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FT Weekend Magazine

POWER GAMES

How the race for renewables is reshaping global politics
By Leslie Hook and Henry Sanderson

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RAMELL ROSS

‘To be black is the greatest fiction of my life’

Photographer RaMell Ross, p30

‘The name of this classic dim sum, radish cake, hardly does justice to its deliciousness’

Fuchsia Dunlop, p38

‘The one thing I’ve learnt through rugby is you’re not going to please everybody’

Maro Itoje, p24

FT Weekend Magazine

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5 Simon Kuper
How to save the world from long Covid

6 Inventory
Gavin Francis, doctor and travel writer

8 Robert Shrimsley
How Swampy puts in the parental spadework

8 Letters

10 Tech World
Japan’s love of robots is paying off

12 Undercover Economist
Investing in data is never money wasted

---

14 The new green order
Dozens of the world’s biggest economies are shifting from oil and gas to green energy as they try to reach net-zero emissions by 2050. But this transition will affect more than how we get our power: it will reshape global politics. By *Leslie Hook* and *Henry Sanderson*

---

24 Maro Itoje
The hard-tackling England rugby star talks to *Murad Ahmed* about activist athletes, levelling the educational playing field and how his sport has embraced positive change

---

30 Days down South
Photographs made by Oscar-nominated film-maker *RaMell Ross* capture the rhythms of African-American life in Hale County, Alabama

---

36 Rowley Leigh
Grilled langoustines and bisque

38 Fuchsia Dunlop
Chinese radish cake to celebrate the Year of the Ox

41 Fantasy Dinner
Rana Foroohar unwinds beside the Aegean sea with Orhan Pamuk and Baris Manco

43 Jancis Robinson
Which whites to drink now

---

45 Games

46 Gillian Tett
The Robinhood drama teaches us to open our eyes

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SIMON KUPER

OPENING SHOT

How to save the world from long Covid

When I listen to scientists talk about where we might be a year from now, two main scenarios emerge. The first one is good: Covid-19 keeps circulating but loses its sting. Most people in rich countries, and the most vulnerable in developing countries, get vaccinated in 2021. The vaccines prevent disease caused by all strains. Covid-19 weakens: once it finds potential victims protected either by vaccination or past infection, it becomes at worst a nasty cold. "The most likely thing is that it will mutate into a more benevolent form. That may solve the problem," says Anthony Costello, a former director at the World Health Organization.

But there's another scenario, less likely yet so momentous that we need to think it through: the world gets "long Covid". Vaccine-resistant mutations cause years of mass death, repeated lockdowns, economic disaster and political dysfunction. What determines which one comes true?

Precedent favours the benign outcome. "Four human coronaviruses... circulate endemically around the globe; they cause only mild symptoms," write Jennie Lavine of Emory University and others in the journal Science. These viruses may have once been deadly too, until humans acquired protective immunity through infection in infancy. When people were reinfected as adults, their immune systems knew how to fight back.

Covid-19 may make that same journey much faster, as vaccines hasten herd immunity. Even as mutations emerge, previous vaccines and infections should confer enough immunity to protect us at least from severe disease; some existing vaccines seem to be handling the British and South African mutations. In this benign scenario, poorer countries can wait for vaccines, as their young populations aren't very vulnerable to Covid-19. (More than half of African people alive today were born this century.)

Yet the malign scenario remains plausible, says Costello. New variants have appeared fast. Philip Krause, chair of a WHO working group on Covid-19 vaccines, told Science: "If it is possible for the virus to evolve into a vaccine-resistant phenotype, this may happen sooner than we like." It may be happening now in the Brazilian city of Manaús: devastated by the first wave of Covid-19, it's being devastated again, possibly because victims of the first wave aren't immune to the new strain.

Vaccine-makers could probably rejig them to combat new strains but it might take months. Then countries might struggle to summon millions of recently vaccinated people back for more jabs. And new vaccines might be only 50 per cent effective, like the flu vaccine. We also don't know how long vaccines will provide immunity against Covid-19. Will people return for booster shots?

Worse, highly infectious mutations have raised a country's bar for achieving herd immunity. Getting there might now require vaccinating 78 to 95 per cent of people aged over 12, warns the consultancy McKinsey. Some will refuse vaccination. Meanwhile Covid-19 keeps circulating and mutating, especially in poor countries. By mid-January, 29 low-income countries combined had vaccinated just 55 people, all in Guinea, said the WHO.

Ian Goldin, professor of globalisation and development at Oxford, sees a more likely scenario than global long Covid: a new pandemic. He notes the growing frequency of pandemics this century, as habitats of animals and humans become compressed, and global travel increases transmission.

Imagine a pandemic that lasts years, killing millions. Whole sectors – tourism, restaurants, the arts, aviation, conferencing – could collapse.

> 'We need to spend whatever it takes on wartime-style mobilisation to make, distribute and inject vaccines'

So might democracies, as isolated people mainline conspiracy theories in their bedrooms. Bankrupt states would helplessly print money. The jobless young might grow up unequipped to deal with people offscreen. Many would rebel against lockdowns, fighting the forces of order. The mental-health pandemic would rage beyond control. A few countries – New Zealand, Australia, Taiwan, Vietnam – would become oases besieged by would-be immigrants from everywhere else. Between deadly waves, people would seek relief in the wildest experiences.

To avoid global long Covid, states need to hurry. The quicker humanity achieves herd immunity, the less time the virus has to mutate beyond control. We need to spend whatever it takes on wartime-style mobilisation to make, distribute and inject vaccines. Costello calls for a "Home Guard" of contact tracers and vaccine promoters.

We also need to get vaccines to poor countries fast. The Covax facility – meant to ensure fair global distribution of vaccines – is fighting hard to reach 27 per cent of people in lower-income countries this year, in the face of underfunding and hogging of supplies by rich countries. Covax's funding target for 2021 is $6.8bn. Compare that with the cost of a week's lockdown in a rich country. In total, says Goldin, "Rich countries have found $12 trillion for themselves, but only $100 billion has been pledged to developing countries."

"No one is safe until everyone is safe," Tedros Adhanom Ghebreyesus, the WHO's director-general, has warned. People in rich countries tend to dismiss such pieties. We've learnt from experience that we can be safe even while pandemics decimate the world's poor. For once, this may no longer be true. FT

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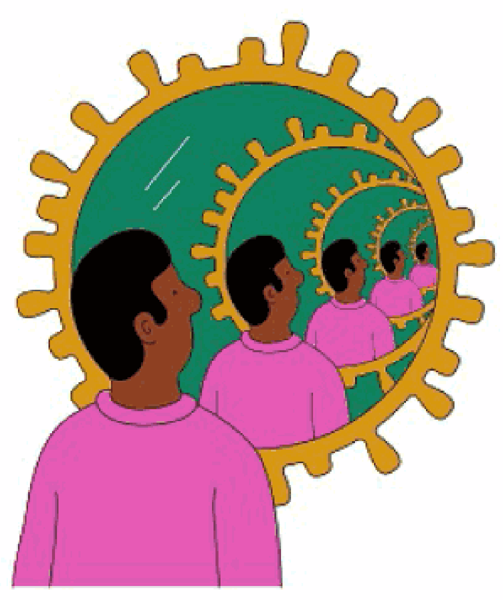


