production will also be harder for foreign governments to disrupt. CDAC has finished the design of its first RISC-V chip, and will soon start manufacturing it.

The government is also funding a commercial chips project called Shakti, which uses RISC-V too. Whereas CDAC is building chips for government use and so keeping the final design secret, Shakti's engineers will publish the final designs of their chips so that any other company can build upon them. G.S. Madhusudan of IIT Madras, who leads the project, has started a company to make and sell Indian processors using Shakti's designs. He says the chips made by the new company, called InCore, will cost less than imported chips. The Shakti project has already produced a chip to demonstrate its technology—the first commercial chip designed in India—using factories in Taiwan to do the physical manufacturing.

By lowering costs for Indian tech firms through open-source chips and by helping to develop a technical ecosystem, Mr Madhusudan hopes to keep more of India's engineers at home, perhaps even starting new technology companies. Computer chips are finding their way into everything from household appliances to running shoes, and he believes India has a shot at making these lower-end processors.

The RISC-V projects also aim to insulate India from geopolitics. That RISC-V has be-

They're better at using them than making them

come the first open-source chip design to reach a wide audience at the same time as America clamps down on semiconductor exports in the name of national security is not a coincidence. S. Krishnakumar Rao, the head of hardware design at CDAC, says that eliminating the risk of a technology embargo is one of the primary reasons that India is pursuing its own semiconductor program. Chinese firms are adopting RISC-V quickly too. Interest is also growing in Europe.

Developing an indigenous semiconductor industry will be hard, however. India does have talented engineers, but only from a handful of elite engineering institutes. The country's infrastructure is nowhere near the standards of southern China and Taiwan, where most of the world's chips are made. Foxconn, Apple's main contractor, is investing billions of dollars to make more iPhones in the southern state of Tamil Nadu, but in much of India reliable power, water and transport are harder to come by. The Indian government does not typically welcome foreign investment on the scale that would almost certainly be required to produce chips, computers and smart devices at scale. Although China is host to plenty of this sort of manufacturing, almost all the companies that carry it out are Taiwanese.

Then again, the incentives for success are strong, too. When India looks east, it sees Huawei, a Chinese tech giant, being cut off from American-made components as a result of the trade war. To the west, it sees its most talented engineers working in Silicon Valley. By pouring millions of dollars into Indian-made semiconductors, India's government hopes to solve both problems at once. ■

Banyan Ode to misconduct

China is resorting to new forms of bullying in the South China Sea

Less is heard these days about China's massive terraforming operations in the South China Sea, which not long ago exercised neighbours as well as the United States. But that does not mean China is any less assertive in the 1.4m square-mile (3.5m square-km) sea which, on the flimsiest grounds, it claims pretty much in its entirety. On the contrary, China seems to think its artificial islands allow it to open a new phase of self-assertion in the face of the South-East Asian countries with overlapping claims in the sea.

Starting in 2013 seven artificial islands sprouted around distant reefs that China controlled. Other countries, including Vietnam, the Philippines and Taiwan, have also reclaimed land from the South China Sea for airstrips and bases. But the scale of China's efforts dwarfs theirs. President Xi Jinping swore that China's operations served only the common good, an assertion undermined by the immense ecological damage of the construction, and by the subsequent installation of missiles, military radar and reinforced bunkers for warplanes.

If the terraforming no longer makes headlines, it is because it is largely complete. The new bases, say American commanders, allow China to control the entirety of the South China Sea in any scenario short of all-out war with the United States. The new port and resupply facilities are helping China project power ever further afield. Chinese survey vessels look for oil and gas in contested waters. They run back and forth "like a lawnmower", says Bill Hayton of Chatham House, a British think-tank.

Vietnam, in particular, is alarmed. In 2014 China towed an oil platform into Vietnam's exclusive economic zone (EEZ, meaning the area off its coast in which it claims exclusive fishing and mineral rights), sparking a stand-off between Chinese and Vietnamese maritime militias and big anti-China protests in Vietnamese cities. The platform was subsequently removed, but China recently unveiled a new, even bigger one.

Further afield, over a dozen Chinese coastguard vessels patrol back and forth around two reefs, barely underwater, where China previously had no permanent presence: the Second Thomas Shoal, west of the Philippines, where a small Filipino force maintains a presence aboard a rusting hulk; and the Luconia Shoals, off the Malaysian part of Borneo. The operations assert sovereignty: patrol enough, and other countries might eventually accept China's de facto control. Meanwhile, some of the same vessels have intimidated rigs (or their supply vessels) drilling in Vietnamese and Malaysian waters.

Yet not everything is going China's way. Rumours suggest the new islands' concrete is crumbling and their foundations turning to sponge in a hostile climate. And that is before considering what a direct hit from a super-typhoon might do.

More significantly, neighbouring countries are resisting Chinese pressure to develop gasfields that lie within their EEZs jointly. Even though the Philippines agreed in principle to one joint development, a formal agreement to that end has yet to be signed. Nor has China prevented foreign oil companies from working with other littoral states. The rig Chinese vessels harried in Vietnamese waters is operated by a Russian state enterprise, Rosneft, even though Russia is supposedly a close friend of China's.

Meanwhile, China's bullying is impeding the adoption of a "code of conduct" between it and the ten-nation Association of South-East Asian Nations (ASEAN)—despite China proposing 2021 as the deadline for achieving one. Ian Storey of the ISEAS-Yusof Ishak Institute in Singapore sees lots of obstacles. One is making any code legally binding—for instance, by lodging it with the UN; China would oppose that. Another is defining the geographical scope of the agreement. China will insist on the vague but expansive "nine-dash line" which encompasses nearly the whole sea. Nearly everyone else will oppose that.

Then there is the question of what activities should be forbidden. China would resist bans on further reclamation and militarisation. And ASEAN would surely reject an insidious provision against military exercises with countries outside the code, in effect giving China a veto over drills between ASEAN members and America. China's demands for the code of conduct, says Teodoro Locsin, the Philippine foreign secretary, are intended as "implicit recognition of Chinese hegemony". They are, he continues, "a manual for...the care and feeding of a dragon in your living room."

Unrest in Hong Kong

Crashing the party

HONG KONG

On October 1st China marked 70 years of Communist rule. Our stories and column look at the day's importance—first, for Hong Kong

OCTOBER 1ST, the 70th anniversary of the founding of the People's Republic of China, was never likely to be joyous in Hong Kong. For over four months the city had been in increasingly violent revolt, with protesters demanding full democracy and denouncing the Communist Party's interference in the territory's liberal way of life. They said they would mark the country's national day as a "day of mourning". Indeed, it proved a dark one.

Across the territory, protesters marched, lit fires (sometimes of Chinese flags) and displayed placards referring to "ChiNazis". They also goaded the police, who responded fiercely. More than 100 people were taken hospital, including two who were in a critical condition. One was an 18-year-old student, Tsang Chi-kin, who is said to be "stable". He was shot in the chest by an officer using a pistol at close range. It was the first casualty involving live ammunition since the unrest began, and has inflamed passions. On October 2nd peaceful demonstrations against the shooting descended into violence, with protesters vandalising shops and stations.

Police had warned that officers feared having to shoot people in order to protect themselves. In this case videos showed protesters viciously attacking a policeman on the ground before a colleague ran towards the group and fired at Mr Tsang (a different incident is pictured). The police have defended the shooting as "reasonable and legal". But for a force that prides itself on its restraint, it marks a dangerous escalation. The officer who used the gun also carried non-lethal weapons.

It will certainly complicate the local government's efforts to defuse the unrest, which was triggered in June its attempt to introduce a bill allowing criminal suspects to be extradited to mainland China. Hong Kong's chief executive, Carrie Lam, has promised to withdraw the bill. But protesters have other demands, including an investigation into police conduct. In September the government promised an inquiry, but demonstrators say the body that would conduct this is pro-police.

Mrs Lam, in Beijing for the national-day festivities, had tried to avert trouble by toning down official celebrations in Hong Kong. A grand fireworks display was cancelled. The police also refused an application by protesters for a large march on Hong Kong island. But such measures were in vain. Tens of thousands of people staged a march anyway. Afterwards scattered riots broke out across the territory. Five police were hospitalised, including one with third-degree burns, allegedly caused by corrosive fluid thrown by rioters.

Early in the summer there was much speculation that the mainland authorities were mulling using troops to crush the unrest. Officials have since tried to downplay this possibility. In September Song Ru'an, a senior Chinese diplomat in Hong Kong, expressed confidence in the local government's ability to restore calm. Nevertheless, Reuters news agency has reported a recent surge in the number of Chinese troops stationed in the territory, from about 3,000-5,000 to around 10,000-12,000. Police groups and Communist Party-controlled media in Hong Kong have urged the use of a colonial-era emergency law to quell the unrest, which would allow sweeping curbs on civil liberties.

Mrs Lam, having earlier expressed reluctance to do this, may be changing her mind. The *South China Morning Post*, a local newspaper, said she was preparing to in-

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voke the emergency bill to ban the wearing of masks at protests. But Mrs Lam still wants to show that she is sensitive to protesters' grievances. On October 1st Matthew Cheung, Mrs Lam's deputy, referred to "society's deep-seated problems" such as a shortage of affordable homes. Pro-government politicians in Hong Kong and the mainland's press have criticised the city's property tycoons, shaming them into offering up land for public housing.

Officials have even hinted that political reform might still be possible. In September Mr Song said the central government's most recent electoral-reform package, published in 2014, was still on the table. That deal stopped far short of promising full democracy. It sparked weeks of sit-ins on busy streets and was rejected by lawmakers. But on September 28th Hong Kong's government promised to "take forward constitutional development".

Nonetheless, tensions will remain high. The Legislative Council, in recess since July, is due to reconvene on October 16th. Shortly afterwards Mrs Lam must outline her priorities for the coming year. Then on November 24th Hong Kongers go to the polls to elect local councillors. Further protests could erupt if the government attempts to bar candidates who are deemed to lean towards Hong Kong's independence from China, as it did during elections to the legislature in 2016 and 2018. More imminently, October 7th is Chung Yeung, a holiday when families sweep the graves of their ancestors. Protesters may see it as another chance to mourn for their city. ■

Military technology

Opening the arsenal

Weapons paraded in Beijing were designed to make Americans tremble

China has held several large military parades, but none as grand or involving such cutting-edge technology as its display in Beijing on October 1st marking 70 years of Communist rule. Fifteen thousand troops goose-stepped through Tiananmen Square, accompanied by 580 pieces of weaponry including missiles, tanks and drones and, overhead, more than 160 fighter jets, bombers and other aircraft. State media said all of the equipment was Chinese-made and that 40% of it had never been shown in public before.

The missiles stole the show. By some counts, China displayed one-third of its entire inventory of intercontinental ones. The most notable of these, the DF-41, was saved for last. It had never been seen in public previously. Its estimated range of 12,000-15,000km would probably make it China's first road-mobile missile (ie, one less vulnerable to pre-emptive strikes) that could hit any part of America. It can carry a large number of decoys or, it is rumoured, up to ten warheads—each able to manoeuvre independently after re-entering the atmosphere. The missile's predecessor, the DF-31, can carry only about three.

The parade also highlighted China's ability to strike from the sea by showing off the JL-2 for the first time. This intercontinental missile can be launched from China's new Jin-class nuclear submarines, of which China has put six into service over the past four years. Each sub can carry a dozen of the missiles. The JL-2 does not have the range of the DF-41. It could "at best attack Seattle" says Owen Cote of the Massachusetts Institute of Technology, because the noisy Jin-class subs would struggle to range beyond the Yellow Sea without being detected. But China is developing new missiles and subs to remedy this.

There were more exotic projectiles on display, too. China provided a tantalising look at the DF-17, a wedge-shaped hypersonic glider that would be launched and released from a traditional missile. China, America and Russia are all competing to develop such gliders. The DF-17 is designed to fly at the atmosphere's outer edge at over five times the speed of sound. Whereas ballistic missiles loop up and down in predictable arcs, gliders can fly at lower heights and in more unpredictable ways, making them harder to intercept. The DF-17 could carry nuclear warheads or destroy targets by smashing into them. In April 2018 Michael Griffin, the Pentagon's research and development chief, said that if China had not already fielded such gliders, it was close to doing so. "We do not have defences against those systems," he added.

Also paraded were two new drones, the supersonic WZ-8 (pictured) and the stealthy Sharp Sword. Both of these could be used to spot targets for hypersonic and other missiles, note Antoine Bondaz and Stéphane Delory of the Foundation for Strategic Research, a French think-tank.

For many years, America paid little attention to China's nuclear forces, focusing largely on Russia. That is changing as China builds farther-flying and nimbler missiles that are harder to spot before launch and pose a more serious threat to American soil. China's stockpile of nukes remains small—under 300 warheads, compared with America's 4,000. But in May the head of America's Defence Intelligence Agency, Lieutenant-General Robert Ashley, predicted that China's nuclear arsenal would double in size in the next decade.

Amid an economic slowdown and revolt in Hong Kong, the muscle displayed in Tiananmen may help Mr Xi persuade the public that his "great rejuvenation" of China is still on track. He certainly made clear what America was supposed to read into it. "No force can ever shake the status of China, or stop the Chinese people and nation from marching forward," he said. ■

A brand new spy in the sky

Chaguan | Reasons to be fearful

Official celebrations of National Day showed a worrying contempt for history

THE MOST revealing moment of the national day parade through Tiananmen Square on October 1st lasted just a few seconds. It came as China's fearsome new DF-41 nuclear missiles, capable of striking any city in America, neared Chaguan's press seat on the Avenue of Eternal Peace. Loudspeakers came to life as their camouflaged, many-wheeled carriers growled towards the grand gateway of the Forbidden City where President Xi Jinping and other Chinese leaders waited on a rostrum. Unseen voices explained how the weapons would ensure that China always retains a deterrent capability, thus safeguarding peace. Turning lyrical, the voices compared the missiles to large dragons that can hide in massive mountains or boundless seas before delivering earth-shaking blows. The hand-picked crowd erupted in spontaneous cheers.

Those cheers reflect two messages conveyed by the parade, which marked 70 years of Communist rule. The first is that China wields such firepower that no country may safely defy it. The second is that China is great again thanks to the Communist Party which is, and has always been, a force for good.

That second message was pressed home by the civilian half of the parade, which began with open-topped, gold-painted buses carrying red princelings and other descendants of Communist China's founders and martyrs. One was a grandson of Mao Zedong, squeezed into a general's uniform. The point was reinforced by marchers dressed as Mao-era farmers, soldiers and workers, dancing and singing in celebration of party-ordained campaigns of the 1950s, 1960s and 1970s to tame nature, mobilise the masses and turn China into an industrial power. Such sanitising of the Mao years is indecent. On balance those were lost decades that left millions of Chinese dead, whether from man-made famines, class warfare or ideological purges. Yet under Mr Xi, the twists, turns and dead-ends of party rule have been tidily woven into a glorious story of national progress. China's boss has not hidden his motives. He links the Soviet Union's collapse to the moment that Russian leaders disavowed crimes by Stalin and other Communist leaders. Mr Xi has chosen another course, curtailing the party's previous, limited tolerance for historical candour.

Previous parades have nodded to live debates. On national day in 1984 Deng Xiaoping, then China's leader, said the country's primary task was to reform the economy to remove obstacles to growth. That parade included busts of leaders purged or sidelined under Mao, and a float from Shekou, a pioneering special economic zone that Deng's leftist critics called capitalist.

In elite settings, largely for the benefit of insiders, Mr Xi has repudiated past crimes by ultra-leftists who were deemed by Deng to have deviated from the party line. Honouring revolutionary heroes on the eve of this year's national day, Mr Xi remembered Zhang Zhixin, a party member executed in 1975 for speaking out against Mao-era excesses, though not before her larynx was cut to stop her calling to fellow inmates as she died.

No such candour is offered to the masses. The true story of China's recovery from Maoist ruin was written by hundreds of millions of individual Chinese. They were enabled to raise themselves from poverty through hard work and risk-taking, after Deng pragmatically embraced market forces. Yet in this year's parade, a vast painting of Deng in a Mao suit was escorted by identically dressed dancers waving fronds of grain, as if he were the skilled boss of a collective farm rather than the man who let peasants grow their own crops, transforming rural lives. Later floats, lauding the Xi era, showed such centrally planned glories as high-speed trains and space rockets. Some of the few visible representatives of private enterprise were delivery drivers on scooters, a low-paid group once praised by Mr Xi for being like diligent bees. In apparent homage to this simile, the parade's delivery drivers wore yellow and black hats topped with bee antennae, like heroes in a children's book. As if vanquishing the ghosts of the Tiananmen protests of 1989, students from the city's universities marched beneath their college flags, hopping with excitement as they saw Mr Xi, through air still heavy with the fumes from parading tanks.

China's nationalism is the world's problem

It is understandable, indeed inevitable, that a wealthier China would seek to become a great military power. What was not inevitable was that Mr Xi would embrace populist, nostalgic, red-flag waving nationalism, while glossing over the party's terrible mistakes. Traditionally, those urging China to reckon honestly with the past have appealed to rational self-interest. Brave, embattled liberals have called for more open debate about the Great Leap Forward and the Cultural Revolution, to prevent such mistakes from being repeated. That argument feels weak today. Mr Xi is not a revolutionary like Mao, bent on dismantling the party. Rather, he is an authoritarian obsessed with stability, determined to assert the party's absolute authority. To that end his team is happy to harness Maoist rhetoric, nostalgia for a simpler, less materialist China and the public's justifiable pride in the endurance of past hardships. Judged cynically, such propaganda is astute domestic politics. Mao-style strongman rule is still a danger, but there is little risk of a return to the mayhem of the Cultural Revolution.

Other countries may have more to fear from Mr Xi's embrace of false history. By telling his people that Communist China has never taken a wrong turn, he is stoking an impatient, hair-trigger nationalism in which criticism from abroad equates to hostility.

China is not the first rising power to seek fearsome weapons. Its people's patriotism cannot be dismissed as brainwashing. Many are clear-eyed and rational in their love for their country and support for Mr Xi. But heavily armed, self-righteous nationalism can start wars. Both China and the rest of the world would be somewhat safer if party chiefs were to acknowledge their fallibility. That Mr Xi is heading in the other direction should alarm everybody. ■

Global sports

Ahead of the game

In the increasingly tough global contest between sports for money and attention, basketball is scoring points

THE EARLY stages of this year's rugby World Cup provided one of the greatest upsets in the event's 32-year history. On September 28th, in the sweltering heat of the Shizuoka Stadium, the hosts, Japan, beat Ireland, then the second-best team in the world, for the first time ever. The result sparked raucous celebrations around the country. Japanese TV presenters bowed in front of images of the victors before reading the news. The commissioner of the Japan Sports Agency boasted that his country had rewritten sporting history.

The sport's bosses are hoping that such standout events will attract more than its usual followers. Rugby and other games are increasingly concerned about their commercial future. Technology allows fans to watch any game at any time from anywhere. That, combined with a growing world population, means that in terms of sheer numbers, sports audiences are bigger than ever. But growth in revenues has slowed, according to PWC, a consultancy. Attention spans are shrinking. The "stickiness" of viewers—the number of minutes of a game that they watch—is dwindling, says Kevin Alavy, the head of Futures Sport, another consultancy. An annual decline of 3% in the number of minutes watched per game per sport per year is common. Sports that drag on for hours, if not days, such as cricket, are particularly vulnerable, as viewers impatiently resort to alternative entertainment on their smartphones—including clips of the highlights. Cricket sells the rights to show such clips separately from those to screen whole matches.

This pressure is leading to increasingly intense competition between sports for fans' money and attention. The stakes are high. Sport is a serious business, generating around $90bn a year, reckons Victor Matheson, a sport economist at the College of the Holy Cross in Massachusetts.

In America major sports are still extremely valuable to advertisers and pay-TV providers because almost every other type of entertainment offered on television has suffered far worse declines in viewership. MoffettNathanson, a research firm, found in a recent survey of 5,000 Americans that half watched sports at least once a month, and that of those, 90% still subscribe to pay-TV. Only 67% of the respondents who do not watch sports have pay-TV. So while Netflix has eroded pay-TV viewership, the live sporting match remains a draw that is less replaceable—except by other live sporting matches.

Football remains indisputably the world's favourite sport. It generates revenues of around $40bn a year, says Mr Matheson, almost twice as much as the next most lucrative sport, American football, five times as much as basketball and 20 times as much as cricket (see chart overleaf). Its overall market share has grown since 2000, according to Futures Sport. It is simple to play and easy for fans around the world to follow. FIFA, the sport's governing body, has invested huge sums of money in emerging markets. The women's game has galvanised the sport still further; this year's women's World Cup was watched by more than a billion viewers. And football's popularity has soared in China and America, especially among young people.

No sport will dislodge football. But others can learn from its success. Three big lessons have become apparent. Sports need to adapt to modern viewing habits. They need to break into new markets. Doing so involves more than simply staging matches in new countries—it means finding homegrown stars from these markets.

No game has reinvented itself for a time-poor age as successfully as cricket. In ▸▸

2003, a marketing survey saying that people wanted shorter matches led to the launch in England of professional Twenty20 (T20) cricket. Games last just three hours compared with eight hours for "one-day" cricket and as long as five days for Test matches. T20 now is the most watched version of cricket worldwide. It appeals to a much younger fan base, explains Mr Alavy. Cricket's success has been inspirational. Rugby sevens, in which matches consist of two halves lasting seven minutes, compared with the usual 40 minutes, featured in the Olympic games for the first time in 2016. Three-a-side basketball, in which games last ten minutes as opposed to 48 minutes for National Basketball Association (NBA) matches, will make its Olympic debut next year.