ILLUSTRATION BY HARRY HAYSOM

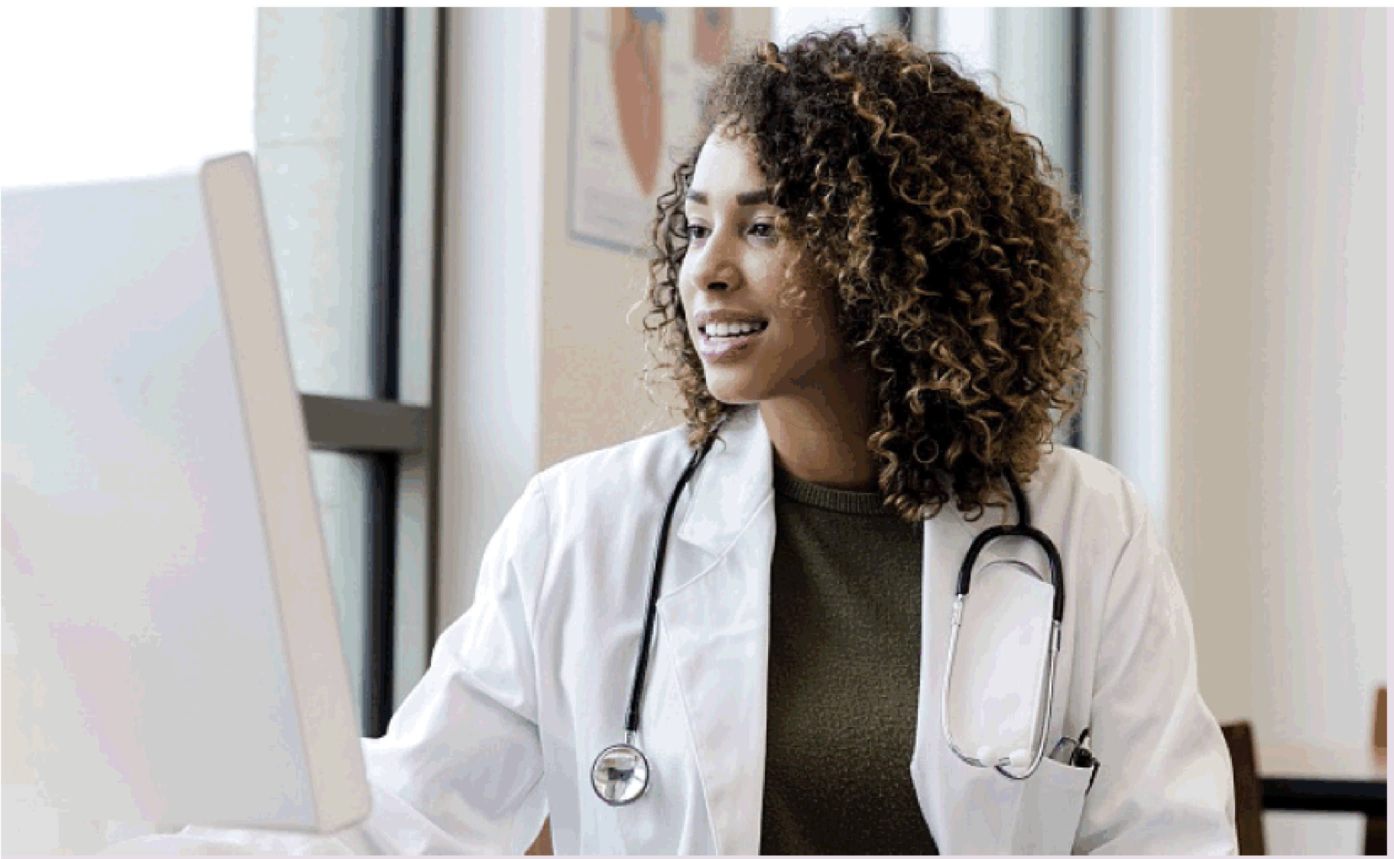
INVENTORY GAVIN FRANCIS
DOCTOR AND TRAVEL WRITER

'Every action has consequences, ripple effects that change the world and lives of others'

Gavin Francis, 45, graduated in medicine from Edinburgh in 1999, then spent 10 years travelling. His book *Empire Antarctica: Ice, Silence & Emperor Penguins* was shortlisted for the Costa and Ondaatje prizes; *Intensive Care*, published in January, is his account of working as a GP during the pandemic. He practises as a doctor in Edinburgh.

What was your childhood or earliest ambition?
To get a trade, and see the world.
Private school or state school? University or straight into work?
State school – thank goodness. Then straight into work while at university studying medicine, first as a cinema usher, then a nursing auxiliary, then an anatomy demonstrator, then a barman – the best training in learning how to be a listening doctor, and appreciating just how much plurality there is in the ways of living your life.
Who was or still is your mentor?
I've never had one. But role models? I could suggest roomfuls, and more appear every day.
How physically fit are you?
Moderately, in that I bike a hundred miles a week between home and the clinic, but my resting pulse is over 60 far more often than I'd like.
Ambition or talent: which matters more to success?
Confidence, enthusiasm, connections and luck seem more important than either in most areas of human endeavour.
How politically committed are you?
To one party, not at all. To the idea that politics can transform human lives for the better, very much.
What would you like to own that you don't currently possess?
A machine that sucks carbon out of the atmosphere so fast that atmospheric CO_2 will promptly return to pre-industrial levels. From its twin exhausts will drip an elixir that propagates human happiness and the serum for a Covid-19 vaccine. I promise to make the plans freely available.
What's your biggest extravagance?
Owning my own home.
In what place are you happiest?
If not home, then the Isle of May, an island in the Firth of Forth, home to a handful of ornithologists, a colony of seals and hundreds of thousands of seabirds. Isolation can be very therapeutic, but I also love the city for its connections and possibilities.
What ambitions do you still have?
To see a think-piece for the FT in print. And to work out my own salvation with diligence.
What drives you on?
Curiosity, enthusiasm, awareness of my mortality, love of my kids.
What is the greatest achievement of your life so far?
My marriage.
What do you find most irritating in other people?
Bellicosity, arrogance, faux humility, using the last of the milk. I'm aware I'm not immune to these traits myself.
If your 20-year-old self could see you now, what would he think?
He might pause, shake his head, then say: "Well, at least you've still got your hair." But I could tell him a thing or two. The juicy stuff that I really need to know is what my 70-year-old self will wish he could have said to my 45-year-old self.
Which object that you've lost do you wish you still had?
I lost a very fine hiking fleece on a Faroese mountainside, towards the end of a long and difficult trek. I've never found one that fitted or kept me warm quite so well, and suffered a few cold nights before I got back to Tórshavn. Also, the motorbike my wife and I drove from Orkney to New Zealand was stolen and torched not long after we got back home – I wouldn't mind still having that, for sentimental reasons.
What is the greatest challenge of our time?
To find a way of creating wealth and using resources sustainably, without poisoning all of our literal and metaphorical wells.
Do you believe in an afterlife?
Absolutely – in that every action has consequences, ripple effects that change the world and the lives of others, in ever-expanding circles of influence, and will go on doing so long after we're gone. In my clinical work, I see daily proof of this – it's a great consolation.
If you had to rate your satisfaction with your life so far, out of 10, what would you score?
I'll give myself a point for every decade I've lived so far to the full: four out of 10. FT

Interview by Hester Lacey. "Island Dreams: Mapping an Obsession" by Gavin Francis is published by Canongate



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- French and Italian epidemiologists and health experts are using Facebook technology to anticipate the viral spread of COVID-19 and identify the most at-risk communities.
- We've worked with governments across Europe to build WhatsApp chatbots that answer questions about COVID-19 quickly and accurately.

Learn more about how we're collaborating to keep communities safe and informed at **about.fb.com/europe**

ROBERT SHRIMSLEY
THE NATIONAL CONVERSATION

How Swampy puts in the parental spadework

It must be a source of pride for any parent to see their children wanting to follow in their footsteps. Well, perhaps it depends a little on the career. Stepping up to run a multibillion-dollar private corporation may signify fewer pure emotions than, say, following your mum or dad into teaching.

So it must have been heartwarming for the legendary environmental campaigner known as Swampy when his son Rory, 16, followed him into the family business, joining him underground as part of a protest designed to delay the new HS2 rail project. In an interesting spin on home-schooling, it turns out that Swampy (now just known as Dan) has taught his son GCSE tunnelling and that, at the time of writing, the two of them are unsafely ensconced in some burrow beneath Euston station.

The protest is not only a costly delay for developers but also a flagrant breach of social-distancing guidelines. Ministers have however denied that, once cleared, the tunnels could be redeployed as one of Priti Patel's reception centres for asylum seekers. Apparently, the home secretary would never sanction anything as desirable as a central London location.

I take my hat off to the Swampster. The rules of teenage rebellion would normally require Rory to become a property developer. He would start small, concreting an area of green belt, before going global with investments in the deforestation of the Amazon.

So it says something for Swampy that his son admires him sufficiently to follow him into the tunnels. Because once the glamour of being wedged together in a narrow hole underground wears off, the fringe benefits are pretty limited. There is no defined career path, private medical insurance or even a staff canteen. I have to admit to being impressed, possibly a bit jealous. I couldn't even get the boy to come with me to QPR.

ILLUSTRATION BY LUCAS VARELA

Bring Your Child To Work Day is one thing but, as a first-generation tunneller, Swampy should want more for his spawn. "Listen, son, this is not the life for you. I had no choice, I had to dig, but you can do anything. You could superglue your hands to trains or learn to dance on stilts in street protests. You could work for Ed Miliband, be an environmental lawyer or an ethical investor, I wouldn't think less of you."

It must also have been a hard call for Swampy. Rory doesn't even have a cool pseudonym, all the good ones having been grabbed by grime stars. But more importantly, it cannot be entirely safe. He clearly felt the boy may come to less harm with his more experienced dad than striking out on his own with less seasoned mole-men. I hope he's right.

Many will question a father who encourages such futile and dangerous activity. Had the cause been something other than the environment, social services might have been round to inquire why young Rory was spending his days in a damp and dangerous tunnel. It is true that many others have brought their children on political protests. During the Brexit battles, the weekend streets were filled with Remainers' offspring being dragged along to rallies – although at least they faced nothing riskier than a Starbucks latte.

But no one sees your flaws like a teenager, so his son's choices are also a compliment to a patently sincere, decent man who, with his partner, lives his beliefs, raising a family in a turf-roofed, wooden yurt in a Welsh eco-village.

My real complaint is that there are better ways to harness Rory's inherited eco-enthusiasm than pointlessly blocking public transport projects. While Swampy's past protests raised attention and costs, they were a failure. His greatest hits – the Newbury bypass, the A30 and Manchester airport's second runway – have one common outcome: they all got built. It is one thing to inspire your kids, it is another to teach them to respect futility.

If a man is measured by the respect of his children, then Swampy has got something right. Even so, they might thank him for lifting their gaze at least a little from his own tunnel vision.

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@robertshrimsley

Reply

Re: "From forgeries to Covid-denial, Tim Harford on how we fool ourselves" (Jan 30/31).
I suspect we have other troublesome weaknesses in our decision-making logic as well. For example, feeling comfortable as part of a group. If those around us tend to subscribe to a particular hypothesis, whatever the supporting evidence, it's far more comforting to fall in with the prevailing idea than to risk being an outsider.
Steve Wise *via FT.com*

@weathertoy Jan 30
A great read from @TimHarford – helps explain why we rarely change our minds when faced with contradictory evidence. A valuable read for Remainers/Leavers alike

Re: "Tales from a traitor – an encounter with cold war spy George Blake" (Jan 30/31).We read about people that have done bad things. There is a tendency to think this is a result of some hidden malevolence. It often isn't. We wade through the still lake of life and don't always see the waves we create.
Nuuk *via FT.com*

Re: "Ella Risbridger, the 'new Nigella', on cooking as a lifeline" (Jan 30/31). *Midnight Chicken* is written with a compelling urgency. It's unflinching, tragic and highly moving. The recipes work, and work for people who cook to live (literally for the author), not live to cook. Read it. Don't expect it to be "like" anything or anyone else.
Verity *via FT.com*

I enjoyed your Dave Grohl Inventory (Jan 30/31). I met Dave just before the Led Zeppelin reunion at the O2 in 2007. Exactly the way he comes across in this interview is the way he is in real life – a thoroughly decent human being. We parted with a huge bear hug and then he let out a primal roar with the words, "We're gonna see Zeppelin, man, and it's gonna rock!"
Julian Kozerski *via FT.com*

To contribute
Please email magazineletters@ft.com. Include a daytime telephone number and full address (not for publication). Letters may be edited.

Quiz answers The link was adjectives related to cleverness (or lack of) 1. *Ring of Bright Water* 2. Smartphone 3. Robert Wise 4. Quicklime 5. "It's the economy, stupid" 6. Intelligent design 7. Daft Punk (feat. Pharrell Williams) 8. Simple Simon (to the pie man) 9. Pat Sharp 10. *The Dumb Waiter* **Picture quiz** DH Lawrence + Samuel L Jackson = DHL

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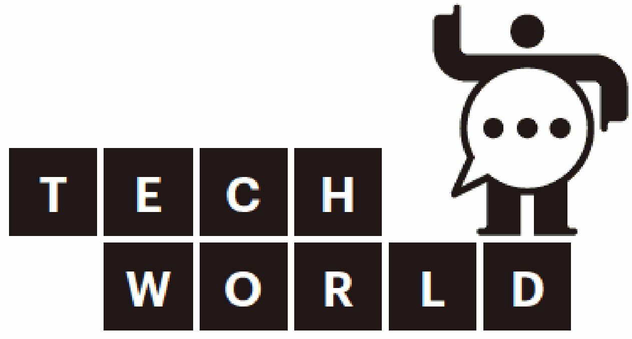

BY LEO LEWIS IN TOKYO

Japan's love of robots is paying off

Robots are by and large given an easy ride in Japan. Most people like them, an esteemed Tokyo University robotics professor once told me, and the rest don't actively dislike them.

And as Japan's population greys and shrinks, that robophilia has come in handy. Increasingly, industry, academia and the government pitch advances in robotics as a panacea for the challenges that come with being the world's fastest-ageing society.