Cricket's reinvention has paid off. Mr Matheson reckons that over the past decade its revenues have grown faster than those of any other big sport. Much of that is thanks to India. The Indian Premier League, the T20 domestic league in India, is by far the fastest growing major league of any sport, says Mr Matheson. Sports can hope to increase their revenues either by gaining new fans or by relying on existing fans becoming wealthier. Cricket is betting on the latter. India will overtake China as the most populous nation in the world sometime in the 2020s and its middle class is growing fast.

So central is India to cricket's calculations that its elimination early in the 2007 cricket World Cup led to the decision to cut the number of teams in the tournament in future from 16 to ten, the lowest of any comparable men's competition. The team's premature exit meant that it played just three matches that year. The restructuring means it is guaranteed to play nine in the group stage, a crucial factor in generating cash from broadcasters and advertisers.

Cricket is unusual in relying so heavily on one market for revenue growth. Most other sports must look farther afield. To start, they can open international tournaments to new players. Since 2002 basketball has doubled the number of teams in the men's World Cup to 32. Rugby is considering boosting its cup from 20 countries to 24. The rationale is simple: viewership in countries is inevitably higher when they compete in a world cup. "The more inclusive you make sports, the wider the market is going to be," says Dave Berri, a sports economist from Southern Utah University. Football is, once again, the world leader in this regard. It recently expanded its World Cup to allow 48 teams to compete. The next women's cup will include 32 countries, compared with 24 in the most recent one.

Game on

Holding such competitions in new markets also helps. Rugby has been cautious, but after taking the 2019 World Cup to Japan—the first time the event has been staged outside the sport's traditional strongholds—it now intends to hold either the 2027 or 2031 tournament in America. "It would certainly accelerate some possibilities in that part of the world, which would be good for everyone because the revenue would go back into the game," Brett Gosper, World Rugby's boss, recently mused. Basketball's next World Cup will be held in Japan, Indonesia and the Philippines.

Sports can venture abroad even without a world cup. The major American leagues in American football, baseball and basketball are all playing regular season matches in London in 2019. They are already attracting crowds beyond homesick Americans. The National Football League says that it sold tickets to one game played in London to every neighbourhood in Britain.

Such efforts can go alongside squeezed sports' third gambit—spotting star players in the markets they are eyeing up. These athletes are a powerful recruitment tool, keeping new fans watching. The success of basketball in China—which hosted this year's World Cup—is a slam-dunk example.

Basketball's achievements in China are partly down to one man. In 2002 Yao Ming became the first Chinese player to be the top pick in the NBA draft. That marked the start of a brilliant career in America. Finding a star always involves luck. But the NBA improved its chances through its grassroots work in China. It established offices there as far back as 1992. It has played exhibition games in China since 2004, long before any other professional American sports league.

The NBA has capitalised on Mr Yao's popularity and used it to expand basketball's reach still further. It now has three academies in China, as well as others in Australia, Mexico, India and Senegal. In the past, the league has been "more passive in terms of the development of that next generation of international players," said Adam Silver, the head of the NBA, last year. He reckons that if the organisation can nurture outstanding players in such markets, it will increase interest in basketball hugely. The Basketball Africa League, which includes teams from nine African countries, will launch next year as a collaboration between the NBA and FIBA, the global governing body for basketball.

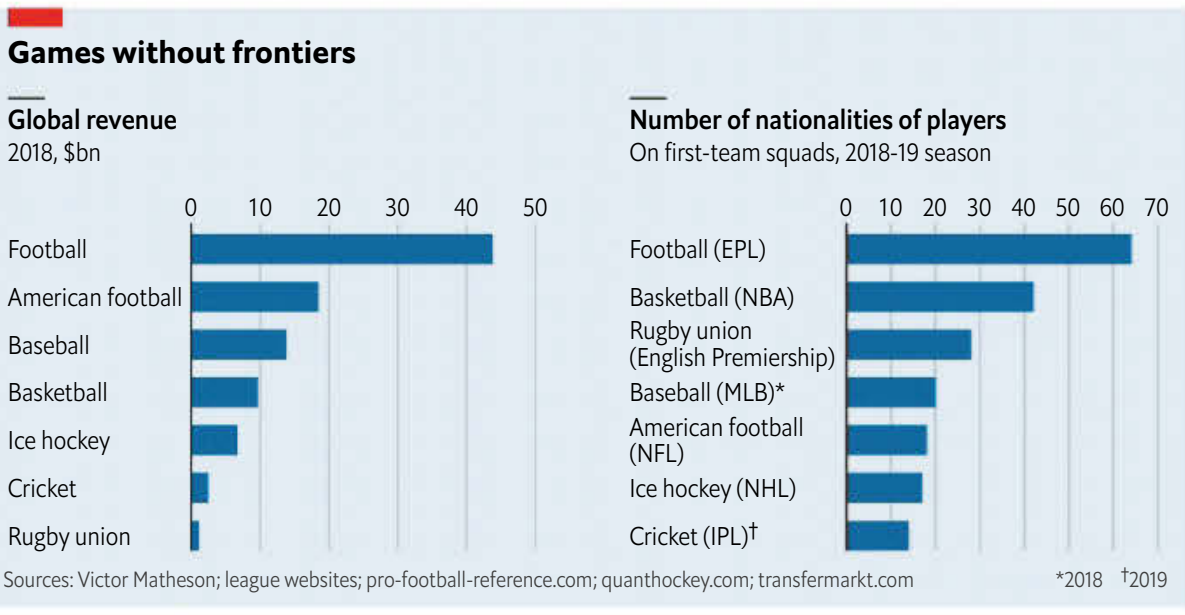
Such investment helps explain why basketball players in America have become a markedly more international bunch. In 1980 the league had only four foreign players, from just four countries beyond America. By 2000 the league had 36 non-American players, from 24 different countries. It now boasts 108, representing 42 nationalities. The figure remains well short of Premier League football in Britain, whose players hailed from 64 countries last year. But it comfortably outstrips similar leagues in other sports.

Yet perhaps the biggest lesson of all from the NBA's success is the extent to which playing a sport makes people watch it. According to its research, the NBA reckons that in newer territories, people who participate in a particular sport are 68 times more likely to be committed fans. There are now 600,000 basketball courts in China, giving players plenty of places to dream of becoming the next Mr Yao.

Increasing audiences in new markets requires commitment, time and money, says Mr Alavy. Sports that put on one-off matches and hope to gain devoted followers as a result will probably be disappointed. In 2015 a set of T20 matches between teams captained by Sachin Tendulkar and Shane Warne, two cricket legends, were staged in America. The organisers claimed these would spark interest in cricket there. In fact, once the tickets had sold, little serious investment went into developing American interest in the sport.

Basketball has done better than its competitors at heeding the lessons of football's success. PwC reckons that among the big sports other than football, basketball will see the greatest increase in revenues in the coming years. The world seems to have settled on its second-favourite sport. ■

Games without frontiers



Sources: Victor Matheson; league websites; pro-football-reference.com; quanthockey.com; transfermarkt.com *2018 †2019

Silicon Valley in the cross-hairs

The tech offensive

SAN FRANCISCO AND WASHINGTON, DC

The battle lines of an American regulatory assault on technology companies are being drawn

THE BILL, proposed in America's Senate, reads like a coding manual for software developers. "Infinite scroll", which makes social-media apps display more content as users swipe up, would be prohibited, as would automatic playlists for videos. Social networks would need to show how much time users spend on them and set a default limit of 30 minutes a day.

Parents of teenagers mustn't get their hopes up: the Social Media Addiction Reduction Technology (SMART) Act is unlikely to become law. But the fact that it exists—and was put forward by a Republican senator, Josh Hawley of Missouri—shows how quickly the tide has turned in Washington against big technology firms. After decades of letting them do more or less as they please, the state is ready to strike back. Voters are on board: one recent survey found that two Americans in three support breaking the companies up.

Big Tech is worried. Its bosses, once infrequent visitors to the Beltway, have become a regular fixture. Last month Mark Zuckerberg spent a week there, meeting President Donald Trump and lawmakers. On October 1st a recording surfaced of Facebook's boss describing the plans of Elizabeth Warren, a left-wing Democratic presidential hopeful, to break up his firm and others as an "existential" threat. Google's parent company, Alphabet, has recruited as its top lobbyist a former chief of staff to a Republican senator. Wall Street wants to know what all this means for the business models of America's biggest companies. Microsoft, Apple, Amazon and Alphabet are the world's four most valuable listed firms. Add Facebook, which is the sixth, and they are worth a combined $4.3trn.

Tech bulls can argue, with justification, that all the frenzied activity amounts to little more than exercises, with the odd warning shot. Some tech firms' share prices have been dented by the trade war. None, as yet, has been badly hurt by the techlash at home. Even so, the contours of a battle plan against the industry are emerging. It has two prongs. Officials are using existing laws to pursue the companies, particularly over anticompetitive behaviour. And politicians are drafting new legislation. Neither is yet an all-out assault. Both portend a prolonged pitched battle.

Start with the investigations. The Department of Justice (DOJ), the Federal Trade Commission (FTC) and the House antitrust subcommittee have all launched inquiries. In a sign that Alphabet's new pointman will be busy, a congressional committee sent the company a 17-page letter last month demanding a decade's worth of emails between senior executives on a range of matters and, on September 9th, 48 state attorneys-general launched an antitrust probe into the company. Any day the attorney-general, William Barr, is expected to announce an investigation into Facebook.

GAFA prone

Most of these efforts so far amount to fishing expeditions. Their precise scope has yet to be determined. Even the division of labour between the investigators is unclear. Although they reportedly agreed to one in June, the DOJ and the FTC have yet to decide which tech titans each will go after, as became apparent when senators quizzed Makan Delrahim, who heads the DOJ's anti- ▸▸

The EU v Silicon Valley

Der Techlash

BERLIN AND PARIS

Europe has so many issues with Big Tech it hardly knows where to begin

Ask a European politician about Silicon Valley and you get a tirade about *les fake news*, tax dodging, cultural imperialism, privacy violations and then some. This litany inevitably ends with a gripe that Europe needs to do much more to foster such companies at home.

Europe's version of techlash often looks like sour grapes. With the possible exception of Spotify, no internet firm successful enough for regulators to worry about was founded there (and the Swedish music-streaming business is listed in New York). SAP, a German software-maker, is big but hails from the pre-internet era. Unicorns, worth $1bn-plus, remain as rare on the old continent as the term suggests they ought to be. Forget Euro-Facebook or Le Google.

Still, much European tech-angst is universally shared. French officials pooh-poohed plans by Facebook to launch its own currency, as have people on Capitol Hill and at the Federal Reserve. Uber is in the cross-hairs of regulators in London, who on September 24th extended its licence for only two months. The gig-economy has also discomfited lawmakers in its home state of California. Antitrust concerns first raised in Europe are now echoed across the Atlantic. Even privacy worries, long a European preserve, are infecting America.

As with many American efforts to regulate Big Tech, EU ones are a work in progress. A copyright law designed to make search engines pay publishers (such as news organisations) for snippets became practically useless after Google last month said it would tweak its search results to avoid such payments; *inacceptable*, fumed Franck Riester, the French culture minister. A proposal for an EU-wide digital tax has failed. Last month the EU's highest court ruled that the quintessentially European "right to be forgotten" (which, for example, forces Google to stop linking to old, embarrassing web content) applied only to searches carried out inside Europe.

Attempts to rein in Silicon Valley giants aren't going away. France introduced its own version of the EU's abortive levy. Olaf Scholz, the German finance minister, is preparing another campaign for a continental one. The surest sign of European intent vis-à-vis Silicon Valley is the promotion of Margrethe Vestager, EU's tech-bashing competition chief, to a role overseeing tech policy as well. Her confirmation hearings for a second term on October 8th ought to be a breeze.

trust division, and the FTC's chairman, Joe Simons, on September 17th.

Even if the FTC and the DOJ argue for radical measures such as break-ups, and convince lower courts, most federal appeals-court judges (not to mention the conservative majority on the Supreme Court) are reluctant antitrust enforcers, steeped in old teachings of the University of Chicago, which urge that companies be left alone so long as they do not harm consumers.

Still, the general line of attack is clear. Amazon, Apple and Google are being taken to task over their chokehold on e-commerce, app stores and search engines, respectively. Google and Facebook face scrutiny over online advertising, which they dominate. The giants will have to show that buying startups like CTRL-Labs (which develops brain-computer interfaces and has just been acquired by Facebook) is not simply a way to neutralise rivals.

It is a similar story on Capitol Hill. Bills to regulate tech have mushroomed. Mr Hawley alone has introduced half a dozen since joining the Senate in January. Besides the addictiveness of tech, they cover children's privacy, online gaming and content moderation. Some have Democrat co-authors. One, nicknamed the DASHBOARD Act (don't ask), would require online platforms to disclose the value of data they collect on users; Mark Warner, a former venture capitalist, helped write it. Another, backed by Richard Blumenthal and Ed Markey, would ban video games from letting players (including under-age ones) pay a fee and receive random awards, which looks an awful lot like gambling.

With the possible exception of a federal privacy bill, which tech firms are promoting before a strict California state law enters into force in January and becomes de facto law of the land, most existing proposals may not get far. Impeachment proceedings against Mr Trump will distract lawmakers for months. If elected next year, a President Warren may not be able to ram her ideas through what is likely to remain a Republican-controlled Senate.

But Big Tech will be under fire whoever wins the presidency. Agencies and politicians are "on a steep learning curve", says another lobbyist. The FTC has a dedicated "tech task force" and two activist commissioners. One, Rohit Chopra, cut his teeth at the Consumer Financial Protection Bureau, where he led efforts to reform America's student-loan system. The House has hired Lina Khan, author of an influential paper on Amazon's power, as counsel.

Trustbusters and lawmakers are also gathering intelligence. Besides the missive to Google, the antitrust subcommittee has sent requests for information to Amazon, Apple, Facebook and dozens of other firms. Oracle, a software-maker and old foe of Google's, got one from Texas's attorney-general. Snap, a social-media firm, is said to keep a dossier documenting Facebook's anticompetitive actions, which it is sure to share with regulators and Congress.

Think-tanks which get pots of money from Big Tech are no longer the main resource available to its opponents. Less conflicted brain trusts backed by diverse donors, such as the Electronic Privacy Information Centre, which used to specialise in consumer-data protection, or Public Knowledge, once focused on media regulation, now study antitrust, too. Tim Wu of Columbia Law School and others have devised a legal strategy to make Facebook spin off Instagram and WhatsApp. In September a report from the Booth School of Business at the University of Chicago, of all places, called for vigorous merger control and a "digital authority" to oversee online competition. Republicans, who are friendlier to big business but accuse tech platforms (without evidence) of discriminating against right-leaning content, have set up the Internet Accountability Project.

Big Tech is not standing still. Its lobbyists will try to disarm radical proposals. It has squadrons of lawyers on hand. Firms are adapting in anticipation of rules to come. Facebook, Google and others plan to make it easier for users to move their data between services. Neither Silicon Valley nor Washington is bracing for a Blitz. Rather, prepare for a grinding war of attrition. ■

Crowdshipping

Headed your way

SAN FRANCISCO

The next stop for the sharing economy

CARPOOLING APPS to connect passengers with drivers going the same way are old hat. Now "crowdshipping" services are doing the same with parcels, allowing senders to "plug into" road traffic as if it were a utility, says Marc Gorlin, boss of Roadie, a startup based in Atlanta. Drivers get a tip; the middlemen take a cut. Firms like Mr Gorlin's are proliferating. Rappi operates in 57 cities in Latin America. A Filipino firm, Jojo, does so in Manila, the capital, and a nearby province.

Many of the senders are companies. Amazon's quick and cheap deliveries are forcing others to up their game, says Ravi Shanker of Morgan Stanley, a bank. Corporate fleets and logistics giants like FedEx will dominate long-haul routes. But by tapping into people's movements, firms can withstand spikes in demand—floral bouquets on Mother's Day, say—and save money on the "last mile", often the costliest leg of a parcel's journey.

Four-fifths of Roadie's revenue comes from retailers such as Macy's, Walmart or Home Depot (which has invested in Mr Gorlin's firm). Airlines are another big client. Nearly half of Delta's mishandled bags are delivered by travellers who use Roadie's app to see if suitcases need dropping off along their drive home. The carrier's head of cargo, Gareth Joyce, says this has cut costs, speeded up deliveries and boosted customer satisfaction. Alaska Airlines, Southwest and United also use Roadie to return lost luggage.

Other crowdshipping startups are eyeing free space inside travellers' suitcases. PiggyBee, based near Brussels, and Grabr, with offices in Moscow, New York and San Francisco, operate worldwide, linking consumers desirous of products only available—or cheaper—overseas with international passengers headed their way.

The buyer pays the product price, and any relevant taxes and duties, into an escrow account managed by the app, plus a tip to make it worth the transporter's while. The transporter buys the item and receives the reimbursement and tip on delivery. The apps discourage transporters from pretending a purchase is for personal use to avoid customs duties. But as David Vuylsteke, boss of PiggyBee, acknowledges, "since we're under the radar, no one cares."

African enterprise

Uberising luck

KAMPALA

Schemes to make entrepreneurs more successful are hit and miss

IN 1999 A Ugandan teacher decided to start her own school. Barbara Ofwono Buyondo had $350 of savings. Bankers would not give a loan without collateral, especially to a young woman. With no money for tables, children wrote on their chairs, kneeling. Today her company, Victorious Education Services, is one of the leading schools in Uganda. Over 4,000 fee-paying pupils attend its five campuses, swept up by a fleet of branded buses and welcomed by primly uniformed teachers.

Decent jobs are so scarce in Africa that, like Ms Buyondo, many people create their own. Surveys by the Global Entrepreneurship Monitor find that one in three working-age adults in sub-Saharan Africa either runs a new business or is trying to start one, compared with one in six Americans and one in 20 Germans. In Tanzania informal firms created four-fifths of new non-farm jobs between 2002 and 2012. Most such enterprises are also tiny. Schemes to help them emulate Ms Buyondo's success have a mixed record.

Take attempts to give promising entrepreneurs access to capital. A study in 2017 by David McKenzie of the World Bank looked at YouWIN!, a government-run contest in Nigeria which awards $50,000 on average to applicants with the best business plans. He found winners used the money well, becoming larger and more profitable than otherwise similar firms that did not win. But such initiatives, which resemble a lottery, are inherently hard to scale. Other studies have found that extending microloans to entrepreneurs does not generally raise their incomes.

An alternative approach is to foster good business practices. Enterprise programmes range from small non-profit initiatives to the $100m foundation established by Tony Elumelu, a Nigerian tycoon. At a recent training session run by Enterprise Uganda, a government-backed initiative, some 70 businesspeople discussed how to manage employees. The trainer warns against hiring indolent relatives. "You can't have a minister without portfolio in your business," he says (half-jokingly). One woman recounts how her husband kept antagonising customers, until she moved him to accounts.

These, too, are a mixed bag. Good record-keeping and marketing have been linked to subsequent business success. All too often, though, classroom-style courses meant to inculcate such skills do not succeed in getting trainees to practise what they have learned. In Togo, for instance, Mr McKenzie and colleagues found that teaching practical skills was less effective than showing students how to set goals and identify markets.

Entrepreneurs often need specific information, for example, where to sell their products or source supplies. A randomised trial by researchers from the University of Notre Dame in America linked young businesswomen in a Kenyan slum with local mentors dealing in similar trades. Their profits were 20% higher over the following year, relative to a control group, mainly because they had switched to cheaper suppliers. A study in Egypt showed that artisanal rugmakers learned to make higher-quality carpets after being connected with more demanding rich-world buyers.

Budding business folk need other sorts of assistance. Down a narrow alley in Kampala, Uganda's capital, Ivan Zziwa has built ▸▸

Trimming the odds of success

a mini-conglomerate. He fixes phones, sells accessories, blends juice, hires out chairs and offers mobile money services, with the help of four people. He says online conversations with a volunteer mentor in Spain prompted him to expand into wholesale and door-to-door deliveries. This offered a way to market his existing businesses to new customers. It may also reduce risk.

The mentoring was arranged by Grow Movement, an NGO that pairs volunteer consultants from all over the world with small businesses in Africa. A forthcoming study finds that entrepreneurs who received this long-distance coaching increased their monthly sales by a quarter. They did so not by changing their business practices, such as accounting, but by changing their entire business. One stationer describes how he started making his own exercise books, which was cheaper than buying them. A rural businessman selling liquid soap and fertiliser decided to expand into solar lights, water filters and cooking stoves after his mentor prodded him to look for unmet needs.

As elsewhere, however, most African success stories involve a lucky break. Ms Buyondo's came when a savings group at church lent her money and two teachers agreed to work for deferred pay. Mike Duff mentored Mr Zziwa. He recalls how chance encounters and nuggets of advice while studying at the London School of Economics helped his own career (he now runs an eco-retreat). He describes his Skype conversations with Mr Zziwa as the "uberisation" of good fortune. Mr Elumelu talks of his foundation trying to "institutionalise luck". Starting a business will always be a game of chance. ■

Bartleby From rags to Richer

A success story built on treating people well

In some ways, Julian Richer is a typical market-trader-made-good. He was wheeling and dealing as a schoolboy, even selling candles during the miners' strike of 1974. Then he discovered the market for hi-fi equipment, initially managing other people's stores, before opening his own shop at the tender age of 19. He opted for the trappings of wealth, buying his first Rolls-Royce at 23. After a difficult period when he admits that he confused revenue growth for profit, he built up a successful high-street chain of 52 stores, which he named Richer Sounds.