Japan has a population that has contracted every year since 2010 and pre-pandemic projections suggest that, without significant immigration, its workforce will be 20 per cent smaller in 2040 than it was in 2017. Machines are not stealing Japanese jobs and destroying livelihoods, runs the argument, if there are ever fewer humans in this labour market.

This line played well enough until Covid-19 – a calamity that has battered the economy and begun to rekindle employment anxiety. Before the crisis, there were 1.49 jobs per applicant, which meant robots might be needed to fill the gap; in December, that fell to a rather less comfortable 1.06 jobs. This has not silenced the robot-makers' cherished appeal to demographics but it has to some extent lowered the volume.

It has also cast a powerful spotlight on a paper published by the US-based National Bureau of Economic Research (NBER) last month on the labour-market impact of robots in Japan's nursing homes. The study is groundbreaking in several ways but perhaps most clearly for setting its sights not on manufacturing but on the services sector, where robots are only just beginning to make their mark. The distinction, say the authors, is vital given the diversity of roles they could play there and how rapidly they may be adopted where labour markets are tight.

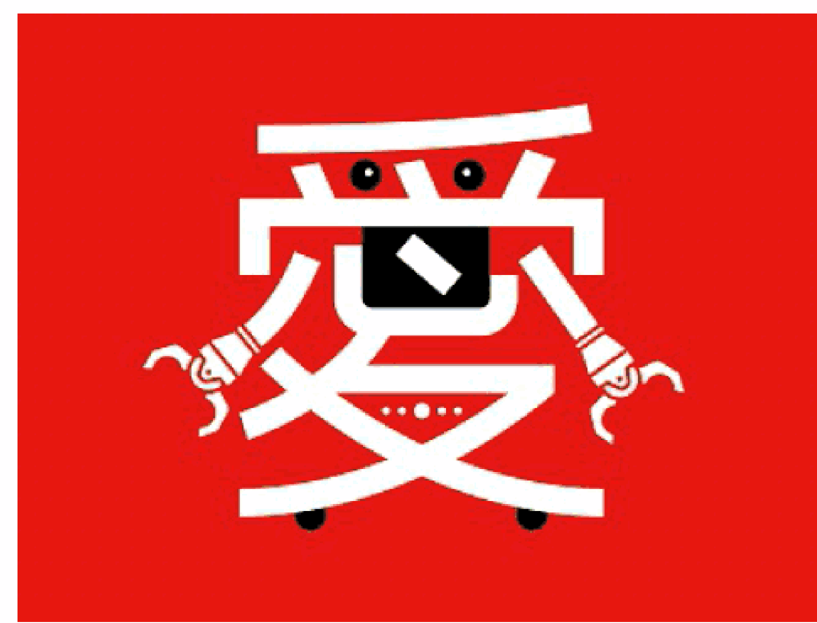

ILLUSTRATION BY PÂTÉ

The choice of Japanese nursing homes (the paper is based on a survey of about 860 such facilities) is key. To a striking degree, they have been early and government-backed hotbeds of experimentation with new types of robot, from health monitors to machines that help to lift people on to their beds.

Many of these are likely to become standard around the world. As more countries face ageing populations, Japan's case will help shed light on how demographics interact with new automation technologies, says the paper.

> 'Japan has reached sooner and more clear-headedly than elsewhere the conclusion that the future narrative of robots is more about demographics than technology'

愛 Love in Japanese is represented by this kanji symbol

But the most arresting conclusion offers an offset to the more dystopian predictions of robot job theft: robot adoption, the NBER survey found, actually increases the number of (non-regular) care workers and nurses, promotes more flexible work and reduces the likelihood of nursing homes reporting difficulty in staff retention. The main drawback, it notes, is that robot adoption tends to reduce the monthly wages of regular nurses.

This will, of course, play well in Japan. Even without this research, the sentiment that robots are fascinating, benign and even cute (as opposed to job-thieving, sinister and soulless) feels well embedded. Under pandemic conditions, for example, some shops have repurposed their in-store greeter-bots to bleat nagging reminders about social distance: the robots expect human obedience, and receive it.

But the national robophilia goes deeper than storefronts. When robots work brilliantly, as great armies of no-nonsense automatons already do in manufacturing and logistics, Japan welcomes them as guarantors of efficiency and productivity. When they are given humanoid features and barely manage to fold a shirt, flip a pancake or play ping-pong, they are forgiven – their whirring endeavours praised as delicious amuse-bouches for the techno-banquet of our future.

Sitting behind this benevolence is the conclusion that Japan has arguably reached sooner and more clear-headedly than elsewhere: that the present and future narrative of robots is, fundamentally, more about demographics than technology. When the Japanese company Alsok recently updated the Reborg-Z security patrol robot, it quite naturally cited labour-force shrinkage as a justification for the machine's existence. Japan's National Agriculture and Food Research Organization did the same with a robot that picks fruit.

The great value of the NBER paper is that – however limited its scope and however much it is supported by future research – the foundation is now laid for an empirical debate on a subject that will be deluged with human emotion as robots continue their march into the services sector. FT

Leo Lewis is the FT's Tokyo correspondent

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TIM HARFORD

THE UNDERCOVER ECONOMIST

Investing in data is never money wasted

In 1935, officials in the British Air Ministry were trying to figure out whether it was possible to shoot down enemy aircraft with a death ray. Reader, they did not succeed.

Fortunately, the effort spawned something much more useful. Robert Watson-Watt and Arnold "Skip" Wilkins of the Radio Research Station suggested a better use for radio beams: spotting incoming bombers when the beams reflected off them.

The resulting radar system was indispensable in fending off the Luftwaffe five years later. When a threat approaches, it helps to be able to see exactly where it is. The pandemic has taught us the same lesson, the hard way. Weaknesses in our information systems have been telling. The tragic failure to produce enough accurate Covid-19 tests swiftly – particularly shocking in the US – is well known.

Subtler failures have received too little attention. Consider this paragraph about social care, in a new report from UK fact checkers Full Fact: "Basic information, such as the number of people receiving care in each area, was not known to central government departments, and local authorities only knew about those people whose care they paid for." Patchy data cannot have made protecting care homes any easier – nor, more recently, vaccinating them.

Alexis Madrigal, co-founder of the Covid Tracking Project in the US, attests that the UK is not alone. At the beginning of the crisis, he says, "We didn't even know how many hospitals there were in the United States."

That may seem surprising. Yet useful statistics do not simply arrange themselves neatly in some spreadsheet somewhere, waiting to be downloaded. They must be collected: someone must set the standards, link up the systems, hire the personnel.

If not, there are gaps. Before the pandemic, Caroline Criado Perez's book *Invisible Women* highlighted that many datasets fail to distinguish between men and women. Yet in the early days of Covid-19 neither the UK nor the US disaggregated cases by gender, although we now know Covid-19 is more dangerous for men.

What about data on ethnicity? "Incredibly uneven," says Madrigal. It is not just a matter of clinical care or vulnerability, important though these are. Are police using their new powers – for example to fine or arrest those in breach of social-distancing rules – in an even-handed way with regard to race? We don't have the data to know.

Food banks have been a vital resource for some households during the crisis but nobody really knows for how many. In the UK, no systematic data exist.