If this tale seems all too familiar, in other ways the 60-year-old Mr Richer is an atypical entrepreneur. That became clear in May when he announced he was selling a majority stake in the company to a trust owned by the staff, and remitting around 40% of the proceeds in the form of a cash bonus to colleagues. For every year of service, they received £1,000 ($1,230). His gesture reflected the management philosophy he has developed over his 40-year business career.

Mr Richer says that the penny initially dropped for him when he read "In Search of Excellence", a business bestseller by Tom Peters and Robert Waterman which came out in 1982. The top-performing companies described in the book had two common features, Mr Richer noticed: they treated both customers and their employees well.

In "The Ethical Capitalist", one of his two books on management, Mr Richer writes that "organisations that create a culture based on fairness, honesty and respect reap the rewards." They attract motivated staff "who are there for the long haul". High staff turnover, he says, is a sign that something is fundamentally wrong. And he cites his firm's turnover rate of 11% a year, compared with an industry average of 25%, as a sign of success. Richer Sounds also tries to promote from within. Each of the other nine board members has risen through the ranks.

How does he keep staff loyal? One way is to survey morale every week. Employees rate it, anonymously, on a ten-point scale. Store managers report the average and the lowest score. If there is a two, the company will investigate. Mr Richer regularly visits his stores to talk to staff.

Another tactic is to ensure staff have the time to learn about the latest equipment in stock. The shops open at noon so that there is time for staff training without dragging people out of bed unreasonably early. Nor is Mr Richer a fan of the long-hours culture; if an employee has to take a telephone call on their day off, they get a £20 hassle bonus.

More generous perks are available. Workers can stay at one of the group's holiday homes; over 70% make use of this perk once a year. The only charge they face is £10 per night per adult, and £5 per child. The British authorities treats such holidays as a taxable benefit but the company covers this cost as well.

Mr Richer believes this cuddly approach results in happier customers. He does not like high-pressure sales tactics, preferring repeat buyers; bonuses are based on surveys of shoppers' satisfaction as well as sales. On top of the bonus, workers get a monthly profit share, based on each store's performance, and an annual share of the group profit.

It is tempting to think that such benign ways can only work at a relatively small company (his sales were £157m in the year to April 2019). However, Mr Richer is a consultant to larger retailers and says that some of his suggestions worked well at Asda, a supermarket chain, in the 1990s. Last year he started advising Marks & Spencer, a British retail group, though its continued troubles suggest there is a lot more work to do.

What prompted his decision to transfer the bulk of his stake to staff? Mr Richer says he was approaching the age when his father died and he did not want his wife to deal with the hassle caused by his own demise. As far as money was concerned, he says, "we have more than enough already". His remaining 40% stake in the group will bring plenty of dividend income. Though he retains the role of managing director, he now takes the same salary as his personal assistant.

There is plenty in Mr Richer's philosophy which Bartleby salutes. For example, he dislikes long meetings which waste everybody's time; the typical board meeting lasts an hour. Best of all, however, he disproves the stereotype that entrepreneurs have to be ruthless in order to achieve success. Treating people well can work, too.

Economist.com/blogs/bartleby

Nike

Don't do it

A high-flying sportswear brand runs into trouble

"IT DOESN'T MATTER how many people hate your brand as long as enough people love it." So declared Phil Knight earlier this year in a lecture at Stanford Business School. Companies cannot remain neutral on issues of conscience, even if it means losing some customers. "You have to take a stand on something," insisted Mr Knight, as Nike, the sportswear firm he dreamed up while studying at Stanford in the 1960s, had done by supporting Colin Kaepernick, an American footballer who refused to stand during the pre-game national anthem in protest against racial injustice.

Woke stuff—and lucrative to boot, if Nike's financial performance is anything to go by. The company's revenues rose by 7% in the three months to August, year on year, to $10.7bn. Profits were up by a quarter, as, so far this year, is the share price.

Ironic, then, that Nike must now fend off accusations of distinctly unwoke behaviour. In May it was shamed into undoing a policy of slashing pay for female athletes it sponsors when they get pregnant. An earlier scandal over allegations of sexual harassment and abuse of female workers led to the dismissal of nearly a dozen male executives. And this week Nike has been embroiled in an ugly doping affair, which dragged its share price down by 3%.

On September 30th America's anti-doping watchdog found Alberto Salazar, a star running coach who counts Olympic gold medallists as clients, and Jeffrey Brown, a physician, guilty of "orchestrating and facilitating prohibited doping conduct" and banned both from athletics for four years. Mr Salazar ran the Nike Oregon Project, a programme for elite athletes; he has a Nike swoosh tattooed on his arm.

Nike denies wrongdoing. Mr Salazar and Dr Brown are expected to appeal against the ruling. In an message to employees this week, Nike's current boss, Mark Parker, reportedly wrote that the idea of doping runners "makes me sick". Yet emails between him, Mr Salazar and Dr Brown, reported by the *Wall Street Journal*, seem to suggest he was aware of their tests. A Nike spokesman told the newspaper that at the time the coach was "concerned that Nike runners could be sabotaged by someone rubbing testosterone cream on them". Mr Parker called the news reports "highly misleading". Perhaps. But Mr Knight's dictum may yet come back to bite the company he created. ■

The Sino-American economic war

Lock stocks and bar all

SHANGHAI

Banning American investments in Chinese firms is mooted. Again

LAST MONTH Steve Bannon, President Donald Trump's former chief strategist, spoke of "the Frankenstein monster" America had to "destroy". "Our capital", he said, had created it. He has long desired to rid American stockmarkets of Chinese firms and to force investors to dump mainland-listed stocks. On September 27th Bloomberg reported that Mr Trump had "given the green light" to the idea. Share prices of American-listed Chinese companies slid.

Such firms have raised over $70bn by selling shares in America since 2000, reckons Refinitiv, a data provider (see chart). The total market value of 300 or so of them is $860bn—$1.3trn if you include some depositary receipts of firms with primary listings in China or Hong Kong. This year 24 new ones have floated—an exception to the economic war Mr Trump has waged against China. That it may no longer be one unnerved investors.

American regulators are frustrated by China's reluctance to disclose some financial records of its companies (it says they are state secrets). In June lawmakers in Washington introduced a bill allowing any Chinese firm that refused to hand over its audit papers to be delisted. According to Reuters, Nasdaq is tightening its rules to make it harder for smaller Chinese companies to float on the exchange. Matthew Doull of Wedbush Securities, an investment firm, says that some Chinese firms are "seriously wondering" about a Plan B (Hong Kong's exchange, for many).

It is unclear how a mass delisting—let alone removal of Chinese stocks from American-run global stock indices that many investment funds track—would work. Americans hold $160bn of assets on mainland exchanges. This week Ray Dalio, founder of Bridgewater Associates, the world's biggest hedge fund, wrote on LinkedIn that the Trump administration's murmurings made him wonder if it was "inching toward bigger moves". Mr Trump could use emergency powers to enact these, he speculated.

Mr Doull says delistings would be "nuts". American exchanges encourage them to behave like Western peers. Shunning thriving Chinese firms may hurt the returns of America's pension and mutual funds. The White House has denied the Bloomberg report. Peter Navarro, its Sinophobic trade adviser, called it "fake news". That is not how China took it. *Global Times*, a state tabloid, said it was "another smoke bomb" ahead of trade talks on October 10th. Beijing warned that "even attempting a decoupling" would unleash "financial-market turmoil". That would be a real monstrosity.

Enter the dragon

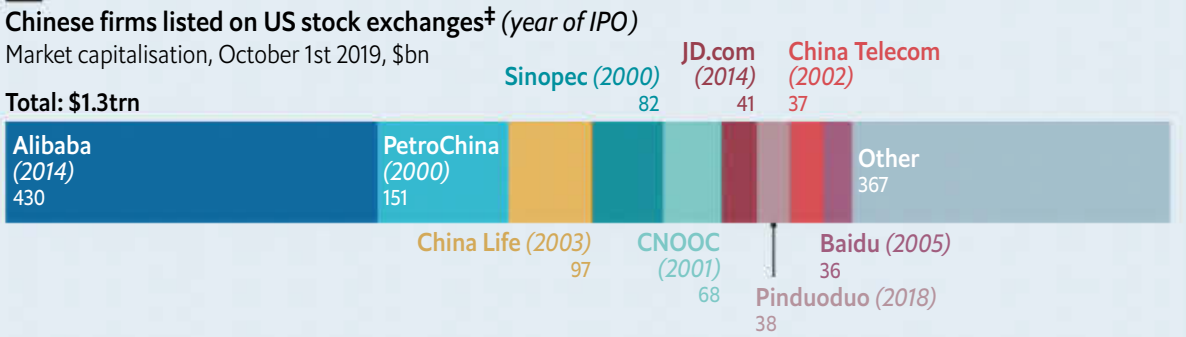
United States, total portfolio investment* in China, $bn

Chinese companies listed on the NYSE and Nasdaq, IPO amount raised, $bn

Chinese firms listed on US stock exchanges‡ *(year of IPO)*

Market capitalisation, October 1st 2019, $bn

Total: $1.3trn



Sources: IMF; Refinitiv; Bloomberg

*Equity and investment fund shares and debt securities †January 1st-October 1st
‡Primary listings or selected depository receipts of firms listed in China or Hong Kong

Schumpeter | Licking the skillet

The General Motors strike is an anachronism. But workers are finding new ways to exert their clout

IN THE MIDST of the first-ever strike by General Motors workers in Flint, Michigan, in 1936, an advocate for the carmaker called the firm "a big family of 250,000 people" in which strikes were alien. Homer Martin, then-president of the United Auto Workers (UAW), retorted with a phrase sizzling with the class consciousness of the era. GM, he said, was "the kind of family where father eats the bacon, mother eats the gravy and the kids can lick the skillet".

Once again, GM's family values are under attack. A strike of 46,000-odd workers demanding better treatment, now into its third week, is the company's longest since 1970. Some see it as a sign of a long-overdue rebalancing of American capitalism. Public support for unions in America is among the highest in half a century, according to Gallup, a pollster. Last year more Americans took part in strikes and lockouts than in any year since 1986. Low unemployment has increased the clout of workers after a precipitous fall in their share of national income since the 1990s. Terry Dittes, the UAW official heading the GM strike, told the *New Yorker* that with corporate profits and executive salaries in America at an all-time high, "there's something bigger brewing here."

Yet if the GM strike shows anything, it is how America's economy has transformed since the days when industrial firms and blue-collar unions called the shots. That past was at times glorious. The 1936 strike in Flint led to the unionisation of GM. The Treaty of Detroit in 1950, between the UAW and GM, offered full medical benefits to workers. But in time unions and industry started to drag each other down. The unions' victories made carmakers less competitive. As two sociologists write in a new book, "Wrecked", the carmakers responded to organised labour by moving away from Detroit, lest strikers turn it into a choke point. That weakened the unions' bargaining power—but also the carmakers' productivity by pushing them away from innovation clusters. Meanwhile, America's economy has become tech-centric, making 20th-century industrial relations look like a relic. As such, the battle between GM and the UAW may be one of the last gasps of a form of collective bargaining that seems obsolete in the 21st century.

The strike itself is mostly about pay and health care. Pay, historically a big bone of contention, is the easier part to settle. Since its bankruptcy and bail-out in the financial crisis of 2008-09, GM has become Detroit's most profitable car company, with earnings last year of $8bn. Workers, who made sacrifices in the lean years, receive a share of those profits. They think they deserve a bigger one. The UAW says that Mary Barra, the firm's boss, makes 281 times as much as an average GM worker. GM probably has enough dosh to offer them a pay rise that would narrow this gap, which many people, not just the UAW, find outrageous.

Health-care costs are a bigger headache for GM. Its workers pay just 4% of their medical costs, a pittance by the standards of corporate America. Like other carmakers, GM is desperate for them to foot more of the bill, which is swelling as workers age and American health care grows pricier. The same rising costs mean that many workers would struggle to pay for treatments out of pocket. But not all Americans will sympathise. The UAW's battle on behalf of a blue-collar aristocracy, many of whom earn around $30 an hour, loses emotional appeal compared with McDonald's burger-flippers fighting for a $15 minimum wage or Uber drivers demanding the barest of benefits. (It doesn't help that several UAW bigwigs have of late been convicted for corruption.)

For all its profits, GM is in a precarious state, too. Last year Ms Barra, a company lifer, unveiled a $6bn-a-year savings drive. It involved shedding up to 14,000 jobs and shutting factories in North America to focus on making high-margin SUVs and trucks, as well as developing electric vehicles and self-driving cars. She sees disruption barrelling down the freeway from rival carmakers but also tech firms investing in autonomous vehicles. To stop GM from becoming the next Studebaker, she is determined to curb the firm's reliance on old factories and wants to be able to shift output up and down as needed by hiring temporary workers. That requires relations with the union to be more flexible than they have ever been, says Patrick Anderson of Anderson Economic Group, a Michigan-based consultancy. GM's very vulnerability over the future of the vehicle reduces the union's leverage.

Across America, private-sector unions are struggling. Membership has fallen from 30% in the 1950s to just 11%. Among private firms it is less than 7%. Tech firms are non-unionised. Industrial concentration has made things worse. Workers' threats to flee to a competitor are less credible when there are fewer rival employers.

Some in the Democratic Party hope to revive the fortunes of the traditional union. But it seems more likely that new forces are at work in the relation between capital and labour. Employees of big firms are "self-organising" via social media, often around issues alien to union bosses of old. One group, United for Respect, has successfully badgered Walmart, America's biggest private employer, into changing its pregnancy policies and offering more family-friendly schedules—areas that male-dominated unions ignore—as well as better pay. Another, Coworker.org, enables people to press their employers on issues ranging from parental leave to climate change through online petitions. Last year Google was persuaded to drop out of a lucrative tender to provide the Pentagon with artificial-intelligence software after moral objections from its coddled coders.

Between the frying pan and You're Fired

Such "bursts of expression", as Andrea Dehlendorf, co-head of United for Respect calls them, may one day become what strikes were in the 20th century—the norm. Unions should take note. So should companies, which can be skewered over an expanding gamut of gripes. Tired of licking the skillet, workers are finding new ways to brandish it. ■

The Greek economy

To hell and back

ATHENS

Greece has been through a punishing decade. A new government aspires to get the economy growing fast. Has it got the mettle?

THE AIRPORT at Hellinikon, a few miles south of Athens, closed in 2001. Planes belonging to Greece's now-defunct national carrier still litter the runway. Nearby a stadium built for the Olympics in 2004 gently crumbles. In the distance, a marina borders the glistening Aegean. In 2011, when Greece was in the throes of a sovereign-debt crisis, the government put the site, which is three times as large as Monaco, up for sale. In 2014 it was snapped up by a consortium that planned to build homes, hotels and a casino. At an expected cost of some €8bn ($8.7bn), it was Greece's largest investment project.

Five years on, ground has yet to be broken. When Syriza, a left-wing party, formed the government in 2015, it reopened the terms of the sale. Ambivalent ministers held up licences. The authorities demanded numerous archaeological surveys. Locals sued. Apart from boats docking in the marina and the occasional security guard on patrol, the site now lies desolate.

Officials from the IMF and European Union who flew into Athens's new airport in September are thus not short of examples of the difficulties of doing business in Greece. When the sovereign-debt crisis struck they bailed the country out on condition that it enact deep fiscal cuts and far-reaching regulatory reforms. Last year the EU struck a debt-relief deal, allowing Greece to exit its third and final bail-out, despite a public-debt burden of 180% of GDP. It required Greece to continue with reforms while hitting eye-watering targets for the primary-budget surplus (that is, before interest payments) of 3.5% until 2022, and then 2.2%, on average, all the way to 2060. In return it offered some interest-rate relief and extended the maturity of some loans.

The centre-right government led by New Democracy, which took over from Syriza in July, is preparing to present a draft budget to parliament on October 7th. The process of assessing those plans against that debt deal has begun. A primary surplus of 3.5% this year appears to be in the bag. But the government hopes to negotiate leniency next year so that it has fiscal space to cut taxes. Wrapping up its annual mission to Greece on September 26th, the IMF blessed lower fiscal targets, pointing to the damage austerity had inflicted on public investment and social spending.

Kyriakos Mitsotakis, the prime minister, wants to transform Hellinikon into a symbol not of the hurdles to doing business in Greece, but of the country's new openness to commerce. Permits have been fast-tracked, and the developers hope to bring in the bulldozers next year. But it will take much more than the approval of one big project to revive Greece's economy. Mr Mitsotakis must deal with twin legacies of the crisis: paralysed banks and cripplingly tight fiscal policy. He must also try to reform a bureaucracy that is more typical of a developing country than of a member of a huge and sophisticated currency bloc.

Leaving Hades

Greece's economy began expanding in 2016, after years of depression. But annual GDP growth rates have been anaemic, at 1-2%. Unemployment is still 17%; the youth rate, twice that. On the current trajectory, the IMF says the economy will labour below its potential until 2023. Nor is the calculus of debt-sustainability likely to change soon. Even as investment elsewhere in southern Europe has recovered, says Kathrin Muehlbronner of Moody's, a credit-rating agency, in Greece it has collapsed. It is still 60% below its 2007 peak.

In Greece's long agony during the euro- ▸▸

zone crisis, borrowers defaulted, saddling lenders with bad debts. A bank run in 2015 led to a liquidity crunch and capital controls. The last of the controls were lifted only in September. Gross non-performing loans (NPLs) have fallen by a quarter since 2016. But they still amount to €80bn, or 45% of exposures. As banks have been forced to make provisions for these assets and deprived of income from interest, lending has seized up. The stock of credit has shrunk every year since 2010, starving productive projects of capital.

Mr Mitsotakis wants to lower the NPL ratio to single digits by 2021. That would imply a big acceleration in the pace of resolutions. He plans to copy Italy, where banks securitise bad loans with government guarantees. But that alone is unlikely to be enough to do the job.

Even if businesses could access credit easily, a thicket of regulations deters expansion. It keeps foreign investors out, too: the stock of inward direct investment relative to GDP is much lower than in the rest of the EU. The government is trying to improve Greece's image. One investor recounts how a friend who complained about red tape on Facebook was rung up by a senior civil servant promising to solve the problem. A lawyer recalls being phoned up late on a Saturday by a minister inquiring if the approvals he needed had been received.

The first hurdle businesses face is registering property, which, according to the World Bank's "Doing Business" report, is as complicated in Greece as in Somalia. Some of the delays at Hellinikon, for instance, were because of uncertain land-use designations. The country has begun work on a land registry. But it is already delayed, and resolving any ownership conflicts uncovered along the way will take years.

Others require root-and-branch reform. Most businesses will become ensnared in litigation at some point, says Alexios Papastavrou of PotamitisVekris, a law firm, because starting legal action is largely costless, and judges will hear even frivolous cases. Disputes that have supposedly been settled can be reopened: he recounts a case where former employees sued their employer, even though they had signed a deal outside court. The courts are clogged up. On average, resolving a business dispute takes over four years.

By far the biggest complaint from businesses, however, is about high tax rates. Alexis Pantazis, co-founder of Hellas Direct, an online car-insurance platform that operates in Cyprus and Greece, says that more than half of gross pay goes on taxes and social-security contributions. The result is that the cost of workers is 30-40% higher in Greece. It therefore makes sense to locate senior staff in Cyprus whenever possible. That is dismal news for a country already suffering from brain drain. According to Ms Muehlbronner, the number of 25- to 34-year-olds shrank by 380,000 between 2010 and 2018—equivalent to 6% of the workforce—mostly as they left the country in search of better fortunes abroad.

Mr Mitsotakis says most of the reforms needed are "win-win". The budget will include corporate- and income-tax cuts, and he hopes that the EU will grant him some fiscal space to do so.

But austerity alone is not to blame for high tax rates. They also reflect choices made by successive governments. Although the rates of income and value-added taxes are higher than the EU average as a share of GDP, the revenue collected is lower, thanks to what the IMF tactfully calls a "weak payment culture", and a narrow tax base. The gap between the expected revenue from value-added taxes and the actual sum raised was around 30% in 2018. The tax-free threshold for income tax is set at 60% of average pay, nearly three times the EU average. The result, says Miranda Xafa of the Centre for International Governance Innovation, a think-tank, is that over half of Greeks pay no income tax at all.

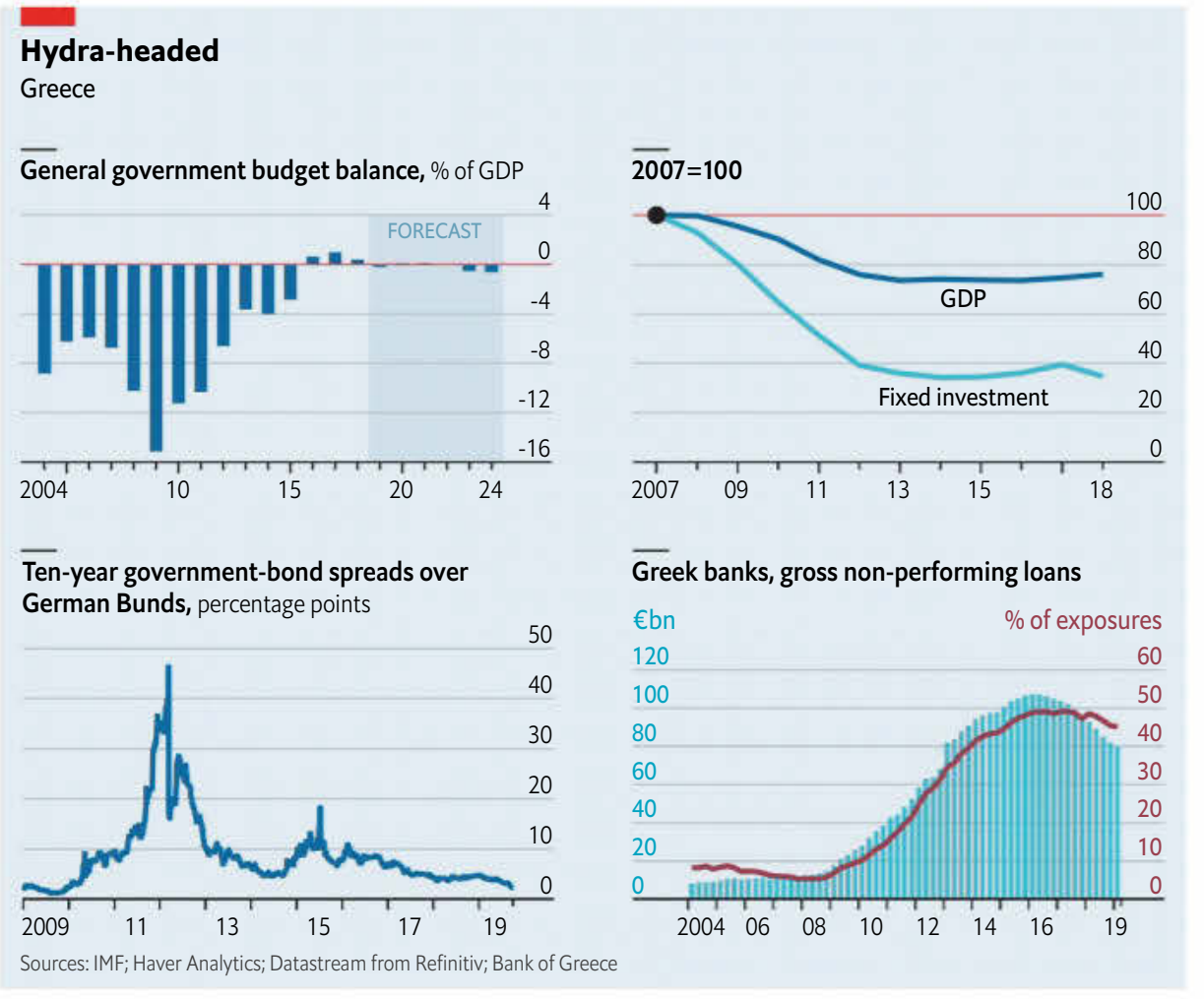
Mr Mitsotakis has shown little interest in widening the tax base. Instead, like several predecessors, he has set up a tax-amnesty scheme, allowing taxpayers who come clean about past underpayment to pay their arrears in instalments in order to boost revenue. But such schemes perpetuate the weak payment culture, says Ms Xafa. Taxpayers wait for the next amnesty, rather than coughing up straight away.

On the spending side, better-targeted benefits could make growth more inclusive. The IMF points out that Greece spends more on government wages and on old-age pensions, as a share of GDP, than the average euro-area country. Meanwhile relatively little is spent on benefits for the young and the unemployed, who are more likely to be poor. In the run-up to the election the previous government worsened the imbalance when it restored the pre-crisis practice of a bonus "13th month" pension.

Hermes be my guide

Mr Mitsotakis's government is still in its honeymoon period. Businesses are delighted by an avowedly centre-right administration. Economic sentiment is at a 12-year high. Investors are bullish: the gap between Greek ten-year bond yields and those on German bunds has halved since the start of the year. It is easy to imagine that optimism starting a virtuous cycle. As the economy grows, reforms become easier. Being brought into the tax net is less painful when your pay is rising. Similarly, rebalancing public spending by ratcheting up working-age benefits at a higher rate than pensions would be more politically palatable than making cuts to pensions.

But if fixing a country were easy, Greece would already have caught up with the rest of the EU. And a government's honeymoon period can be wasted—particularly when the payoff from many of the needed reforms will take years—much like the completion of building work at Hellinikon. Mr Mitsotakis's government has managed to get Greece's economy as far as the runway. What happens next will determine whether it finally takes off. ■



Sources: IMF; Haver Analytics; Datastream from Refinitiv; Bank of Greece

Transparency v privacy

FATCA chance?

America's notorious tax-compliance law faces another challenge

When the Foreign Account Tax Compliance Act (FATCA) was passed by America's Congress in 2010, it was overshadowed by the jobs bill into which it had been shoehorned as a revenue-raising provision. But of the two, FATCA packed the stronger punch. The law, designed to stop Americans stashing money abroad to evade tax, ushered in a global revolution in financial transparency. It forced banks worldwide to start coughing up, via their tax agencies, information on clients with links to America. And it spawned the Common Reporting Standard (CRS), whereby over 100 countries swap data with each other to discourage cross-border tax dodging.

FATCA's detractors extend well beyond the tax-shy, however. Sifting clients for "US persons" has given financial firms a compliance headache. Some have refused to serve Americans living overseas for fear of fines under FATCA's draconian provisions. Many of the roughly 9m Americans based abroad—including "accidental Americans" who have spent most of their lives elsewhere but face tax liabilities in America because they were born there, making them citizens—have formed groups to lobby for less brutal treatment.

Some critics go further, arguing that a principle is at stake. They maintain that FATCA and the CRS have swung too far towards transparency and away from privacy. And they see potential for redress in the European Union's data-protection laws.

A woman known only as Jenny, represented by Mishcon de Reya, a British law firm, is trying to raise £50,000 ($62,000) on a crowdfunding site to challenge the right of HMRC, Britain's tax authority, to pass her information on to America's Internal Revenue Service (IRS). Jenny, a university researcher born in America but resident in Britain for nearly 20 years, claims the transfer breaches her rights under the EU's General Data Protection Regulation of 2016. She argues that her information is irrelevant to FATCA's objective—to catch tax evaders—because she earns less than $104,000 and thus qualifies for an income-tax exemption under American rules.

Jenny is not the first to challenge FATCA. A group called the Association of Accidental Americans brought a case in France, but it was dismissed. An anti-FATCA lawsuit in America, backed by Rand Paul, a Republican senator, was tossed out in 2017 on the ground that America's constitution provides no expectation of privacy regarding financial records. But America's data-protection standards are significantly lower than Europe's, points out Filippo Noseda of Mishcon de Reya. The French case, he notes, focused on lack of reciprocity, not data privacy; America has been slow to share information on its own banks' foreign clients. The EU's executive, parliament and data-protection authorities have all expressed queasiness over FATCA.

Officials in America and at the OECD, a club of 36 countries that oversees the CRS, brush off concerns that information-sharing might undermine data security. But such fears are understandable. Bulgaria's tax agency has been hacked into, exposing the data of 5m taxpayers, including information exchanged under the CRS. America's IRS has not suffered a comparable breach but its computer systems are rickety. State tax agencies, including South Carolina's, have had data stolen.

Mr Noseda sees Jenny's claim as an important test case which, if successful, could spawn others. Another client of Mishcon de Reya has complained to Britain's data-protection regulator about HMRC's data-sharing under the CRS. The law firm has also been instructed by a European company to look at ways of challenging national public registers of corporate ownership. With registers "it's the same argument but more so, since the information is shared not just with tax authorities, but everyone," says Mr Noseda.

Anti-corruption campaigners poohpooh such efforts, which they view as doomed rearguard actions by a tax-averse elite. But Mr Noseda insists it is about more than minimising tax bills: "There is a big tension between transparency and privacy, and we need to find the right balance." ■

Boeing v Airbus

Plane clash

WASHINGTON, DC

An old dispute will lead to new American tariffs on European goods

Most museum exhibits are beautiful—or at least old. But an exhibition in 2015 at the World Trade Organisation (WTO) included 60 cardboard boxes of documents. The point was to give a sense of the scale of two of the body's longest and largest legal disputes, over American and European subsidies for aircraft manufacturers. Now the fight is moving out of the paperwork phase. That means tariffs are coming.

On October 2nd the WTO published its decision to allow the Trump administration to put tariffs on $7.5bn-worth of imports from the European Union. That is intended to match the harm done to Boeing, an American manufacturer, by the EU's subsidies for Airbus, Boeing's European rival. It is the largest retaliation the WTO has ever approved. Senior officials at the United States Trade Representative (USTR) called the victory "historic".

The dispute has been long and bitter. In October 2004 America complained to the trade body about loans offered by EU governments to Airbus on easy terms. The following June the EU filed a complaint about the harm to Airbus from subsidies to Boeing, in the form of tax breaks and generous contracts with the Department of Defence. Since then there has been enough legal back-and-forth to bore the most ardent plane-spotter. The WTO ruled against both subsidisers. Each made some adjustments supposed to resolve the other's complaints—but neither was satisfied. The latest judgment comes as the EU's claim of compliance is still being assessed. In around eight months, the WTO is likely to authorise the EU to put tariffs on American imports, completing the tit for tat.

In a narrow sense, this is the multilateral rules-based trading system working as intended. Both parties went through the proper channels to receive an official judgment. Neither took matters into its own hands. The tariffs America is about to impose on Europe are not unilateral bullying, but an enforcement mechanism of last resort. They would probably have been applied by any president, even one less tariff-happy than Donald Trump.

In a broader sense, it shows how vulnerable those multilateral rules are to time-wasters. In a sector like aircraft manufacturing, where subsidies are ubiquitous, it has always been clear that America and the EU needed to agree to mutual disarmament. Instead, they have talked past each ▸▸

other, each complaining at various points that the other was unwilling to negotiate. Most recently it has been the EU that has submitted proposals to America, only to be rebuffed. Meanwhile, the boxes have been piling up and the lawyers raking in fees.

The Trump administration wasted no time in starting the formalities at the WTO that will allow it to apply the tariffs. That means the EU can expect tariffs on October 18th. As well as tariffs of 10% on large aircraft and 25% on agricultural and industrial goods, the list the USTR published on October 2nd included Italian Parmesan, Scotch whisky and German waffles. Even if a product is not on the list it may still be hit, as items could be shuffled in and out.

For all the fuss the dispute will generate among connoisseurs of European cheese, the biggest impact will be on aircraft, of which America imported $5.1bn-worth in 2018, mostly from France and Germany (the USTR has said that only a portion will be hit). It could have been worse—the Americans could have applied a tariff of up to 100%—but even one of 10% will bite. American airlines fear that tariffs will raise the price of Airbus aircraft, and that Boeing will lack the capacity to expand supply.

Perhaps the WTO will find that the EU has removed its subsidies, and the Americans will stand down. Or in eight months' time, when the WTO authorises the EU to place retaliatory tariffs on American imports as part of the Boeing dispute, the two sides might finally negotiate away their differences. By then Mr Trump's appetite for tariffs may have been sated, and he might abandon separate threats to put tariffs on European cars and car parts. But it is also possible that trade disputes between the two sides become fiercer. America is blocking the appointment of judges to the WTO's court of appeals. If either side makes a move that the other judges an infraction, and a complaint to the WTO cannot be heard for lack of judges, that could be the end of playing by the rules. ■

India's struggling banks

Lots of No-Nos

NEW DELHI

Yes Bank has become an example of all that ails India's banking system

BUSINESS DAYS now begin in India with a scan of the headlines and then a click to check on the shares of Yes Bank, the country's fourth-largest private bank. They peaked at 394 rupees ($5.64) in August 2018, and have staggered downwards ever since. On October 1st they hit 32 rupees after a 23% drop on the day, before rising by 23% on October 3rd as *The Economist* went to press.

Yes is not alone in its troubles. The shares of Indiabulls Housing Finance, the second-largest home lender—and, not coincidentally, a big borrower from Yes—have also plummeted. Late last month the Reserve Bank of India (RBI), the central bank, suddenly capped withdrawals from a small lender, Punjab and Maharashtra Co-operative Bank. That brought into the open what a police investigation now alleges was a vast lending fraud. Rumours of similar issues at other financial institutions prompted the RBI to tweet on October 1st reassuring "the general public that the Indian banking system is safe and stable and there is no need to panic".

That is unlikely to help. Such words from a financial authority are prone to be heard as a signal to stampede. Even if that is averted, India's banks are obviously faltering. They are still dealing with the overhang from a splurge of bad lending years ago. Yes Bank is merely a particularly marked example. The RBI has been concerned about the source of its seemingly impressive growth for some time.

But only in January this year did the regulator push out the bank's founder and chief executive, Rana Kapoor. Write-offs followed, but there are worries about what remains to be uncovered. A report by Credit Suisse estimated that 9.4% of Yes Bank's loans are in the process of being restructured—far higher than the 2.8% average for India's other banks. It will probably need to raise capital, but that will be hard.

Although Yes's problems are real, market movements may be exaggerating them. Some of the selling pressure has come from the forced liquidation of a large stake that had been retained by Mr Kapoor but pledged as collateral for loans. Holding companies linked to him have also sold shares to cut their debt. These sales created a vicious circle that may now be exhausted. The optimistic case for India's banks is that something similar is playing out across the financial system: real problems, and an overheated market response. But for the market-watchers who have become accustomed to shocks, India's banks steadying themselves would be a real surprise.

Look behind the headlines

Swiss banking

Discredit Suisse

A furore over spying rocks Switzerland's second-biggest bank

AT NOON ON September 17th, in central Zurich, Iqbal Khan confronted a man he suspected of following him. The suspicion was correct. The incident sparked a criminal investigation, still under way, and a speedy inquiry by Homburger, a law firm, for Credit Suisse, Mr Khan's former employer. The inquiry led on October 1st to the resignation of Pierre-Olivier Bouée, the bank's chief operating officer, and Remo Boccali, its head of security.

Until July Mr Khan oversaw Credit Suisse's wealth-management business outside Switzerland and Asia. He was a star. The chief executive, Tidjane Thiam, was reorienting the bank towards wealth management and away from the riskier bits of investment banking, and after a rocky start the bet was paying off. In the second quarter of 2019 the bank's return on equity was 9.7%, a shade under the 10% that investors regard as par. Revenues and profits in Mr Khan's division had grown nicely.

Alas, Mr Thiam and his talented, ambitious protégé had fallen out. Living next door to each other made matters worse. Mr Thiam was reportedly annoyed by Mr Khan's lengthy building works; Mr Khan, by Mr Thiam's planting of trees on the boundary. Eventually Mr Khan quit the bank. On August 29th UBS, Credit Suisse's bigger local rival, said he would become its co-head of global wealth management.

According to Homburger's report, Mr Bouée decided to have Mr Khan observed, fearing that he would try to poach employees or clients. The fact that Mr Khan continued to socialise with ex-colleagues while on gardening leave added to his worries. The report says Mr Bouée admitted acting

alone, telling no other executives or board members, including Mr Thiam. Homburger found no evidence that Mr Thiam knew anything until the day after Mr Khan spotted his shadow. The lawyers noted that they had no access to police or prosecutors' files, and that some messages between Mr Bouée and security staff had been deleted. But a trawl of messages between Mr Thiam and Mr Bouée yielded nothing.

Despite his exoneration—and the robust support of both the biggest shareholder and the chairman, Urs Rohner—the slightly farcical affair is a blow to Mr Thiam. He has lost two of his top brass within three months. The split with Mr Khan may have been inevitable, but Mr Bouée was a colleague of long standing. He was one of only a few outsiders Mr Thiam brought in when he took over at Credit Suisse in 2015; despite the bank's troubles, he liked most of what he saw. Mr Bouée was chief risk officer at Prudential, a British insurer which Mr Thiam headed before making the leap to banking, and the two had also worked together at Aviva, another insurer, and McKinsey, a consulting firm. As chief operating officer at Credit Suisse, Mr Bouée was instrumental in the tighter cost control that, with the push into wealth management and greater investment in Asia, has been a hallmark of Mr Thiam's tenure. Operating costs have been cropped by 18% in the past four years.

On October 1st Mr Rohner apologised to staff, clients and shareholders—and to Mr Khan. Neither the surveillance nor the Homburger probe found any evidence that he had tried to poach anybody. He took up his job at UBS the same day.

The affair seems to have cost something far more important than reputations and jobs. On September 24th a middleman who, on Credit Suisse's behalf, had hired the firm that watched Mr Khan died, apparently by his own hand. ■

Crypto-derivatives

Too dicey

Betting on the price of bitcoin may soon be deemed illegal gambling

On September 24th the price of a single bitcoin, the best-known cryptocurrency, fell by $1,000 in 30 minutes. No one knows why, and few people cared. There have been similar drops nearly every month since May. Yet for one obscure corner of the market, it mattered. Exchanges that sell "long" bitcoin derivatives contracts, with which traders bet that prices will rise without buying any coin, soon asked punters for more collateral. That triggered a stampede. By the end of the day $643m-worth of bitcoin contracts had been liquidated on BitMEX, a platform on which such contracts trade. Bets on other cryptocurrencies also became toxic.

Crypto-derivative products, which include options, futures and more exotic beasts, are popular. More than 23bn have been traded so far in 2019, according to Chainalysis, a research firm. But tantrums such as last month's have put them in regulators' cross-hairs. Japan is considering stringent registration requirements. Hong Kong bars retail investors from accessing crypto funds; Europe has had stiff restrictions since last year. Now the Financial Conduct Authority (FCA), a British watchdog, is proposing a blanket ban on selling crypto-derivatives to retail investors. A consultation ended on October 3rd. Its decision is expected in early 2020.

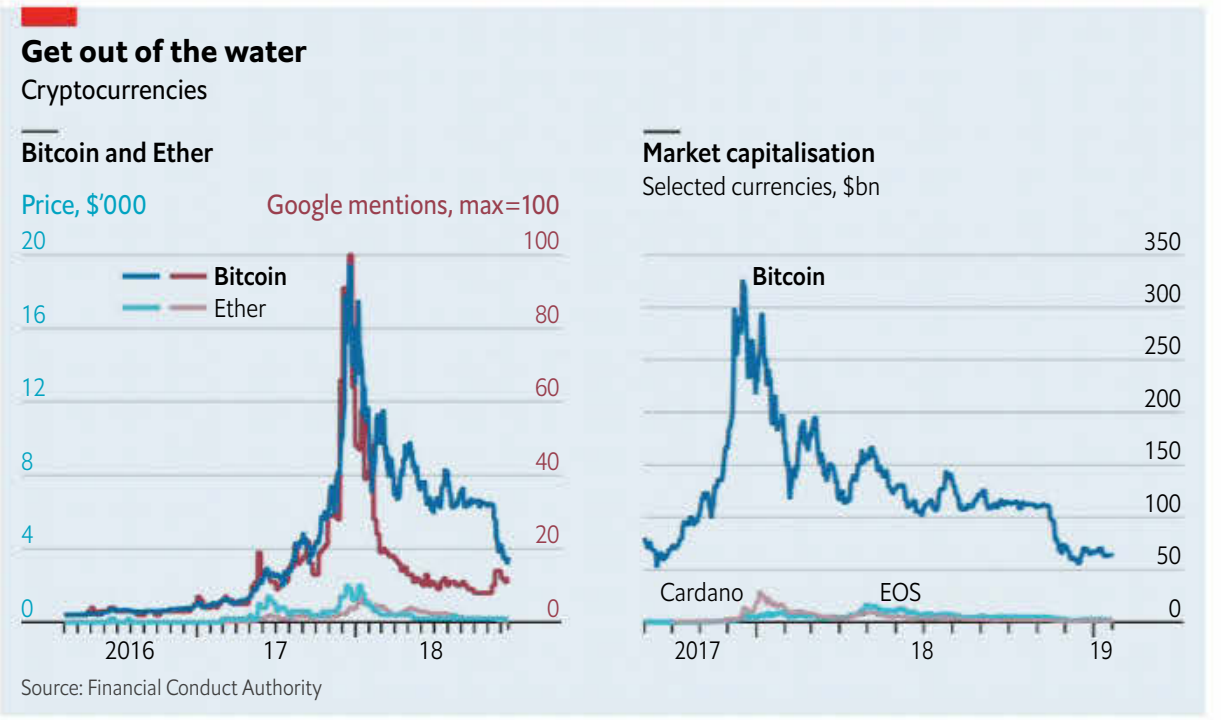
It would take an earthquake for the FCA not to press ahead. In the real world, importers buy derivatives as a defence against slumps in their domestic currency. But crypto-monies are not legally recognised currencies. They do not reliably store value, rarely serve as a unit of account and are not widely accepted. Peddlers of crypto-derivatives, the FCA says, cannot claim their wares are needed for hedging purposes.

That explains why most such derivatives are marketed as investment products. Yet they are not tempting places to park savings. The assets they track are hard to value: virtual monies promise no future cash flows. Prices across cryptocurrencies are strongly correlated, suggesting that demand does not stem from usage or technological advances. Instead it responds to hype (for which Google searches are a proxy; see chart). Thin trading means that prices differ widely between crypto-exchanges, making them a poor reference for derivative contracts. Illiquidity also amplifies swings: bitcoin is four times more volatile than risky physical commodities.

The FCA thinks crypto amateurs fail to understand all this. It estimates that investors in Britain made total losses of £371m ($492m) on crypto-derivatives from mid-2017 to the end of 2018 (net profit was £25.5m, but was mostly captured by the largest investors). Two other features can make losses catastrophic: leverage (platforms typically allow derivative traders to borrow between two and 100 times what they put in) and high trading costs. The FCA thinks its mooted ban could reduce consumer losses by up to £234m a year.