Then there are basic gaps in information management systems. Nobody is likely to forget the moment last autumn when Public Health England mislaid nearly 16,000 positive cases, reportedly because an Excel spreadsheet ran out of rows. We don't know exactly what went wrong because PHE has not fully explained it. That does not bode well for preventing a repeat.

Why does this matter? When our information systems fail, we are flying blind. There are the basics: we cannot find cases, we cannot run an efficient test-and-trace programme, we cannot easily see which hospitals are most in need of help. There are the big strategic calls: when to impose or lift restrictions based on prevalence. And there are the long-term issues: how can we target assistance to help rebuild the economy? Which children have fallen behind their peers? How is the criminal justice system bearing up? We know less than we should.

Yet there have been impressive successes. "The UK statistical system responded," says Rebecca Hill, lead author of the Full Fact report. "It is a real testament to their ability to innovate, contrary to their reputation."

The Office for National Statistics, for example, rapidly set up a large representative survey of the prevalence of infection in the population. Economists have quickly looked to unconventional sources, such as mobility data from Google, to understand the shape of the crisis. Data on US hospitals were successfully rebuilt from the ground up over the summer. And non-governmental operations ranging from Our World in Data to The Covid Tracking Project to Johns Hopkins University have performed heroic efforts in assembling clear, usable information from a messy patchwork of primary sources.

We take good data for granted until something goes wrong – at which point it is too late. Instead we should make it a priority. For example, UK border infrastructure is being redesigned for a post-Brexit world. Decisions made now about how the IT systems work will lock in knowledge, or ignorance, for a generation. More broadly, Full Fact argues that statisticians should be doing regular horizon scanning – teaming up with experts from all fields to ask: what gaps exist now? What data should we be gathering with the future in mind?

> 'Useful statistics do not simply arrange themselves neatly in a spreadsheet somewhere, waiting to be downloaded'

Robust information systems are not free. They require time, attention and money – but they can pay for themselves over and over again in better decisions taken, and better democratic accountability after the fact.

When the British showed the Americans their cutting-edge radar equipment in 1940, the US response was to pour resources into developing every possible application. Ten Nobel laureates emerged from the project – as did the radar technologies that did so much to win the war.

It isn't cheap to build the systems that show you what's coming at you. But failing to build them? That's far more expensive. FT

Tim Harford's new book is "How to Make the World Add Up"

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THE NEW GREEN ORDER

Dozens of the world's biggest economies are shifting from oil and gas to green energy as they try to reach net-zero emissions by 2050. But this transition will affect more than how we get our power: it will reshape global politics. *Leslie Hook* and *Henry Sanderson* report. Illustration by *David de las Heras*

Construction of the North Sea Link, an interconnector between Norway and the UK, included building a custom barge

‘We just can’t keep doing things the way we have, otherwise our planet is going to be toast’

ANDREW FORREST,
CHAIRMAN OF FORTESCUE METALS GROUP

Williamsdale solar farm in Canberra, Australia

hile the world was locked down by coronavirus last year, Andrew “Twiggy” Forrest, chairman of Fortescue Metals Group, was on the move. The billionaire mining magnate and his entourage toured 47 countries over five months, managing to convince some of them to open their borders to the delegation despite the pandemic.

But Forrest wasn’t searching for mineral deposits – he was on the hunt for clean energy. From Kyrgyzstan to Korea to Bhutan, the group was scouting out the best sites for hydropower and geothermal energy. The advantage of travelling during a pandemic, Forrest explains, is that government officials have much more free time. (He did, however, contract Covid-19 en route, necessitating an emergency medical stop in Switzerland.)

When Forrest returned, fully recovered, to Australia, he declared Fortescue, a miner of iron ore and coking coal, was going all-in on green hydrogen. He believes the market could be worth as much as $12tn by 2050. “The journey to replace fossil fuels with green energy has been moving at glacial speed for decades – but is now violently on the move,” he said in a TV lecture series.

Over the phone, he is even blunter. “You’ll see change everywhere… In 15 years’ time, the world energy scene will look nothing like what it does now,” he says. “Any country which does not take green energy very seriously, but clings to polluting energy, will eventually get left behind.”

While many are cynical about the environmental conversion of a man who has made a fortune selling iron ore, Forrest is part of a trend. As climate concerns increase, the world is getting behind the energy transition – even in the most unlikely quarters. “We just can’t keep doing things the way we have always done them, otherwise our planet is going to be toast,” he says. He admits that his record in this respect is not exactly blameless: Fortescue’s carbon footprint is two million tonnes of CO_2 per year, about as much as a small island state.

Australia itself has long been a climate laggard and a major coal exporter, but as China and other big customers plan to cut their emissions, taking their business with them, that may be changing. Dozens of the world’s biggest economies have adopted targets for net-zero emissions of greenhouse gases by 2050. And 189 countries have joined the 2015 Paris climate accord, which aims to limit global warming to well below 2C. In a race to curb climate change, countries are rushing to cut fossil fuels, boost clean energy – and transform their economies in the process.

But as the energy system changes, so will energy politics. For most of the past century, geopolitical power was intimately connected to fossil fuels. The fear of an oil embargo or a gas shortage was enough to forge alliances or start wars, and access to oil deposits conferred great wealth. In the world of clean energy, a new set of winners and losers will emerge. Some see it as a clean energy “space race”. Countries or regions that master clean technology, export green energy or import less fossil fuel stand to gain from the new system, while those that rely on exporting fossil fuels – such as the Middle East or Russia – could see their power decline.

Olafur Ragnar Grimsson, the former president of Iceland and chair of the Global Commission on the Geopolitics of Energy Transformation, says that the clean energy transition will birth a new type of politics. The shift is happening “faster, and in a more comprehensive way, than anyone expected”, he says. “As fossil fuels gradually go out of the energy system… the old geopolitical model of power centres that dominate relations between states also goes out the window. Gradually the power of those

states that were big players in the world of the fossil-fuel economies, or big corporates like the oil companies, will fritter away."

In Australia, a growing lobby is pushing for the country to become a "renewable superpower" thanks to its abundant wind and solar resources. Forrest is an investor in a project called the Sun Cable, which hopes to lay an electric cable all the way to Singapore. He believes the country's future is at stake. "The impact on the Australian economy, if we get this right, could be nothing short of nation-building," he says.

New power structures will emerge along with the transition. "The [old] levers of control, a lot of them will dissipate and simply cease to exist," says Thijs Van de Graaf, associate professor at Ghent University and lead author of an influential 2019 report from the International Renewable Energy Agency (Irena). "This is a completely new constellation, so we cannot think just like the old days," he adds. "There is a new class of energy exporters that may emerge on the global scene."

FROM CARBON TO ELECTRONS

When it comes to exporting clean electricity, countries such as Norway, Bhutan and France are already far ahead. In a few months' time, Norway and the UK will finish constructing the world's longest subsea electricity cable, the North Sea Link. The Norwegian side of the cable runs through snow-capped mountains and a deep lake, then travels underwater for more than 720km, across the North Sea, until it reaches the UK. The highly specialised cable is also manufactured in Norway, in a factory located next to a fjord, so that it can be easily loaded on to ships and taken out to sea for installation. The North Sea Link will be Norway's seventh subsea interconnector, allowing the country to export its abundant hydropower to its neighbours.