Insiders disagree. "This is a knee-jerk reaction," says Jacqui Hatfield of Orrick, a law firm. "Crypto-derivatives are just as risky as other derivatives." A ban could mean consumers invest directly in unregulated cryptocurrencies instead. Exchanges could relocate. In any case, says Danny Masters of CoinShares, which sells crypto vehicles, the regulator should not be choosing which technology thrives or fails.

Yet it is part of the FCA's mandate to protect consumers against predators. Nearly $1bn in virtual coins were stolen from crypto-exchanges and infrastructure last year, 3.6 times more than in 2017. Such thefts hit the value of derivatives. Manipulation is also rife. "Retail investors are diving in a pool of sharks," says David Gerard, a bitcoin sceptic. As regulators close in on market abuse, defenders of crypto-derivatives are swimming against the tide. ■



European monetary policy

Calming the hawks

BERLIN

Germans object to the ECB restarting stimulus. Can they cool down?

NOTHING INSPIRES German newspaper illustrators like the European Central Bank's monetary policies. Bond-buying is represented as a tsunami of cash. An uptick in inflation becomes a euro-gulping great white shark. After Mario Draghi, the ECB's outgoing president, pushed deposit-rate cuts and a promise to restart quantitative easing (QE) through its governing council last month, *Bild*, a tabloid, depicted him cloaked and fanged, as "Count Draghila".

German complaints are long-standing. The ECB's *Strafzinsen* ("punishment rates") expropriate savers. Banks suffer from negative rates they cannot pass on to customers. Cheap money fuels housing bubbles. The ECB is stealthily extending its mandate beyond price stability to redistribution. This week Oliver Bäte, the boss of Allianz, Europe's largest insurer, joined the attack, lambasting the ECB in an interview with the *Financial Times* for "multiplying risk".

Some fear such attacks risk weakening support for the single currency in its largest economy. But criticism from mainstream German politicians is now more muted than in 2016, when Wolfgang Schäuble, a former finance minister, blamed easy money for the rise of far-right populism. Inside the ECB council, the idea of sometimes using unorthodox monetary tools is no longer contested. On the big questions, Mr Draghi leaves office vindicated.

Yet his tactics are increasingly questioned. At least seven council members are reported to have objected to restarting QE. Dissenters worried that additional unconventional stimulus might do more harm than good. Several central-bank governors took their concerns public. On October 2nd Jens Weidmann, the Bundesbank's hawkish head, said he would oppose any effort to lift caps on bond-buying which the ECB will probably eventually hit. For his part Mr Draghi fears that airing dirty laundry damages the bank's credibility.

Mr Draghi has consistently urged governments with fiscal space to relieve the pressure on the ECB by spending more. In Germany public debt is low, borrowing costs are negative, investment needs are acute and recession appears imminent. Yet the coalition clings to its "black zero" principle of no net borrowing. A serious downturn would probably inspire some sort of stimulus, but it could come too late.

Henrik Enderlein of the Hertie School of Governance in Berlin fears that the ECB's stimulus gives Germany's politicians an excuse not to act. "It gives governments a signal that we are there to rescue you," he says. But Frederik Ducrozet, an ECB-watcher at Pictet Wealth Management, notes that lower interest payments make it easier to loosen fiscal policy. The Bundesbank reckons low rates saved the German state €368bn ($402bn) in the decade to 2018.

Later this month the German finance ministry must name a replacement for Sabine Lautenschläger, a monetary hawk who unexpectedly resigned from the ECB's executive board in September. One favourite is Isabel Schnabel, a member of Germany's advisory Council of Economic Experts. She has criticised the shrill tone of the country's monetary-policy debate. Such a choice would signal the German government's desire to cool the temperature. Christine Lagarde, who replaces Mr Draghi on November 1st, would surely be grateful; three days after that, she gives her first speech as ECB president—in Berlin, at an event to honour Mr Schäuble. ■

Music revenues

Don't stop me now

The economics of streaming is changing how pop songs are written

"WHERE THE streets have no name", the first song on U2's blockbuster 1987 album, "Joshua Tree", begins with 40 seconds of ambient noise. A guitar arpeggio enters and accelerates into the driving rhythm of the drums and bass that arrive around 1:10. Nearly two minutes pass before Bono breathes the first lyrics. Such leisurely intros are no more, says Justin Kalifowitz of Downtown Music Publishing, a rights manager. Streaming platforms like Spotify have reshaped the music business—and pop songs. The gist of it: songwriters now get to the good stuff sooner.

From sheet music to MP3s, technology has long influenced the form of music. Ever since songwriters have been paid royalties, however, one thing was constant: compensation was tied to sales. But last year streaming accounted for almost half the industry's revenues of $19.1bn. In America, the share was 80%.

Artists are paid per play—provided the listener stays tuned for at least 30 seconds. Each stream earns a tiny fraction of a cent. And just 13% of that goes to the songwriter, says David Israelite of the National Music Publishers Association, an American trade group. To make half-decent money, a song needs millions of plays.

The pressure is greater since overall revenues are lower than in the music industry's heyday around the turn of the millennium. Global revenues are at least recovering from a low of just $14.3bn in 2014, when piracy was rampant and business models had yet to adapt to the digital age.

It helps to be included on a streaming company's playlist. These account for roughly a third of all streams. Tracks are selected by opaque algorithms, but by analysing performance data you can work out what the bots like, says Chiara Belolo of Scorpio Music, a boutique label. Composers are adapting to what they think is being looked for. Hit songs are shorter. Intros have become truncated, says Mr Kalifowitz, "to get to the point a bit faster".

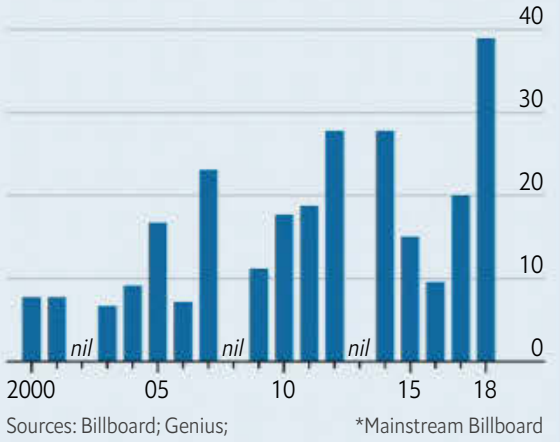
Choruses are starting sooner (see chart). Take this year's most-streamed Spotify track. The first notes on "Señorita", by Shawn Mendes, preview the refrain, which arrives 15 seconds in and is a fixture throughout the playing time of 3:10.

The dominant model splits streaming revenues between artists in proportion to their share of total streams. Some think this is overly generous to superstars. They prefer a "user-centric" alternative, in which revenues brought in by a particular customer are doled out in proportion to streams, but only among the artists that customer listens to. The difference is that if two users bring in the same revenue, each stream by the lighter user is worth more to the artist.

Deezer, a French streaming service, is planning to move to a user-centric system next year. A Finnish study in 2017 suggested that would boost the earnings of artists of middling popularity—though Spotify's former director of economics thinks it neglected to account for higher administrative costs. To the extent that playlists are filled with blockbuster songs, and are disproportionately popular with the heaviest listeners, the study is probably right. "Until we try, we will not know," says Alexander Holland of Deezer. But one thing is a near certainty: long, atmospheric intros are unlikely to make a comeback. ■

Don't bore us, get to the chorus

Hit songs* with chorus within first 15 seconds, %



Sources: Billboard; Genius; Spotify; *The Economist*

*Mainstream Billboard chart number ones

Free exchange | Outrageous fortune

A new paper makes a novel argument for wealth taxes

Five years ago Thomas Piketty's "Capital in the Twenty-First Century", a weighty analysis of rising inequality, flew off shelves and ignited fiery debate. Fans and detractors alike tended to agree on one thing, at least: its proposal to fix inequality—a tax on wealth—was a dud. A half-decade later the mood has shifted. Several candidates for the Democratic presidential nomination promise to tax wealth; Bernie Sanders recently announced a plan to tax fortunes of more than $32m at 1% per year, and those larger than $10bn at 8%. In his latest doorstopper, "Capital and Ideology", currently available only in French, Mr Piketty suggests taxing the wealth of billionaires at up to 90%. Few economists go so far. But more are now arguing that wealth taxes need not slow growth.

The shifting political climate is not hard to explain: taxes on wealth are popular. An analysis of recent survey evidence, for example, found that Americans favour such levies, especially on inheritance. And the case for taxing wealth has become easier to make. Emmanuel Saez and Gabriel Zucman of the University of California, Berkeley, find that the top 0.1% of taxpayers accounted for about 20% of American wealth in 2012, up from 7% of wealth in 1978 and close to levels last seen in 1929. The vast fortunes of the very rich—for example the more than $100bn controlled by Jeff Bezos, the founder and boss of Amazon—make juicy targets, too, for politicians seeking to fund new spending.

Economists have long been hostile to wealth taxes. But not Mr Piketty, Mr Saez or Mr Zucman. Mr Piketty based his case on the argument that concentrated wealth leads to concentration of political power, which undermines democracy. Mr Saez and Mr Zucman agree, and cite other concerns. In a recent paper, for instance, they note that in America the ratio of household wealth to national income has nearly doubled over the past 40 years, mostly because of the rising value of assets. Higher asset values could mean that firms are becoming more efficient—or it could reflect economic sclerosis. Property values could be rising because regulations make it difficult to build, for instance, and higher stock prices could be a sign that markets are becoming less competitive, and profits thus easier to come by. Taxing and redistributing wealth, then, could be a justified response to misfiring markets.

Other economists are warming to the idea. In a new paper published by the National Bureau of Economic Research, a team of five economists aims squarely at the standard economic argument against wealth taxes. Today's wealth is yesterday's income, that reasoning goes, so wealth taxes are bad because they discourage income-generating activities, such as work and investment. Taxes on capital in particular should be spared, because investment is an input into future growth. Taxes that discourage investment mean less output today and a smaller economy tomorrow. In some economic models the optimal tax on capital is a whopping 0%.

But these models often assume that one investment is as good as the next. In practice, say the authors of the new paper, that is far from true. Some people stash their money in low-yield government bonds; others fund startups that become trillion-dollar companies. Shifting the burden of tax from capital income to wealth, they argue, would reward investors capable of achieving outsize returns on their investments, and shrink the fortunes of those unwilling or unable to put their lucre to productive use. Heirs would feel pressure to use their wealth or lose it. Entrepreneurs accustomed to achieving double-digit returns would scarcely notice a modest wealth tax. Designed well, the authors reckon, it could reduce inequality while raising productivity.

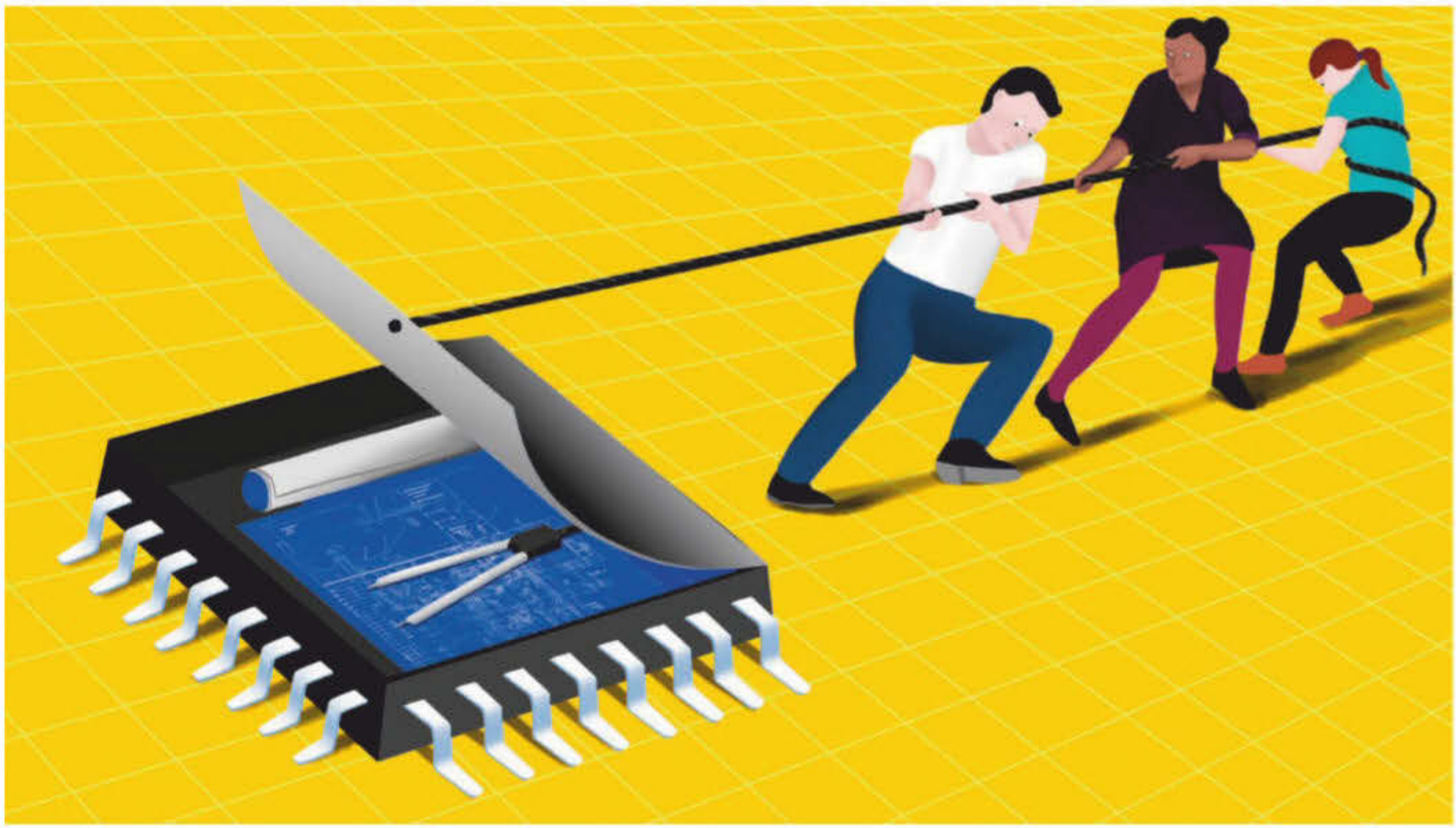
The authors' use-it-or-lose-it approach to wealth taxation has some similarities with arguments for taxes on land values (which this newspaper favours). Henry George, a 19th-century American journalist, became the Thomas Piketty of his day by campaigning for such levies. The rents earned by wealthy landowners derive in part from improvements they make to the land, he argued, but also from land's scarcity. A land-value tax collects on behalf of society the value attributable to the land itself, while leaving owners to collect the returns on investments in the land, such as buildings, untaxed. Similarly, shifting the burden of tax from capital income to wealth rewards ongoing efforts to deploy money well.

Economists like land-value taxes because they are efficient. But they also have a certain moral appeal. Society sets the terms on which individuals can accumulate wealth. It makes sense to structure those terms to benefit society as a whole. Wealth taxes are often cast as punitive—an impression encouraged by supporters, like Mr Sanders, who believe that "billionaires should not exist". But designed well, a wealth tax could confer greater moral legitimacy on large fortunes, because keeping them means continually putting them to productive ends.

All's well that ends wealth

Wealth taxes have their complications. Defining what kinds of investment are more productive than others is difficult. Instead of encouraging more risk-taking they might encourage tax avoidance—and emigration, since the rich are often highly mobile. In Europe, where citizens can easily move country and policing of tax evasion is lax, wealth taxes have been hard to sustain. But some politicians reckon that the challenges are surmountable. Elizabeth Warren, another Democratic presidential contender, would hit Americans who renounce their citizenship for tax purposes with an "exit tax" of 40% of their net worth above $50m. Financial institutions maintain detailed information on clients' wealth balances; governments could require them to share this information with tax authorities. Governments' patience with tax havens, already waning, could fail entirely if wealth taxation spreads.

Overshoot is clearly a risk. An energised American left, if elevated to power, could easily go too far. But wealth taxes are not necessarily an affront to economics. They are worth debating. ■



Open-source computing

Your own RISC

A new blueprint for microprocessors is challenging the industry's giants

Most microprocessors—the chips that do the grunt work in computers—are built around designs, known as instruction-set architectures (ISAs), which are owned either by Intel, an American giant, or by Arm, a Japanese one. Intel's ISAs power desktop computers, servers and laptops. Arm's power phones, watches and other mobile devices. Together, these two firms dominate the market. Almost every one of the 5.1bn mobile phones on the planet, for example, relies on an Arm-designed ISA. The past year, however, has seen a boomlet in chips made using an ISA called RISC-V. If boomlet becomes boom, it may change the chip industry dramatically, to the detriment of Arm and Intel, because unlike the ISAs from those two firms, which are proprietary, RISC-V is available to anyone, anywhere, and is free.

An ISA is a standardised description of how a chip works at the most basic level, and instructions for writing software to run on it. To draw an analogy, a house might have two floors or three, five bedrooms or six, one bathroom or two. That is up to the architect. An ISA, however, is the equivalent of insisting that the same sorts of electrical sockets and water inlets and outlets be put in the same places in every appropriate room, so that an electrician or a plumber can find them instantly and carry the correct kit to connect to them.

RISC-V offers computer architects a way to standardise their sockets and plumbing without having to gain permission from (and pay royalties to) either of the monopolists—for any company or individual may download it from the internet. It was originally written by computer scientists at the University of California, Berkeley, who wanted an instruction set that they could use for publishable research. Commercial producers of ISAs were reluctant to make theirs available, so the academics decided to buckle down and write their own.

The result, RISC-V, made its debut in 2014, at the Hot Chips microprocessor conference in California. It is now governed by a non-profit foundation. Though there are no formal royalties, the foundation does solicit donations as *pro bono publico* gestures from firms that employ RISC-V architecture—for what was once a tool for academics is now proliferating commercially.

There are three reasons for this proliferation. The most obvious is that the lack of royalties means using RISC-V is less costly than employing a commercial ISA. If the final product is a high-price object like a smartphone, that may not be a huge consideration. But for cheaper devices it is. Moreover, as chips are built into a growing range of products, such as home appliances, city infrastructure and factory equipment, it makes business sense to keep them as cheap as possible.

A second, more subtle advantage is that, unlike chips based on proprietary designs, those involving RISC-V can be used without lengthy and expensive contractual negotiations. It can take between six months and two years to negotiate a licence to use a chip design involving a commercial ISA. In the world of computing, especially for a cash-strapped startup, that is an eternity.

The third reason people are shifting to RISC-V is the nature of open source itself. Since the instruction set is already published online, American export controls do not apply to it. This has made it particularly popular with Chinese information-tech- ▸▸

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nology firms. Alibaba, an e-commerce giant based in Hangzhou, announced its first RISC-V chip in July. Shanghai's municipal government has a programme which supports startups using RISC-V in their designs. Huami, a big wearable-device firm in Hefei, is mass producing smart watches containing processors based on RISC-V. And in Shenzen, Huawei, one of the world's largest electronics companies, has a team of developers working on RISC-V. In an interview in September Wang Chenglu, the boss of Huawei's consumer-electronics business, pointed to the RISC-V foundation's recent move to Switzerland, out of America's jurisdiction, as something that will encourage Huawei's use of the ISA.

RISC-V does have weaknesses. Arm has spent decades building software tools to work with its designs, and spends a lot of its time helping customers implement these on their chips. The tools that exist for RISC-V designs are not yet that sophisticated. Intel makes things simpler still. It carries out all of the development, testing and fabrication itself, delivering only finished chips to customers. This reliability will certainly keep these firms' products competitive for a while.

Despite all that, though, RISC-V seems likely to thrive, particularly in products that contain chips but which are not smartphones or computers. Open-source software was a prerequisite for the smartphone boom that has taken place over the past decade. Open-source hardware, such as RISC-V, may lead to a similar expansion of other devices in the decade to come. ■

Optics

Dark business

The future of super-black coatings looks, as it were, bright

On September 13th a 16.78-carat yellow diamond, worth $2m, which was on display at the New York Stock Exchange, disappeared from view. Police were not, however, called to the scene. The disappearance was intentional. The diamond, part of an artwork called "The Redemption of Vanity", had been coated in a "super-black" layer of carbon nanotubes which, by absorbing 99.995% of the visible spectrum, made the usually sparkling gemstone seem practically invisible inside its dark case.

"The Redemption of Vanity" was a collaboration between Diemut Strebe, artist-in-residence at the Massachusetts Institute of Technology, and Brian Wardle, the institute's professor of aeronautics and astronautics. Whatever moral message this artistic endeavour might or might not have been intended to convey, it was a stark demonstration of allotropy—the fact that a single element can come in many guises, depending on the arrangement of its atoms. For, like Dr Wardle's nanotubes, diamonds are made of carbon. And that allotropic diversity is one of the reasons why carbon is such a useful material.

The idea of creating super-black surfaces out of carbon nanotubes is not in itself new. Vantablack was developed by Surrey NanoSystems, a British company, and put on the market in 2014. Vantablack, however, absorbs only 99.965% of the light incident upon it. As Dr Wardle's work shows, things have moved on since then.