At its most basic, the new energy transition is a shift from oil and gas to electricity, says Auke Lont, chief executive of Statnett, Norway's state grid company. "Electrification will be the answer to climate change, to put it at a very general level," he explains. "The reason is that we now have access to very cheap electricity, and we see that cheap electricity can serve our energy needs in the future." Whether in trucks or cars or home heating, the use of electricity is already surging. It provides about 20 per cent of energy today, and will have to rise to 50 per cent by 2050, if countries are to meet their climate commitments, according to the International Renewable Energy Agency.

"Our world order has been based on oil," says Lont. That is changing: "As we go from carbon [fossil fuels] to electrons, we will have a world order where the electron is more important than the carbon."

The question of which countries will end up ahead is still subject to debate. But there is broad consensus that change is happening. Pascal Lamy, former head of the World Trade Organization, compares the global shift from one energy system to another with the advent of the industrial revolution. "There is an inflection taking place," he says, from behind the frames of his red glasses in a video interview. "If you compare the world today to the world 18 months ago, the big difference is that... only 25 per cent of the world had a decarbonisation horizon. Today, 75 per cent of the world economy has a decarbonisation horizon. This is a major shift."

The coronavirus pandemic has accelerated the trend. Last year, new renewable power hit a record 200 gigawatts, while the rest of the energy sector shrank. Amid the recession triggered by the pandemic, demand for oil fell 8.8 per cent and demand for coal 5 per cent, compared to the year before, according to the International Energy Agency, the Paris-based oil watchdog. Clean energy was the only part of the energy sector that had growth in 2020. The pace and scale of the transition to renewables have already shot past the most optimistic projections.

The IEA expects that renewables will soon pass coal as the biggest source of power generation. "We can say that renewables were immune to Covid. Both solar and wind saw significant increases [last year]," Fatih Birol, head of the IEA, said at a press conference in January. "Our numbers show that renewables are set to become the largest source of generation by 2025, overtaking coal – and ending the fossil-fuel domination of the last decades."

That's a grim thought for regions such as the Middle East that rely on oil and gas exports for revenue. Countries that have the most to lose are already pushing back. At the annual UN climate talks, Saudi Arabia and Russia routinely play a disruptive role. (Saudi Arabia wants to have it both ways: a big plan to expand its solar power while continuing to produce oil and gas.) Meanwhile, Poland, a coal producer, dragged its feet for months before reluctantly agreeing to the EU's net-zero emissions target. In a world disrupted by coronavirus, fossil-fuel-producing countries fear further job losses.

A fleet of electric vehicles at a Chinese car plant

> **'As fossil fuels go, the old geopolitical model of power [between states] also goes out the window'**
>
> OLAFUR RAGNAR GRIMSSON, FORMER PRESIDENT OF ICELAND

The transition will also be painful for energy companies that produce oil and gas. But even they acknowledge that it is picking up pace. In a statement that would have once been unthinkable, BP recently said peak oil may have already occurred in 2019.

Ben van Beurden, Shell's chief executive, says electricity will become a mainstay of its business. "The fundamentals of how we win in power are going to be really different from how you win in resources extraction," he says. "In oil and gas, you need an asset base. It is about having the best rocks, the lowest cost of production." That equation is turned on its head in the power sector, when the electricity from one solar farm is just as good as the next.

There are other differences too: unlike gas pipelines, electricity trading can go in both directions. Renewable power is also more dispersed, rather than concentrated in a few locations like fossil fuels. "When we talk about wind, solar, biomass, hydropower, ocean energy, geothermal – they are actually available in one form or another in most countries," says Van de Graaf. For places such as Morocco, which imports more than 80 per cent of its energy but also has abundant solar resources, the transition could be an economic gift.

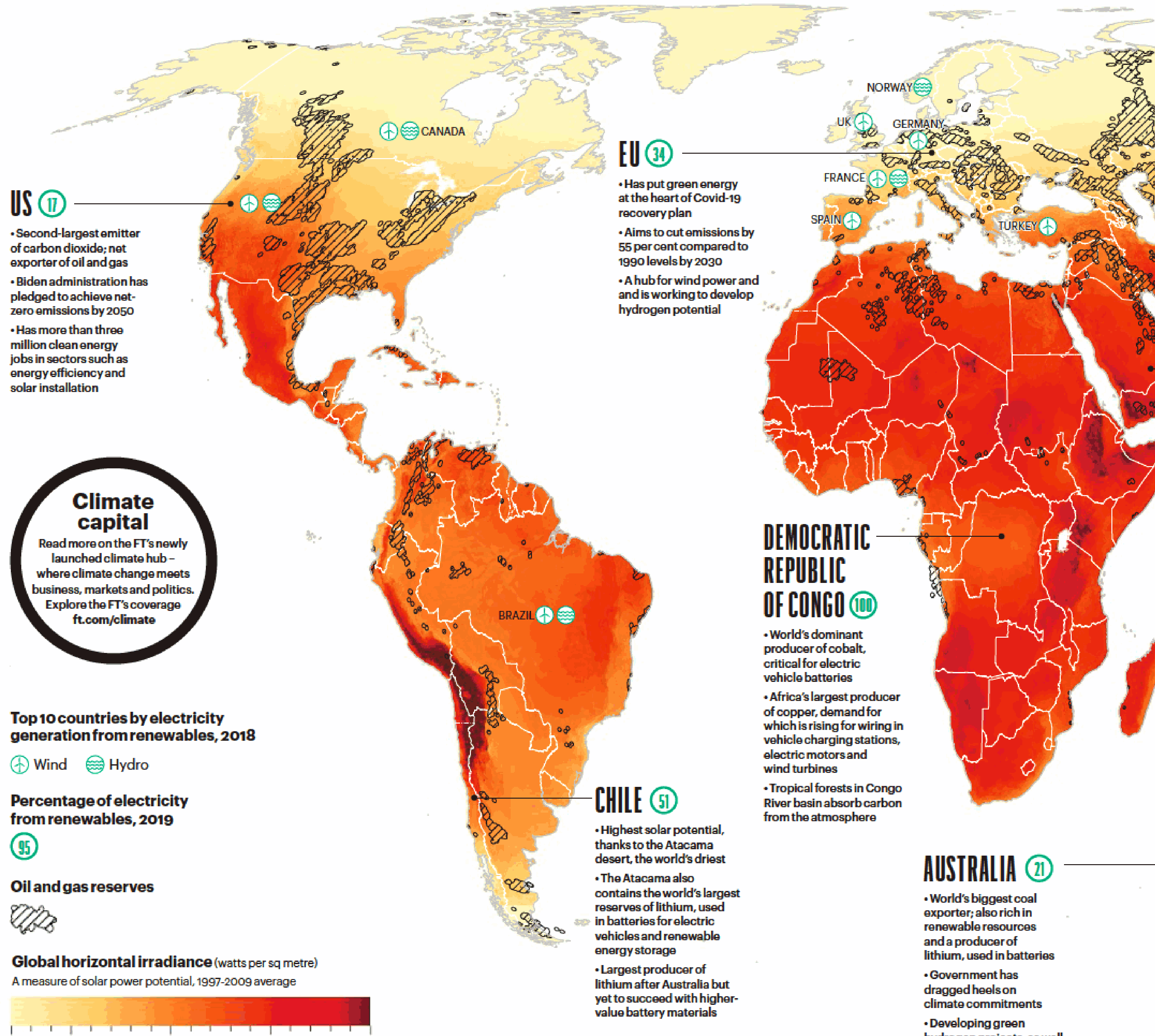
The Irena report found three ways for countries to exert influence in the new system. One is by exporting electricity or green fuels. Another is by controlling the raw materials used in clean energy, such as lithium and cobalt. The third is by gaining an edge in technology, such as electric vehicle batteries. With renewable resources so readily available, Van de Graaf believes that it is technology which will end up being the biggest differentiating factor.