Nanotubes, which have an atomic structure similar to graphite's, are naturally black. To make them super-black means growing them as forests that rise upward from the surface to be blackened. That way, once light enters the forest, it bounces from tube to tube—with each encounter bringing a high chance that the light will be absorbed. Few photons survive this process long enough to escape from the top of the forest canopy and be reflected from the surface. The effect is uncanny. A ball coated in a super-black would appear more like a hole in the air than a solid object.

Now you see me. Now you don't

The nanotubes involved in super-black surfaces are created by encouraging carbon atoms that start off in gas molecules such as carbon dioxide to crystallise into small cylinders which grow outward from the surface to be coated. Conventionally, this is done at a temperature of about 700°C. The target surface is coated with tiny particles of iron. These act both as catalysts for the carbon-liberating reaction and as nuclei for the growth of the cylinders.

Dr Wardle's team has been experimenting with aluminium surfaces instead of iron nanoparticles, and employing substances like baking soda and salt to prepare the aluminium. These materials remove the thin oxide layer that forms naturally on the metal when it is exposed to air. The sodium in them also seems to act as a catalyst in the way that iron does. The result is a process that operates at 400°C instead of 700°C, and which produces one of the superest blacks around. The involvement of aluminium means, of course, that to create "The Redemption of Vanity" the team had first to coat the diamond at the artwork's centre with aluminium—but aluminising things in this way is a well-established process. Indeed, that is part of the point. Substituting aluminium for iron should make super-blacking things easier.

Since the introduction of Vantablack, super-blacks have moved on commercially as well as artistically. Vantablack was so delicate that, once applied, it could not be touched. It had to be secured behind a protective layer. Surrey NanoSystems's more recent products incorporate elements other than carbon. As with diamonds, these dopants change a crystal's properties. (Pure-carbon diamonds are colourless; the yellowness of the stone in "The Redemption of Vanity" is caused by traces of nitrogen.) Correct doping of nanotubes creates a less fragile arrangement—more akin to a coral reef than a forest. Some modern super-blacks, indeed, are robust enough to withstand being sprayed onto suitably prepared surfaces at room temperature.

Moreover, besides their decorative applications super-blacks are used in manufactured products, particularly optical devices. Since they absorb more stray light than other coatings, using them to cover the interior surfaces of lenses can result in clearer images with better contrast and colour definition. According to Ben Jensen, chief technical officer at Surrey NanoSystems, the firm is collaborating with an as-yet-unnamed Japanese company to develop cameras which work on this principle. Certain European carmakers are, he says, also eyeing up super-blacks to improve the accuracy of sensors such as those employed to guide autonomous vehicles. And there are, naturally, military applications—though these remain secret.

Altogether, then, this allotrope of carbon looks likely to have a profitable future. Whether it will be as profitable as its cousin diamond's is remains to be seen. But in this case, to say that things look black for it is not a pessimistic assessment. ■

Animal behaviour

Children of dunes

Why do lizards swim in the sand?

AFICIONADOS OF "Dune", Frank Herbert's novel about a planet covered by Sahara-like desert, will be familiar with the idea of animals that swim through sand. Giant worms which do just that are a feature of the book. Back on Earth, though, there are sand-swimmers, too. And these ones are real. At least eight groups of lizards have a habit of diving headfirst into sand, if it is available, and making paddling motions with their limbs to carry them below, as if they were submerging themselves in a body of water. The question is, why?

Obvious hypotheses include evading predators and controlling body temperature. However, Ken Toyama of the University of Toronto has a third: that the animals are ridding themselves of skin parasites. And he has data to back his theory up.

Skin-grooming, which is crucial to any vertebrate's health and hygiene, can be a struggle for lizards. The layout of their skeletons means they cannot rotate their heads around far enough to reach certain parts of their bodies, in order to nibble parasites away. Nor, for want of the neural apparatus needed to keep track of favours given and received, can they easily play the mammalian game of "you scratch my back and I'll scratch yours". These facts, plus recent research conducted in the scrublands of Florida, which showed that a sand-swimming lizard species local to the area had far fewer skin parasites than other lizards present, led to the idea that swimming around in abrasive sand might help lizards scrub unwanted bugs from their exteriors.

Mr Toyama decided to test this thought by looking at Pacific iguanas (pictured). These animals dwell in the forests and on the beaches of north-western South America. They are known to be susceptible to skin parasites, and readily sand-swim when given the chance. And examination shows that forest-dwelling members of the species tend to have more skin parasites than do beach dwellers. He therefore went to Peru and collected, from a local forest, 20 Pacific iguanas that each had more than ten parasites attached to them.

This done, he transferred the animals to one of two laboratory habitats. The first had sand pits to swim in. The second did not. He fed the lizards and then left them to do as they pleased for 48 hours while recording what they got up to. After this he collected them, inspected them for parasites and released them back into the wild.

All the lizards that had had access to sand pits swam in them at least ten times each. And, as Mr Toyama reports this week in the *Science of Nature*, by the end of the experiment the parasite load of these animals had dropped by 40%. Animals with no access to sand also shed parasites, but at half the rate of the others. Even though the experiment was small, the statistical difference between the groups was such that there is only one chance in 80 of this result having happened at random.

Mr Toyama is not suggesting that hiding from predators and regulating body temperature are not also benefits of sand swimming. But he has shown for sure that this odd behaviour does indeed help keep lizards' parasites under control. ■

Space travel

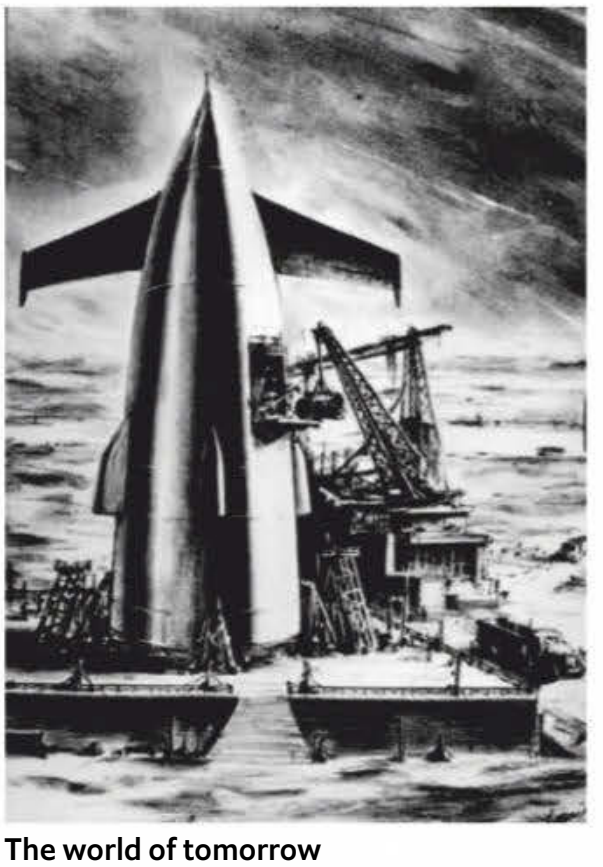
Move fast and build things

SpaceX's Starship is a new kind of rocket, in every sense

IT LOOKED for all the world like something that might have graced the cover of a 1950s comic book. On September 28th, on a warm Texas evening, Elon Musk, the boss of SpaceX, a rocketry firm, unveiled his company's newest machine, Starship Mk1. It stands 50 metres tall and is made from shiny plates of stainless steel. Despite its name, it is not in fact an interstellar spacecraft. But it is a prototype of an interplanetary one. Mr Musk hopes, one day, to use its successors to ferry passengers to the Moon or to Mars—or perhaps even, according to one piece of SpaceX concept art, all the way to Saturn.

In the 17 years since its founding, SpaceX's cheap, reusable machines have revolutionised the rocket business. The firm's ultra-low prices have seen it grab a dominant share of the commercial satellite-launching market. Along with Boeing, an American aerospace giant, SpaceX is responsible for ferrying supplies to the International Space Station. It may soon fly astronauts there as well. But all of this commercial success is merely a necessary first step in Mr Musk's bigger plan, which is to make humanity into a "multiplanetary species" by establishing colonies elsewhere in the solar system.

That is where the Starship comes in. The prototype on display in Texas is only one half of an enormous rocket stack designed ▸▸



The world of tomorrow

The world of today

with planetary colonisation in mind. When paired with a Falcon Super Heavy booster, which is also being developed, the result should be capable of lifting around 150 tonnes into orbit. That would make it the most powerful rocket ever built, squeaking ahead of the Saturn V, which propelled astronauts to the Moon in the 1960s and 1970s. And unlike the Saturn, whose three stages were abandoned to the sea or to space as their fuel was used up, the Starship and its booster will be reusable, which should keep costs down.

It is a bold plan. Mr Musk's shorter-term plans are bold too. Besides designing a new spaceship and booster, SpaceX's engineers are busy working on a new, more efficient engine to power them. Called Raptor, it is designed to burn super-cold methane rather than the kerosene that fuels the company's current Merlin engines. The Starship will sport six Raptor engines. But each Super Heavy booster will need somewhere between 24 and 37. The result will be a plumber's nightmare.

Mr Musk has said, perhaps optimistically, that a Starship prototype might be ready for a test flight all the way to orbit (albeit without its booster stage) within six months. That would be of a piece with its frenetic development schedule. The rocket-building industry is used to generous government contracts that are about job creation as much as rocket creation. SpaceX has brought a different sensibility, closer to the rapid-fire development practices of the software industry.

The Starship prototype, for instance, was welded together in a matter of months. It was built out in the open, rather than in a carefully controlled factory environment. The firm has two teams competing against each other to produce the best design. Ideas are tested quickly, taken forward if they work, and scrapped if they do not. The Starship was originally to be made of a carbon-fibre composite. But the company soon abandoned that idea, destroying its production tools. Steel, noted Mr Musk, has a higher melting point than carbon fibre, making re-entry easier. It is also an order of magnitude cheaper.

To see the contrast, look at the Space Launch System (SLS), another super-heavy rocket designed to ferry astronauts to the Moon and Mars, but which is being built by NASA, America's space agency. The SLS has had around $14bn of taxpayers' money since it was authorised in 2011—and that understates the true cost, since the SLS incorporates technology from old, abandoned rocket projects. It is due to make its first flight in 2020, though NASA has hinted that date may slip. Mr Musk claims that less than 5% of SpaceX's resources are dedicated to Starship. Yet it stands a good chance of beating the SLS into orbit. ■

Marine pollution

A message in some bottles

Please take your litter home...

INACCESSIBLE ISLAND is well named. It is an uninhabited rock in the South Atlantic ocean that belongs to Tristan da Cunha, a British dependency which itself vies with Easter Island for the honour of being the most remote inhabited place on the planet. Go there, though, and you will find its coast is covered with litter.

That, at least, has been the experience of Peter Ryan of the University of Cape Town, in South Africa. Since 1984 Dr Ryan, an ornithologist, has been visiting Inaccessible and, along with his other studies, recording the litter stranded on the island's beaches. This week, in the *Proceedings of the National Academy of Sciences*, he has published the results.

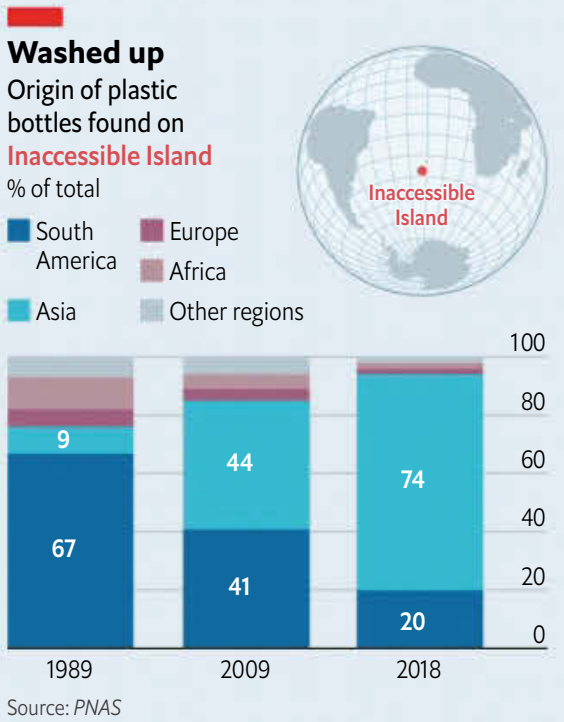
Though Inaccessible is indeed remote, being near the South Atlantic's midpoint, the nature of oceanic circulation means that this is exactly the sort of place where floating rubbish tends to accumulate—at the centre of whirlpools thousands of kilometres across, called gyres. Dr Ryan's particular interest was where all the litter came from before it was swept into the gyre. And he found that this has changed a lot over the decades he has been visiting the island.

To impose some order on the question, he and his colleagues focused on one particular class of litter: bottles. Their definition of a bottle included jars and aerosol containers, and encompassed things made of metal, glass or polymer. Most, though, were of polyethylene terephthalate, a light plastic, and had once held drinks.

A particular advantage of picking bottles to investigate is that they are often stamped with their country of manufacture. That enabled Dr Ryan to analyse the history of oceanic littering. As the chart shows, he picked three recording points, corresponding to field trips to the island, and analysed the proportions of bottles from various geographical sources. In 1989 the preponderance of them (67%) was South American. Twenty years later, in 2009, bottles made in Asia contributed more or less equally (44%) with South American ones (41%). By 2018 the overwhelming majority (74%) were Asian.

This geographical shift speaks volumes. The first sample suggests most litter arriving on Inaccessible had been washed off the land or dropped from coastal shipping—South America being a relatively nearby continent. The other two, with their rising proportions of trash from Asia, which is too far from the island for it to have floated there, strongly suggest it was crews' empties being flung from ocean-going vessels.

Such littering is banned by Annex V of the International Convention for the Prevention of Pollution from Ships—which, ironically, came into force in 1989, the year of Dr Ryan's first survey. But evidently a lot of ships' captains do not care. They permit the dumping of rubbish over the side, regardless.



Source: *PNAS*

Art and faith in Russia

Back to black

YEKATERINBURG

A tribute to the Russian avant-garde has set off a confrontation with believers

THE INDUSTRIAL zone outside Yekaterinburg, a city of 1.5m on the edge of Siberia, has seen better days. On pavements where Soviet workers once tramped to shifts at the Uralmash heavy-machinery plant, babushkas now lay out their wares: apples, mushrooms, smoked fish. Although the area has recovered from the organised crime that plagued it in the 1990s—earning the city the sobriquet, the Chicago of the Urals—most of the buildings on First Five-Year Plan Square in the centre of the district stand empty or underused.

The square is an unlikely place for a clash between contemporary artists and Orthodox believers. But this summer it staged a drama involving accusations of blasphemy, threats of bloodshed and an intervention by the security services. The conflict was ignited by a piece of street art inspired by the Russian avant-garde of a century ago. Unusually for a divided country and bellicose times, the combatants eventually resolved their dispute.

"Pokras is a very peaceful guy, he never meant to provoke," says Andrei Kolokolov, co-founder of Yekaterinburg's annual graffiti festival, which this year invited Pokras Lampas, an up-and-coming artist, to make a work in the square. He chose to create a giant "Suprematist Cross" (pictured), which took its shape from an existing tiled pattern on the intersection and its inspiration from Kazimir Malevich. In 1915 Malevich inaugurated a new era of abstract art with his "Black Square", an entirely black work on a white canvas described by Tatyana Tolstaya, a modern Russian writer, as "an uncrossable line that demarcated the chasm between old art and new art, between a man and his shadow." He founded the Suprematist movement, which declared the supremacy of feeling over the representation of objects. The cross was among its principal motifs.

Pokras's cross in Yekaterinburg was a supersized tribute to the movement. "The history of the area is very close to the Russian avant-garde," reasons the artist (whose real name is Arseny Pyzhenkov), pointing to the Constructivist architecture of the industrial zone. Over three days in July, with the help of 50 volunteers, he covered the 6,700-square-metre (72,000-square-foot) site with a red, white and black cross, using his personal calligraphy to weave in a quote from Malevich: "I have untied the knots of wisdom and freed the consciousness of colour...We, the Suprematists, throw the path open to you."

That path was blocked two weeks later, when workmen arrived and poured a rectangle of asphalt across the centre of the piece. To some, the dark blob in the middle of the work might have seemed a homage to the original "Black Square"; in reality, the city authorities had ordered a new road crossing and forgotten to cancel it when the artwork was commissioned. Either way, the botch made national news, and brought the work to the attention of a small but vocal group of Orthodox believers, who considered the design blasphemous. "Suddenly everyone is talking about how Yekaterinburg is this awful town that doesn't understand contemporary art, we pour asphalt on it," recalls Oksana Ivanova, an energetic employee at a local religious museum. Ms Ivanova says she understands it perfectly; but she objected to the cross.

Opting to speak her opponents' language, she called for a performance-art "happening" on the square, in which activists chanted and waved banners. "With post-modernism it's all a game, nothing means anything," she says. "Everyone makes a chopped salad from whatever they want, from any sphere, including the religious." A viral video shows the situation escalating. "I can make an art-object too," one participant threatened. "I'll smear [the square] with the blood of these satanists, there's your art object." Ms Ivanova was briefly detained for organising an unsanc- ▸▸

tioned demonstration. In a reversal of their habitual bias in favour of traditionalists, security-service agents offered the festival team their support to deal with the threats. Local officials stepped in to mediate.

Caution: religion

Conflict between Russian conservatives and liberals is common. In Yekaterinburg thousands of people took to the streets this spring to protest against plans to build a church over a popular park, eventually leading authorities to find a new location for the building. Two years ago, in the same city, an activist drove a minibus laden with gas canisters into a cinema that was set to screen "Mathilde", a controversial film based on the love affair between a ballerina and Nikolai II (the last tsar, who was killed with his family in Yekaterinburg and is now an Orthodox saint).

Artists who confront the devout have typically fared badly. The church is close to the state, providing President Vladimir Putin with a spiritual foundation for his defence of "traditional Russian values" in the face of the supposedly decadent West. After Pussy Riot performed their anti-Putin "Punk Prayer" in the Cathedral of Christ the Saviour in Moscow in 2012, three members of the collective were imprisoned for hooliganism. The case led to the introduction of a law that made "offending religious sensibilities" a crime. But as far back as 2003 organisers of an exhibition called "Caution: Religion" were convicted of inciting hatred, after the show drew protests from believers. In the years since, the head of a regional opera house was sacked after the church took against one of his productions of Wagner, exhibitions have been attacked and theatres picketed.

Such stand-offs rarely end in compromise. But in the case of the "Suprematist Cross", both sides were determined to hear the other out. "I want to create art that unites people," says Pokras. After talks with his opponents, he has agreed to break up the cross into three rectangles, shrugging off criticism from fellow artists who say he is violating the integrity of the work: "If I can bring people together by adding two lines, it means more to me than making a point." He even called Ms Ivanova while she was being held by the police to express solidarity, for which she says she is grateful. "Of course many people are post-modernist," she acknowledges. "We understand that."

Mr Kolokolov thinks the whole episode has engendered a sense of "catharsis"—as long as Pokras can find space in his schedule to adapt the work before winter covers the square with ice and snow. But the festival organiser takes a sober view of whether the case could serve as a model for dialogue in an increasingly polarised society. "I hope so," Mr Kolokolov says. "I doubt it." ■

Bosnian literature

A pocket of war

The Last Refuge. By Hasan Nuhanovic. Translated by Mirjana Evtov and Alison Sluiter. *Peter Owen; 320 pages; $24.95 and £14.99*
Under Pressure. By Faruk Sehic. Translated by Mirza Puric. *Istros Books; 166 pages; $16.95 and £9.99*

THE CHRONICLES of Bosnia's suffering in the 1990s that have reached Western readers have mostly been written by outsiders or exiles. Now the wartime stories of two Bosnian authors, Faruk Sehic and Hasan Nuhanovic, have arrived in translation. Their experiences—and their books—are radically different from one another's.

When the war broke out in 1992 Mr Nuhanovic was a mechanical-engineering student in Sarajevo; Mr Sehic was studying to be a vet in Zagreb. Because his family did not flee in time, Mr Nuhanovic ended up in Srebrenica, the Bosniak (Bosnian Muslim) enclave that was besieged by Serb forces; eventually he became a translator for the UN. For his part, Mr Sehic signed up to fight, and led a group of 130 soldiers in his native Bihac area, which was also surrounded by Serbs.

Mr Sehic revisits that experience in "Under Pressure", a book of powerful semi-autobiographical vignettes, mostly (but not only) from the conflict. The narrator and his comrades drink copiously, take drugs, have sex and loot if the opportunity arises. Most of their fighting is done in a war within the war: in the "Bihac pocket", Bosniaks not only fended off the Serbs but battled a cultish, Serb-backed Bosniak splinter force led by a man who had previously run a huge agricultural concern.

The tales that Mr Sehic tells are graphic. When the narrator's outfit seizes a trench, they find a still-warm corpse. In his wallet is a passport-sized photo of the dead man: "He had a receding hairline. Large, melancholy eyes. With the sharp edge of the photograph I floss bits of apple from between my teeth." As the narrator pops pills, throws punches and succumbs to post-traumatic stress, his heart skips "like a series of short bursts of machinegun fire"—as does Mr Sehic's writing.

Whereas Mr Sehic is now an established poet and novelist, Mr Nuhanovic is an activist. He made legal history when he successfully sued the Dutch government because its contingent of UN troops had handed over his family to Bosnian Serb forces, who murdered them when Srebrenica fell in 1995. But "The Last Refuge" is not directly about that massacre of some 8,000 Bosniaks. Instead it is a grimly fascinating account of how, after first fleeing to his father's ancestral village, Mr Nuhanovic's family made it to Srebrenica, and of everyday life there. That sounds mundane. It is not. The narrative is crammed with details that only someone who lived through that hell could know. By filling in one piece of the jigsaw, the book will—like the memoirs of Holocaust survivors—help future readers understand the bigger picture.

Mr Nuhanovic recounts other stories besides his own. In stark contrast to Mr Sehic's debauches, hundreds of starving Bosniaks, led by small numbers of armed men, raid surrounding Serb villages for food. At Kravica on Orthodox Christmas Day in 1993, one explains, they found a feast laid out ready to eat. There was shelling and shooting outside the house, and the roof was on fire. But, the man says, "all of us started attacking the cake with our fingers. I was stuffing myself with whipped cream like a madman." Later, when NATO planes began dropping food and a massive pallet smashed through the roof of a home, the (unhurt) inhabitants "didn't mind at all." After all, "mending a roof was much easier than finding food to feed your family."

Today, despite the conclusions of two international courts, Serb politicians vie to deny that an act of genocide took place in Srebrenica. For Bosniaks, meanwhile, Srebrenica continues to grow in importance as a symbol of resistance and steadfastness under attack. Mr Nuhanovic's gripping, beautifully translated book may help counter the denials; but as important in its way is his frank acknowledgment of the impact of war. As the fighting ground on, he writes, some of the compatriots trapped alongside him remained committed to defending Bosnia. But most thought: "Take Srebrenica, take everything, just let me get out of here." If only they could have been certain of not being killed, tortured or sent to detention camps, large numbers would have surrendered, Mr Nuhanovic says. Alas, "of that they could not be sure." ■

The people of the abyss

Always with us

Charles Booth's London Poverty Maps. By Mary Morgan and the London School of Economics. *Thames & Hudson; 288 pages; $75 and £49.95*

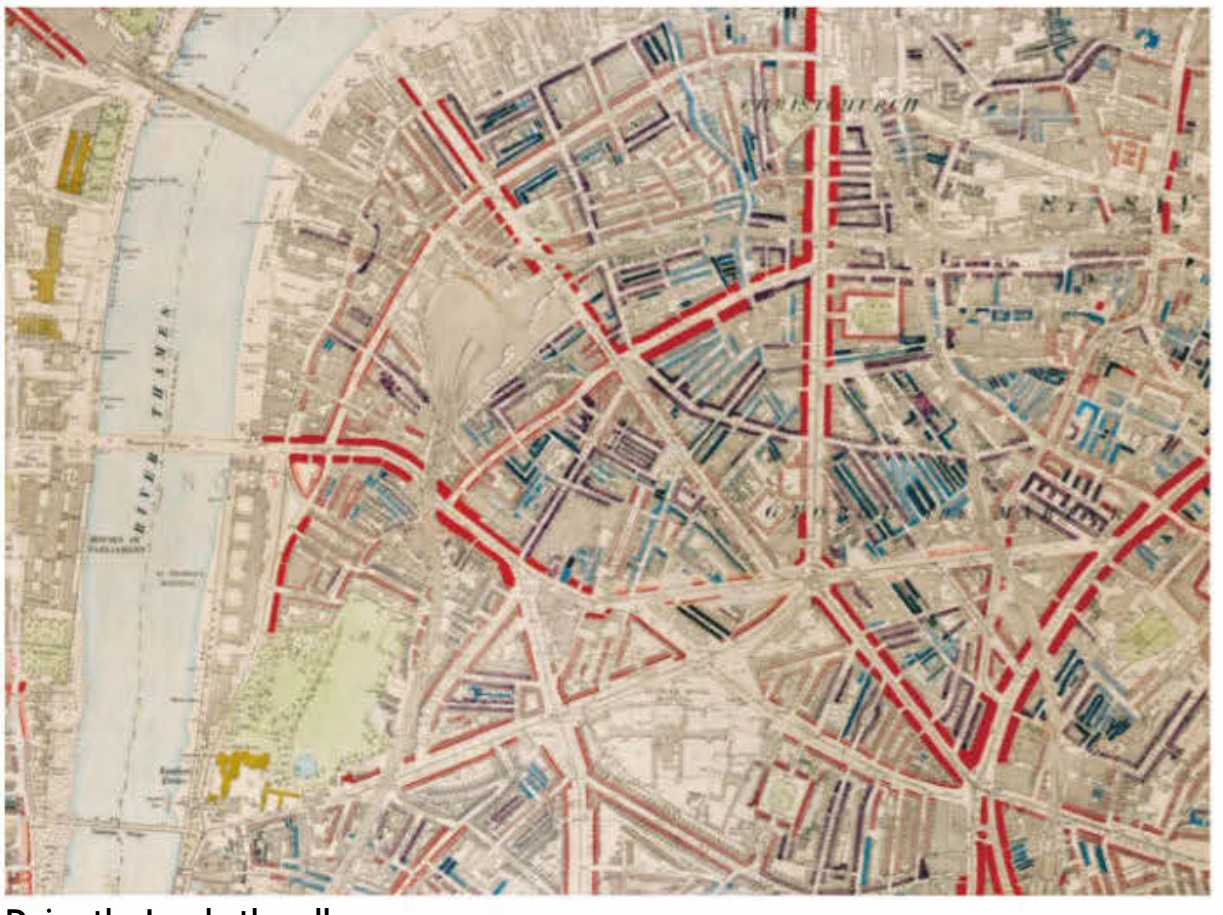
"I CURSED EVERY minute I gave to it," Charles Booth complained of his monumental survey of life and labour in London. It is easy to see why: from 1886 to 1903, while running a leather dealership and a steamship line, Booth pursued a crazily ambitious private scheme to chart the socioeconomic condition of every street in what was then the biggest city in the world. To find out how many Londoners were poor—and why—he and his squad of investigators accompanied policemen on patrols, and conducted interviews in pubs and sweatshops. Their observations of housing and habits, plus the data they received from school-board visitors, were transmuted into colour-coded maps. Like illuminated manuscripts, they are mesmerising in their detail and diligence.

The colour scheme descends from red and yellow for wealthy residents to blue for "chronic want" and black for "vicious, semi-criminal". The handsome volume in which the maps have now been reproduced includes contemporaneous pictures—faces smiling out from the squalor, or scowling—plus extracts from the investigators' notes. As Sarah Wise, author of one of the new book's contextualising essays, puts it, these notes are "a compendium of anxieties" held by the well-off about the working classes, censorious judgment mixing with compassion in a characteristically Victorian way. Prostitution figured prominently, as did booze; sozzled women were a particular worry. Italian thieves were said to be less violent than their English counterparts. Irish and Jewish immigrants were widely reviled.

In outline, the picture of London that emerges is familiar. Then, as now, the east was poorer than the west—a pattern set long ago by the direction of the Thames and the prevailing winds—even if much of the heavy industry of Booth's time is gone, and the once-humming docks are quieter. Then, as now, wealth and poverty were more entwined than in many metropolises, the neat grids of red and yellow on the maps disrupted by thickets of blue and slugs of black. Sometimes streets are cross-hatched, or outlined assiduously in one colour and filled in another, to indicate their jumbled complexion.

Some of the slums Booth documented have since become exorbitantly trendy, though gentrification was a feature of his day, too, the poor circulating to the city's margins to make way for others. For all the moralising, he concluded that vice accounted for a small share of the 31% of Londoners living in poverty. Most were done in by misfortune (illness, accident, bereavement) or by badly paid and erratic work.

The anecdotes in the book are as captivating as the maps. The cat's-meat seller in Holloway does a roaring trade because "nearly every poor family is a customer for its cat even though it can hardly afford to feed itself." Urchins save for their funerals; 64 tramps wait for their dinner outside a Kensington church. In Deptford there are "shoeless children running about and frowsy women gaping at doors". Rose, the keeper of a Hackney sweet-shop, is thought respectable but for "going on a spree" once a year, on which she "drinks a drop too much and takes up with chance men who fleece her." These vivid, hard London lives are all long gone—replaced perpetually by new struggles and stories. ■



Doing the Lambeth walk

Lives of the composers

Rise up singing

Summertime: George Gershwin's Life in Music. By Richard Crawford. *W.W. Norton; 594 pages; $39.95 and £28*

AFTER LISTENING to an early performance of "Porgy and Bess", George Gershwin exclaimed that the music was so beautiful he could hardly believe he had written it. Generations of listeners have swooned, too. "Summertime", the opera's best-known aria, is a sultry blend of blues, folk and jazz that is said to have been recorded around 25,000 times.

Born in Brooklyn in 1898, Gershwin was an innovator who used rhythm, harmony and melody to irresistible effect. He believed that jazz was the "spontaneous expression" of modern American life and became a household name in 1924 with "Rhapsody in Blue". A virtuoso pianist, he performed the premiere of the jazz-inspired work, which he saw as a "musical kaleidoscope of America—of our vast melting pot, of our unduplicated national pep, of our blues, our metropolitan madness".

Richard Crawford of the University of Michigan has written extensively about American music and is an enthusiastic Gershwin fan. In his new biography of the composer, Mr Crawford explains that "Rhapsody in Blue" opens not with "a melody but a surprise: a reedy smear borrowed from the comic realm of jazz novelty."

The author offers many such evocative descriptions in his scholarly account of Gershwin's tragically short life. The works are covered in exhaustive detail, with in-depth analysis, plots and character summaries (the book is also peppered with notations and terminology that might confuse non-specialist readers). Some important cultural history, however, is missing. There is little discussion, for example, of the racial debates surrounding "Porgy and Bess", which is set in a fictional black neighbourhood in South Carolina. ▸▸

Johnson Sticks and stones

The polarisation of politics is producing a new lexicon of insults

THINK OF THE most taboo insult that is possible in English. Chances are you have one of just a few words in mind. Now consider the following anecdote. In 2016 a defendant in an English courtroom told the judge, Patricia Lynch, that she was "a cunt". To which the judge, on the record, thought fit to reply: "You're a bit of a cunt yourself."

Supposedly the 20-megaton nuke of swear words, still considered by some people unacceptable at any time, the C-word does not pack the blast it once did. Samantha Bee, an American comedian, used it on her news show to refer to Ivanka Trump, the president's daughter, inciting only a short-lived controversy. Numerous British television presenters have mistakenly substituted it, on air, for the surname of Jeremy Hunt, who was for a time culture secretary. (Anticipating the "c" in "culture" may have been responsible for early slips of this type, but they mysteriously continued after Mr Hunt became health secretary.) None of the presenters has been disciplined.

The words that shock have changed. An English law of 1606 forbade profane references on stage to God, Jesus Christ and the Holy Ghost. Today such imprecations cause barely a batted eyelash (even if high-profile cases of perceived blasphemy still rile the devout in places such as Russia). Later, words related to sex and the body were the most likely to offend. The word "bloody" set off a gale of laughter at the London premiere of George Bernard Shaw's "Pygmalion" in 1914. Now it is hardly worth remarking upon.

The vocabulary that causes offence today would puzzle those who roared at "bloody". Consider an insult that occupied the British press for several days in December 2018. Jeremy Corbyn, the leader of the Labour opposition, seemed to mouth "stupid woman" as Theresa May, then the prime minister, spoke from the dispatch box. Mr Corbyn was forced to deny he had said those words. He is "opposed to the use of sexist and misogynist language in any form"; what he had actually said was "stupid people".

Mrs May's successor now stands accused of misogyny on the front bench. As Mr Corbyn was speaking in early September, Boris Johnson, now prime minister, yelled, "You great big girl's blouse!" On the same day Mr Johnson also used the word "shit" (he was quoting a Labour politician's reference to that party's economic policy as "shit or bust", meaning "all or nothing"). Once, the earthy Anglo-Saxon word would never have fallen from the mouth of a prime minister in Parliament. Yet "big girl's blouse" dominated the coverage.

A watershed moment has arrived: traditional taboo words, pertaining to the body and excrement, no longer have the punch of group-based insults related to sex, disabilities and other such qualities, about which Western societies are increasingly sensitive. (Race-based gibes have been anathema for a while.)

The evolution of insults is the subject of Philip Gooden's new book, "Bad Words". He recounts in one neat reversal the turn in the history of invective. The *Sun*, a British tabloid, was once in the habit of outing gay people, and even publicly defended its use of "poof" in doing so (because, the paper argued, its readers used the word, too). How times change. After abandoning the practice of outing in 1998, in 2018 the paper led a campaign to track down a bus-driver who called a reality-show star a "poofter". What it once considered lightheartedly banter is now *verboten* homophobia.

Not everyone is happy with this modulation in the unacceptable. Some think it is a humourless and thin-skinned world that can't handle a risqué dig now and again. Those purported stalwarts of robust free speech have inaugurated a new catalogue of insults: the "snowflake" who can't take the heat; the "libtard" who can't think beyond progressive dogma; the "social-justice warrior", once a term applied by left-leaning types to themselves, now appropriated as a smear.

Such people consider themselves "redpilled", named after the red pill in "The Matrix" that allows characters to see the world as it truly is. When Hillary Clinton, running for president, unwisely referred to some Americans as "deplorables", some of her critics embraced that term as a badge of honour—an ironic stance meant to contrast with their supposedly po-faced adversaries.

In a less buttoned-up age, some venerable slurs are in decline. Less happily, they are being superseded by tags based on identity politics. "Deplorables" versus "snowflakes": in place of the old neuroses, the new lexicon of insults captures worrying divisions.

Other biographies have depicted Gershwin, who was an avid art collector, as a thoughtless egotist, but Mr Crawford is a judge of music, not character. Still, he offers a glimpse of his subject's personal life, which included glittering parties and romances with socialites and musicians. He alludes to Gershwin's aversion to commitment and his loneliness, and explores his relationship with his older brother, the lyricist Ira Gershwin, a vital collaborator on many works (including "Porgy").

And he briefly covers Gershwin's childhood and early musical studies. His parents were unmusical Russian-Jewish immigrants who ran various businesses with mixed success. An interesting chapter explores the music-publishing district known as Tin Pan Alley and its influence on the composer, who left school at 15 to become a song-seller there, baffling his peers with talk of the "artistic mission of popular music". There are lively anecdotes from his career, such as the humiliation during a youthful gig at a vaudeville club when a resident comic jeered that he should become a truck driver instead of a pianist.

That was a rare failure. The few dissenters in Gershwin's lifetime included composers such as Aaron Copland and Roger Sessions, who unfairly deemed his music unserious. Gershwin often collaborated with luminaries including Fred and Adele Astaire, who had an unrequited crush on him. The actress Ethel Merman described her first encounter with him as like "meeting God". He died of a brain tumour at 38.

A critic said he had taken "the simple emotion of longing and let it surge through his music," making real "what a hundred before him had falsified." That emotional honesty still bewitches listeners. ■

Economic data

	Gross domestic product, % change on year ago: latest		quarter*	2019†	Consumer prices, % change on year ago: latest		2019†	Unemployment rate, %		Current-account balance, % of GDP, 2019†	Budget balance, % of GDP, 2019†	Interest rates, 10-yr gov't bonds: latest,%		change on year ago, bp	Currency units: per $ Oct 2nd	% change on year ago
United States	2.3	Q2	2.0	2.2	1.7	Aug	2.0	3.7	Aug	-2.2	-4.7	1.7		-130	-	
China	6.2	Q2	6.6	6.1	2.8	Aug	2.8	3.6	Q2§	0.7	-4.5	3.0	§§	-51.0	7.14	-3.6
Japan	1.0	Q2	1.3	1.0	0.2	Aug	1.0	2.2	Aug	3.2	-2.9	-0.3		-34.0	107	5.9
Britain	1.3	Q2	-0.9	1.1	1.7	Aug	1.8	3.8	Jun††	-4.0	-1.8	0.5		-105	0.81	-4.9
Canada	1.6	Q2	3.7	1.6	1.9	Aug	2.0	5.7	Aug	-2.3	-0.8	1.3		-115	1.33	-3.8
Euro area	1.2	Q2	0.8	1.2	0.9	Sep	1.2	7.4	Aug	2.9	-1.1	-0.5		-96.0	0.91	-4.4
Austria	1.5	Q2	-1.4	1.4	1.5	Aug	1.6	4.5	Aug	1.7	0.1	-0.3		-94.0	0.91	-4.4
Belgium	1.2	Q2	0.9	1.2	0.8	Sep	1.8	5.5	Aug	0.1	-1.0	-0.2		-104	0.91	-4.4
France	1.4	Q2	1.3	1.2	0.9	Sep	1.2	8.5	Aug	-0.9	-3.3	-0.3		-108	0.91	-4.4
Germany	0.4	Q2	-0.3	0.5	1.2	Sep	1.3	3.1	Aug	6.5	0.5	-0.5		-96.0	0.91	-4.4
Greece	1.9	Q2	3.4	1.8	-0.2	Aug	0.8	17.0	Jun	-3.0	0.3	1.4		-294	0.91	-4.4
Italy	-0.1	Q2	0.1	0.1	0.4	Sep	0.8	9.5	Aug	1.9	-2.4	0.9		-257	0.91	-4.4
Netherlands	1.8	Q2	1.6	1.7	2.8	Aug	2.6	4.4	Aug	9.7	0.6	-0.4		-102	0.91	-4.4
Spain	2.3	Q2	1.6	2.1	0.1	Sep	0.8	13.8	Aug	0.7	-2.3	0.2		-129	0.91	-4.4
Czech Republic	2.5	Q2	3.0	2.6	2.9	Aug	2.7	2.1	Aug‡	0.5	0.2	1.4		-77.0	23.6	-5.2
Denmark	2.2	Q2	3.6	1.8	0.4	Aug	0.9	3.8	Aug	6.8	1.0	-0.5		-89.0	6.82	-5.4
Norway	-0.7	Q2	1.0	1.5	1.6	Aug	2.3	3.8	Jul‡‡	6.2	6.6	1.3		-69.0	9.14	-10.7
Poland	4.2	Q2	3.2	4.0	2.6	Sep	2.0	5.2	Aug§	-0.6	-2.0	2.0		-122	3.98	-6.5
Russia	0.9	Q2	na	1.3	4.3	Aug	4.5	4.3	Aug§	7.2	2.1	7.2		-143	65.2	0.5
Sweden	1.0	Q2	0.5	1.6	1.4	Aug	1.8	7.1	Aug§	4.4	0.6	-0.3		-94.0	9.89	-9.0
Switzerland	0.2	Q2	1.1	0.8	0.1	Sep	0.5	2.3	Aug	9.3	0.5	-0.7		-76.0	1.00	-2.0
Turkey	-1.5	Q2	na	-0.2	15.0	Aug	15.9	13.0	Jun§	-0.1	-2.8	13.3		-496	5.70	5.1
Australia	1.4	Q2	1.9	1.8	1.6	Q2	1.5	5.3	Aug	-0.1	0.1	1.0		-171	1.49	-6.7
Hong Kong	0.5	Q2	-1.7	0.5	3.5	Aug	3.0	2.9	Aug‡‡	4.2	0.1	1.3		-116	7.84	-0.1
India	5.0	Q2	2.9	5.2	3.2	Aug	3.6	7.2	Sep	-1.5	-3.5	6.7		-133	71.1	2.5
Indonesia	5.0	Q2	na	5.1	3.4	Sep	3.1	5.0	Q1§	-2.8	-2.0	7.3		-88.0	14,195	6.0
Malaysia	4.9	Q2	na	4.8	1.5	Aug	0.8	3.3	Jul§	4.5	-3.5	3.3		-78.0	4.19	-1.2
Pakistan	3.3	2019**	na	3.3	11.4	Sep	9.1	5.8	2018	-3.7	-8.9	12.6	†††	226	156	-20.5
Philippines	5.5	Q2	5.7	5.7	1.7	Aug	2.7	5.4	Q3§	-1.3	-2.5	4.7		-270	52.0	4.4
Singapore	0.1	Q2	-3.3	0.7	0.5	Aug	0.5	2.2	Q2	15.6	-0.3	1.7		-80.0	1.38	-0.7
South Korea	2.1	Q2	4.2	1.9	-0.4	Sep	0.7	3.0	Aug§	4.0	0.6	1.5		-87.0	1,206	-7.2
Taiwan	2.4	Q2	2.7	2.4	0.4	Aug	0.5	3.7	Aug	12.0	-1.0	0.7		-16.0	31.1	-1.3
Thailand	2.3	Q2	2.4	2.5	0.3	Sep	1.2	1.0	Aug§	7.2	-2.8	1.4		-116	30.7	5.6
Argentina	0.6	Q2	-1.3	-2.9	54.5	Aug‡	53.4	10.6	Q2§	-1.5	-3.7	11.3		562	57.9	-34.1
Brazil	1.0	Q2	1.8	0.8	3.4	Aug	3.8	11.8	Aug§	-1.7	-5.7	5.0		-432	4.16	-4.8
Chile	1.9	Q2	3.4	2.6	2.3	Aug	2.3	7.2	Aug§‡‡	-2.6	-1.3	2.9		-166	728	-9.4
Colombia	3.4	Q2	5.6	3.1	3.8	Aug	3.5	10.8	Aug§	-4.4	-2.5	5.8		-113	3,499	-14.2
Mexico	-0.8	Q2	0.1	0.3	3.2	Aug	3.6	3.6	Aug	-1.7	-2.7	6.9		-106	19.8	-5.1
Peru	1.2	Q2	4.1	3.0	1.9	Sep	2.2	6.5	Aug§	-1.9	-2.0	5.6		64.0	3.38	-2.1
Egypt	5.7	Q2	na	5.6	7.5	Aug	9.1	7.5	Q2§	-0.4	-6.8	na		nil	16.3	9.6
Israel	2.2	Q2	1.0	3.5	0.6	Aug	0.9	3.8	Aug	2.3	-4.0	0.8		-115	3.49	4.6
Saudi Arabia	2.4	2018	na	1.5	-1.1	Aug	-1.1	5.6	Q2	1.4	-6.6	na		nil	3.75	nil
South Africa	0.9	Q2	3.1	0.8	4.3	Aug	4.6	29.0	Q2§	-4.1	-4.8	8.3		-81.0	15.3	-6.1

Source: Haver Analytics. *% change on previous quarter, annual rate. †The Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. †††Dollar-denominated bonds.