A tally of countries' activities in clean energy found one racing far ahead of the rest. "We have one country in pole position," he says. "China." ▶

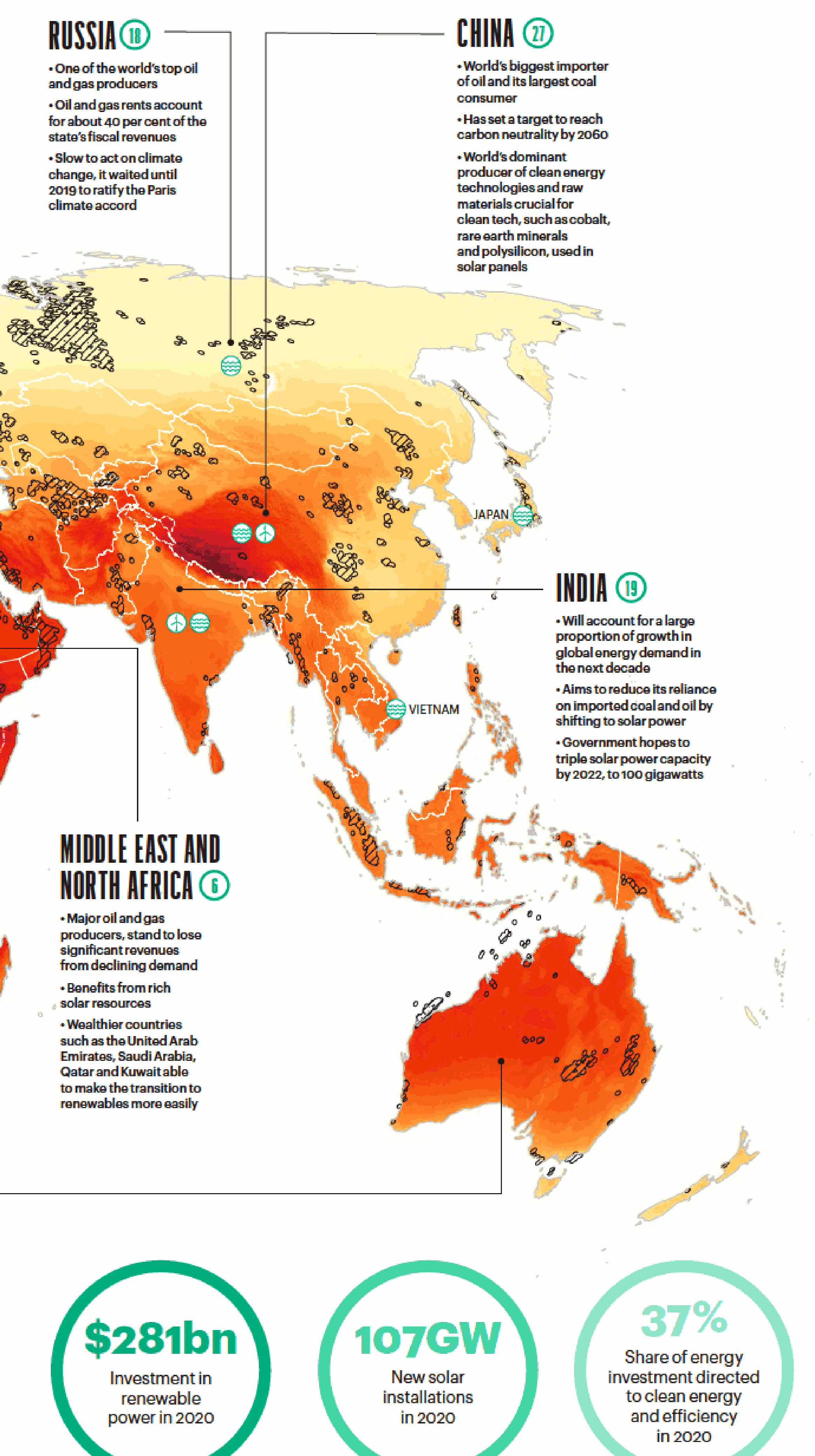
POWER GAMES

As the world shifts from fossil fuels to renewable energy, some countries are getting ahead. Though renewable sources such as solar, wind and hydropower are more evenly dispersed globally, a handful of countries dominate production of the raw materials critical for clean tech

Cartography by *Steven Bernard*



SOURCE: VAISALA, INTERNATIONAL RENEWABLE ENERGY AGENCY, INTERNATIONAL ENERGY AGENCY, FT RESEARCH, PRIO, E2



$281bn Investment in renewable power in 2020

107GW New solar installations in 2020

37% Share of energy investment directed to clean energy and efficiency in 2020

SOURCE: IEA

CHINA PULLS AHEAD

The southern tip of the Democratic Republic of Congo is famous for the Tenke Fungurume copper and cobalt mine. The ore is so rich that in some places it can be dug up by hand – enterprising locals look out for the pale-purple "copper flower" that signals the presence of the mineral below.

Huge trucks travel at high speed along the narrow paved road that leads to the mine, carrying ore, equipment or acid used to process the minerals. And along the sides of the road, a foreign script is visible on storefronts and signs – Chinese.

The area has long been the subject of power disputes, but China's arrival is recent. China Molybdenum, which is listed in Hong Kong and Shanghai, bought the mine from Freeport-McMoran, the US copper giant, for $2.65bn in 2016. Initially, it looked as if China's bet was struggling: copper and cobalt prices fell, and disputes with local suppliers caused the mine to lag behind in production.

But today, as demand for copper and cobalt soars due to the clean energy transition, it seems like a masterstroke. Copper is essential for electric cables and wind turbines, and cobalt is used in electric vehicle batteries. China Molybdenum now controls more than one-tenth of the world's cobalt. Tenke Fungurume is an "absolutely great asset", says copper analyst George Heppel of business intelligence company CRU. "I don't think there's anything quite like that size, in terms of gigantic deposits."

The purchase is just one in a series of moves that have put Chinese groups ahead in almost every area of clean tech. China produces more than 70 per cent of all solar photovoltaic panels, half of the world's electric vehicles and a third of its wind power. It is also the biggest battery producer and controls many of the raw materials crucial for clean-tech supply chains, such as cobalt, rare earth minerals and polysilicon, a key ingredient in solar panels.

"If you talk about the clean energy technology race, in many ways, it looks as if the race has already been run, and the winner is China," says Van de Graaf. "Other players are trying to catch up." The US, for example, has limited domestic supplies of cobalt and lithium, and the state department has for the past few years tried to improve access to rare earth minerals, due to their strategic importance.