Markets

In local currency	Index Oct 2nd	% change on: one week	Dec 31st 2018
United States S&P 500	2,887.6	-3.3	15.2
United States NAScomp	7,785.3	-3.6	17.3
China Shanghai Comp	2,905.2	-1.7	16.5
China Shenzhen Comp	1,595.2	-2.7	25.8
Japan Nikkei 225	21,778.6	-1.1	8.8
Japan Topix	1,596.3	-1.5	6.8
Britain FTSE 100	7,122.5	-2.3	5.9
Canada S&P TSX	16,311.0	-2.8	13.9
Euro area EURO STOXX 50	3,413.3	-2.8	13.7
France CAC 40	5,422.8	-2.9	14.6
Germany DAX*	11,925.3	-2.5	12.9
Italy FTSE/MIB	21,298.2	-2.2	16.2
Netherlands AEX	558.0	-2.7	14.4
Spain IBEX 35	8,912.2	-1.9	4.4
Poland WIG	55,598.6	-2.6	-3.6
Russia RTS, $ terms	1,313.8	-3.0	23.2
Switzerland SMI	9,757.3	-1.6	15.8
Turkey BIST	103,509.2	0.9	13.4
Australia All Ord.	6,753.3	-0.9	18.3
Hong Kong Hang Seng	26,042.7	0.4	0.8
India BSE	38,305.4	-0.7	6.2
Indonesia IDX	6,055.4	-1.5	-2.2
Malaysia KLSE	1,574.9	-0.9	-6.8

	index Oct 2nd	% change on: one week	Dec 31st 2018
Pakistan KSE	32,363.4	2.5	-12.7
Singapore STI	3,103.5	-0.7	1.1
South Korea KOSPI	2,031.9	-2.0	-0.4
Taiwan TWI	10,947.9	0.7	12.5
Thailand SET	1,613.6	-0.9	3.2
Argentina MERV	30,792.1	9.1	1.6
Brazil BVSP	101,031.4	-3.3	15.0
Mexico IPC	42,222.9	-1.8	1.4
Egypt EGX 30	14,381.2	5.8	10.3
Israel TA-125	1,520.8	nil	14.1
Saudi Arabia Tadawul	7,984.4	-0.6	2.0
South Africa JSE AS	54,003.8	-1.6	2.4
World, dev'd MSCI	2,121.5	-2.9	12.6
Emerging markets MSCI	989.2	-1.6	2.4

US corporate bonds, spread over Treasuries

Basis points	latest	Dec 31st 2018
Investment grade	164	190
High-yield	512	571

Sources: Datastream from Refinitiv; Standard & Poor's Global Fixed Income Research. *Total return index.

Commodities

The Economist **commodity-price index**

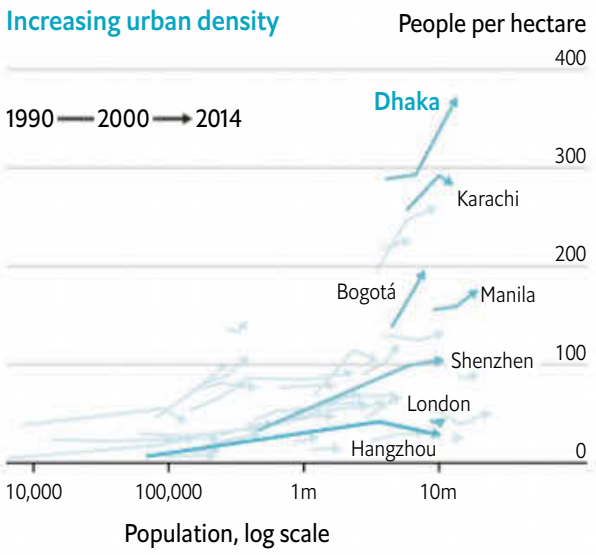
2005=100	Sep 24th	Oct 1st*	% change on month	year
Dollar Index				
All Items	134.0	135.0	3.4	-3.4
Food	143.8	147.3	5.8	2.8
Industrials				
All	123.9	122.2	0.5	-10.2
Non-food agriculturals	111.6	110.3	1.1	-12.1
Metals	129.2	127.3	0.3	-9.5
Sterling Index				
All items	195.4	200.9	2.3	2.6
Euro Index				
All items	151.5	153.7	3.8	2.2
Gold				
$ per oz	1,525.2	1,483.0	-4.3	22.9
West Texas Intermediate				
$ per barrel	57.3	53.6	-0.6	-28.7

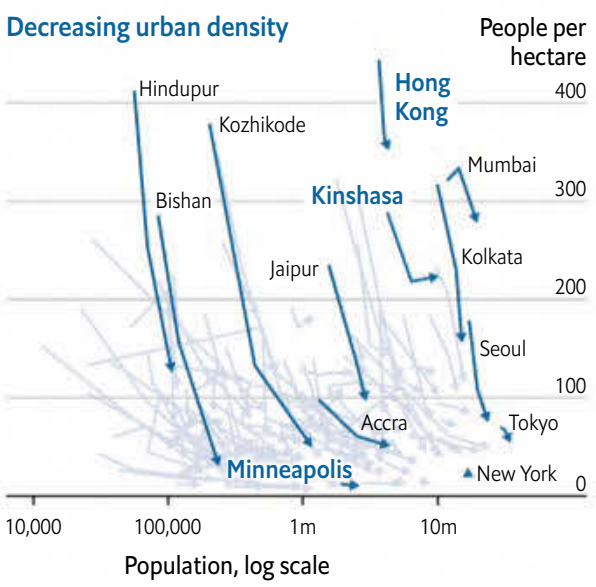
Sources: CME Group; Cotlook; Darmenn & Curl; Datastream from Refinitiv; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

For more countries and additional data, visit **Economist.com/indicators**

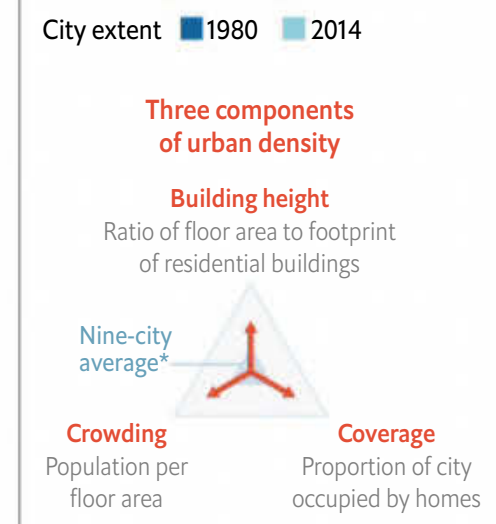
Most cities are becoming less dense as their populations increase. The biggest engine of growth is sprawl, not building height

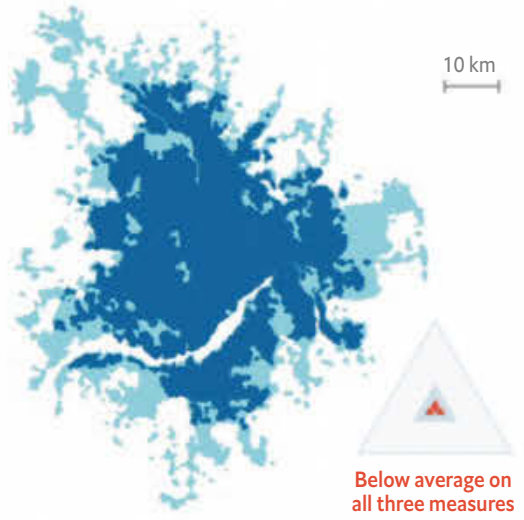
Population v urban density, 1990-2014

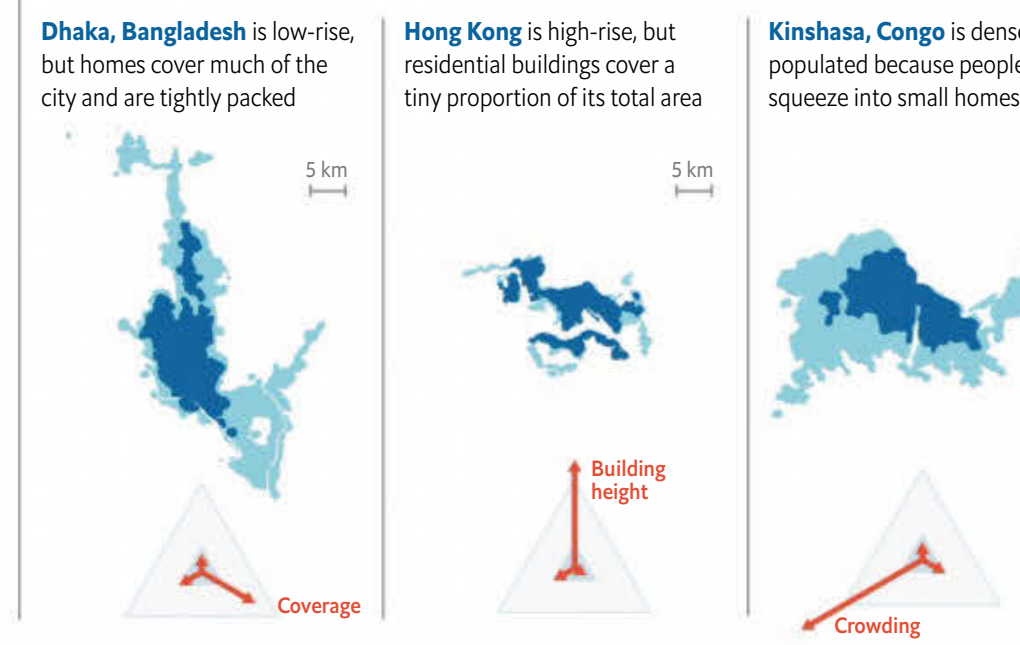




How different cities grow







Sources: Atlas of Urban Expansion; "Anatomy of density I: six measurable factors that together constitute urban density (forthcoming)" by Shlomo Angel and Patrick Lamson-Hall (2019)
*Bangkok, Bogotá, Cairo, Dhaka, Hong Kong, Kinshasa, Madrid, Minneapolis-St Paul, Wuhan

The paradox of density

Modern cities add people by spreading out more than by building up

LOOK UP, AND cities seem to be squeezing in more people. All of the world's 73 residential towers over 250 metres high were built after the year 2000. Another 64 are under construction. On 57th Street in New York, a building where *The Economist* used to have an office has been knocked down and replaced by an 82-storey glass splinter. When finished, it will be just 8 metres shorter than the Empire State Building.

But appearances can deceive. Shlomo Angel and researchers at the Urban Expansion Programme at New York University have used population data and satellite maps to show that most cities are becoming less densely populated. That is seldom because they are losing people (although New York is). Usually, it is because they grow faster in extent than in population. In 1990-2014, for example, Mexico City grew from 9.8m inhabitants to 17.8m, an 82% gain. During the same period, however, its built-up area expanded by 128%. This pattern is common. Sprawl has outpaced densification in 155 of the 200 cities tracked by the Urban Expansion Programme.

As people grow richer, they demand more space. Despite the efforts of many urban planners to stop them, they move from cramped inner cities to sparsely populated fringes (Mr Angel's team counts suburbs as parts of cities, regardless of where political boundaries lie). Moreover, because people are living longer and having fewer children, a growing proportion of households contain only one or two people.

Even the towers that spring up in city centres are not all that dense. There is a lot of air between them and a lot of elevator shafts inside them. High-rise cities like Seoul and Tokyo are less densely populated than Dhaka, the capital of Bangladesh, where most people live in walk-up apartment buildings or low-rise slums.

Cities can be dense in different ways. Hong Kong is a champion at stacking people on top of each other. But almost all of Hong Kong's built-up area is occupied by roads, pavements, offices, hotels, parks and mandatory spaces between buildings. The footprints of residential buildings account for less than 4% of it. In Dhaka, by contrast, homes cover nearly 20% of the land. In a poor city like Kinshasa, the capital of the Democratic Republic of Congo, population density comes mostly from squeezing more people into each room.

Many low-density cities wish to change. Minneapolis, for example, plans to alter housing codes to pack more people in. But density always comes with drawbacks. Towers cast shadows. Devoting more of the city to residential buildings means less space for other useful things—skimp on roads and you might end up with Dhaka's traffic jams. And nobody should envy the residents of Kinshasa. It is always worth asking the advocates of higher density: what kind, exactly, would you like? ■

Le Bulldozer

Jacques Chirac, twice president of France, died on September 26th, aged 86

FANS PRAISED his wit and tactile warmth (unlike most French politicians, he enjoyed hobnobbing with the voters, preferably over a beer or slice of *saucisson* in an unpretentious zinc-clad bar). Jacques Chirac was successful, too: mayor of Paris, twice prime minister and twice president, from 1995 to 2007. He may have bought a chateau in *la France profonde*, but it was a "little one", sniffed a snobbish predecessor, Valéry Giscard d'Estaing. For the French, his love of France and its people made him *sympa*. Yet cynicism was also his hallmark.

Abroad, he seemed to favour dictators over democrats. He told African strongmen not to worry about elections. He sold a nuclear reactor to Saddam Hussein's Iraq. A Russian-speaker (as a student, he translated Pushkin's "Eugene Onegin"), he counted Vladimir Putin as a personal friend and loathed the "badly brought up" east Europeans with their high-minded talk and Atlanticist outlook.

Where others had principles, he had prickles. A proud defender of the French language, he stormed out of a summit meeting when a French businessman dared to use English (he also said, only half-jokingly, that Britain's deplorable cuisine made it inherently untrustworthy). Despite a happy student summer at Harvard, he bridled at America's overweening ways, arguing for a "multi-polar world" as a way to counter its post-war dominance. Equally, he set up France 24 to rival the "Anglo-Saxon imperialism" of the BBC and CNN. He was contrarian too, resuming nuclear testing in the Pacific to international dismay.

At home, he was better at campaigning than governing. The candidate who had vowed to mend the "social fracture" bequeathed worse public finances and deeper social divisions. His disillusioned people lost faith both in the European ideal (voting against a draft constitution in 2005) and largely in their own governing class—not least, in him. He won a second presidential term by a fluke landslide: a first-round upset meant that his opponent was a far-right extremist, Jean-Marie Le Pen. His one-time reformist zeal mutated into a fear of upsetting the status quo. By the end of his ill-starred second term, Mr Chirac was the Fifth Republic's most unpopular president (though François Hollande later beat that dismal record).

It was easy to see why. The country was suffering from what he himself admitted was a "profound malaise", playing a humiliating second fiddle to a resurgent Germany in European politics. His nadir came when he lay low for a week while rioting engulfed the big cities in 2005. He was prone to petulance and rudeness in official meetings, bore mammoth grudges, and took some spectacularly bad gambles, notably calling a parliamentary election in 1997 which the opposition Socialists won easily.

Much of his energy was devoted to dodging impertinent questions, of which there were many. In his 18-year stint running Paris he bloated the city payroll (particularly with jobs for party workers). He threw huge, lavish parties for his supporters, while cultural notables and other influential friends gained chic municipal apartments. Hence the caustic slogan from the 2002 election, "Vote for the crook, not the fascist".

The stink rose with him. Even the most world-weary could not shrug away the stories of bundles of cash, foreign bank accounts and murky quid pro quos. One puzzle was Japan. A keen Japanophile, even to the point of wondering whether he might become a sumo wrestler (it had taught him all he needed to know about life, he said), Mr Chirac made dozens of private trips there. Nobody knew why. A son? A mistress? Perhaps both? Or several? Pre-#MeToo, the indiscretions were scandalous. His chauffeur wrote a scabrously detailed book about the president's energetic private life, for which he was dubbed: "trois minutes, douche comprise" (three minutes, shower included).

He was shamelessly unbothered about it. A favourite toast was "Allons boire à nos femmes, à nos chevaux et à ceux qui les montent" ("Let us drink to our women, our horses and those who mount them"). For most of his misdeeds, loyal lieutenants took the rap. Prosecutors landed only one belated blow: in 2011 he was convicted of misconduct in office, with a suspended two-year sentence (he declined to give evidence, pleading ill health).

Yet no sooner had he left power than the French began to miss him. He had aroused American fury by threatening to use the French veto in the UN Security Council to block a resolution authorising the use of force in Iraq. That split the EU and damaged the West. But it looked brave and prescient later. So did his appeal against climate change—"our house is burning and we are looking elsewhere"—in 2002. A product of France's elite schools, including ENA, he was better linked in the public mind with his love of rural Corrèze, where his grandfathers came from: its *paysans*, its cattle, its cheeses. Compared with his brash successor, Nicolas Sarkozy, he seemed a model of understatement, one of the last French presidents who seemed to embody the nation. By 2010 he was France's most admired political figure.

A la recherche du temps perdu

His ineffectual latter years belied formidable willpower and political talent, which earned him the nickname, as Prime Minister Georges Pompidou's troubleshooter in the 1960s, of "the bulldozer". He could charm, too. In 1968 he negotiated a truce with the leaders of protests that had taken France to the brink of chaos. Unlike previous generations of public figures, he was personally untouched by the controversies of the second world war. Perhaps thanks to that, he lanced a historical boil. In a speech in 1995, just two months after taking office, he ended decades of blame-dodging by accepting that France—not just the Vichy regime—bore moral responsibility for the Nazi deportation of 76,000 Jews, most of whom perished. In remarks that seem unremarkable now, he said the "homeland of the Enlightenment…committed the irreparable". He left France with many burdens. But not that one. ■

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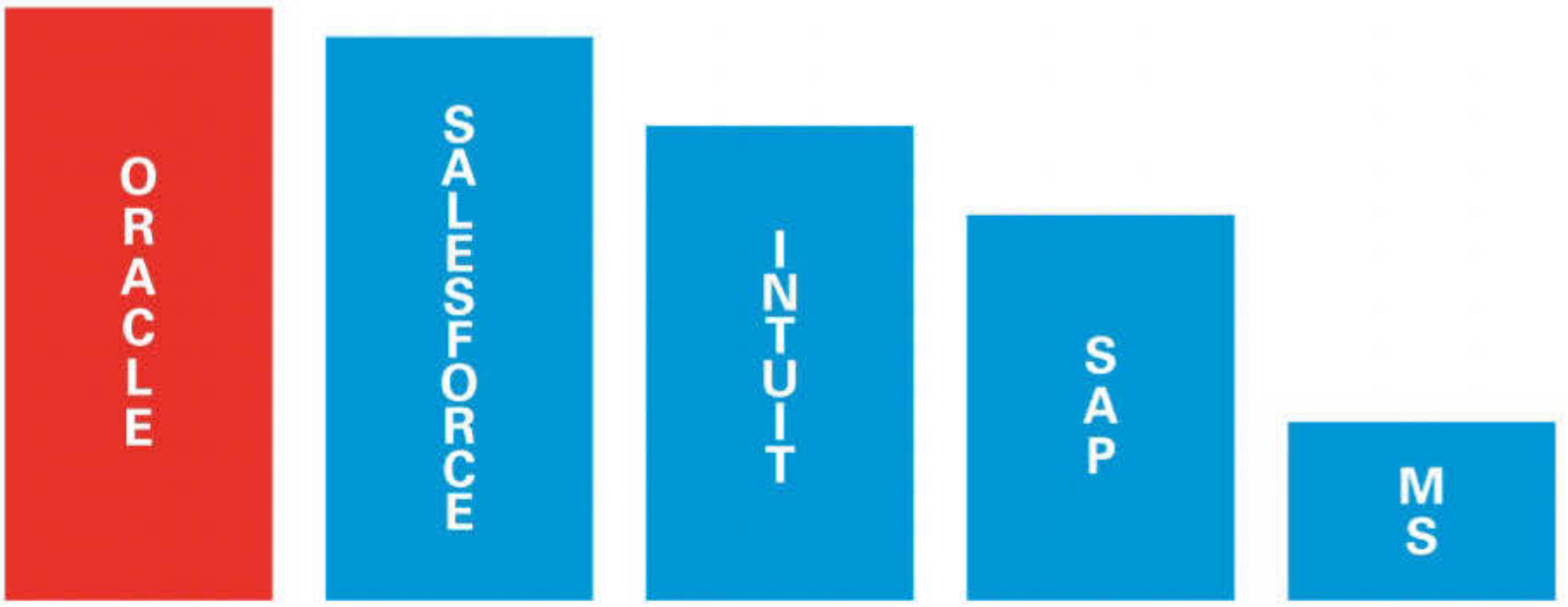

IDC Worldwide Semiannual Software Tracker, April 2019, results for CY2018. North America is the USA and Canada. Enterprise Applications refer to the IDC markets CRM, Engineering, Enterprise Resource Management (including HCM, Financial, Enterprise Performance Management, Payroll, Procurement, Order Management, PPM, EAM), SCM, and Production and Operations Applications.

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