For China, this advantage has been part strategy, part luck. Policymakers have long worried about the country's dependence on imported oil and gas, and Beijing embraced renewable energy manufacturing relatively early, focusing particularly on solar panels and LEDs. All this was supercharged in September 2020, when President Xi Jinping announced at the UN General Assembly that China would reach carbon neutrality by 2060. "Covid-19 reminds us that humankind should launch a green revolution," said Xi, in an announcement that came as a surprise to many. "Humankind can no longer afford to ignore the repeated warnings of nature," he added.

Xi also spoke about the "historic opportunities" created by this new phase of "industrial transformation". Last year, China installed a record 120GW of new wind turbines and solar panels domestically, more than double the year before. Meanwhile, China's Belt and Road Initiative, the international development programme that has been criticised for being coal-friendly, invested more in renewable projects than fossil fuels for the first time. ▶

Chinese-owned Tenke Fungurume mine in the DRC

'[The US] is caught in a pickle... all of the climate goals that are being promised will rely on China'

JONAS NAHM,
ASSISTANT PROFESSOR OF ENERGY AT
JOHNS HOPKINS UNIVERSITY

◀ Making the transition won't be easy – China is still the world's biggest emitter of greenhouse gases and is heavily dependent on coal, which supplies 58 per cent of its electricity. But its companies are poised to benefit greatly, not only from the domestic energy transition, but from growing demand for clean-tech products around the world. As major economies work to reach their net-zero goals, they will have to buy more solar panels, batteries and critical minerals. The main supplier? China.

THE RACE FOR BATTERIES

China's sway over battery manufacturing reflects its long-term strategy. Its poster child is CATL, Contemporary Amperex Technology. Founded in 2011 in the mountainous eastern fishing town of Ningde, the company owes a large part of its success to government protectionism. In 2015, as China was pouring billions into its electric vehicle market, the government suddenly announced a list of approved battery-makers who were eligible for subsidies, none of which were foreign. This was a boon to domestic businesses: CATL grew from producing 6.2GWh worth of batteries in 2016 to 34GWh last year – a third of the global market. Now the biggest producer in the world, it has contracts with Daimler, BMW and Tesla among others.

Beijing dominates the supply chain from the mines in the DRC to the final production of lithium-ion batteries. Its companies control more than 85 per cent of the world's refined cobalt chemical capacity, essential for most lithium-ion batteries. It also mines almost all of the world's rare earth minerals, which are used in electric motors and wind turbines. Making an electric vehicle without involving China is almost impossible.

China's manufacturing prowess has helped to drive down the global cost of batteries, making electric cars more competitive. This echoes what has happened with other clean energy technologies, from solar panels to polysilicon production: subsidies led to overcapacity and a rush to produce, and ended up with China dominating global markets.

The cost of lithium-ion batteries today is just one-seventh what it was a decade ago, according to Bloomberg New Energy Finance. CATL is now building a battery plant in Germany. "It was actually a brilliant strategy," says Jim Greenberger, founder of NAATBatt, the North American trade association for advanced battery technology. "CATL was the winner and they have used that scale to compete very effectively in the export market. That's the issue we're dealing with in the west: how to compete with Chinese companies that have gotten to scale, via use of industrial policy."

As the world shifts from carbon to electron, China has been active in developing the electricity network that will be the backbone of the clean energy system. One of Xi's pet projects is the Global Energy Interconnection – a network of high-voltage transmission lines that would span the globe. The project envisages cheap electricity being shipped around the world – from dams in Congo to Europe. It is headed by Liu Zhenya, the former chief of State Grid, who describes it as the "internet of energy".

While the Global Energy Interconnection will take decades to build, it signals how Chinese policymakers are thinking about the new global order. "The idea is to connect countries with [clean energy] resources, with those that have the demand," explains Xu Yi-chong, author of *Sinews of Power: The Politics of the State Grid Corporation*.

China's clean energy dominance has faced a backlash, which could grow as the energy transition gathers speed. The US and EU have repeatedly slapped tariffs on Chinese photovoltaic panels in trade disputes, while new rules in Europe could reduce imports of Chinese batteries. Recent revelations about forced labour in Xinjiang – a region that produces most of the world's polysilicon – threaten further sanctions. Abigail Ross Hopper, president of the US Solar Energy Industries Association, said in January that the association has been telling "all solar companies operating in the Xinjiang region to immediately move their supply chains".

This is likely to be a challenge for US president Joe Biden, who has made climate change a top priority. He wants the US to adopt a net-zero emissions target, but he has also pledged to revive US manufacturing. Jonas Nahm, assistant professor of energy at Johns Hopkins University, says new US climate targets could benefit Chinese companies: "This administration is caught in a pickle, which is that all of the climate goals that are being promised will rely on China, at least in the short term."

Other global leaders face a similar quandary: as they invest more in the energy transition, some of that money will filter back to China. "This is prompting a lot of anxiety, especially amid this proliferation of net-zero commitments," says Van de Graaf, "because other countries, such as Japan, the US and the EU, will make a transition that is very costly, and the economic benefit of that will be reaped disproportionately by China."

WINDS OF CHANGE

Many of those countries are taking their own steps toward a clean energy future. In the town of Blyth, on the north-east coast of England, the harbour is full of wind farm activity. The former mining town is reinventing itself as a centre for the wind industry. A deep-water port makes it an ideal launch point for wind farm construction boats, and a blade testing facility that opened in 2017 has been certifying some of the longest in the world.

Scroby Sands, located off the coast of Norfolk in the North Sea, was o

The UK is the largest producer of offshore wind power globally and Prime Minister Boris Johnson has pledged to make it "the Saudi Arabia of wind", with a plan to quadruple offshore wind capacity by 2030. Europe has long been ahead in this industry, and European companies still hold a lead in turbine manufacturing. In the North Sea, many of the companies that used to work in the declining oil and gas sector are shifting their focus.

Blyth also happens to be the arrival point for the high-voltage subsea cable between the UK and Norway. Nigel Williams, project director of the North Sea Link for National Grid, sees it as the "perfect landing spot". "What we are doing, really, is to find a way to maximise the renewables we generate in the UK," he says. When the UK has surplus power on windy days or during storms, it will export electricity to Norway. When the weather is calmer, it will import power from Norwegian dams. The interconnector can provide about the same amount of energy as Blyth's two coal-fired power plants, which are both now closed.

But Blyth is also set to be the home of Britishvolt, a start-up seeking to build the UK's first battery gigafactory. (Construction has yet to begin on the site,

ne of the UK's first offshore wind farms

a £2.6bn project that is still to receive full funding.) Chief strategy officer Isobel Sheldon says Britishvolt aims to have a competitive edge by tailoring its batteries to each car manufacturer and making them in a more environmentally friendly way. The company, whose website is covered in pictures of the Union Jack, plans to start production in 2023. Sheldon still nurses a grudge that current lithium-ion battery technology – invented at Oxford in 1980 – has been slow to catch on in the UK. "It's always irritated me to death that we created the technology and the rest of the world has capitalised on it," she says. "The west has been caught sleeping on this."

The EU's plans for green recovery will give a boost to several clean energy technologies, such as the hydrogen industry, which will receive about €30bn. As Brussels edges closer to adopting a carbon border adjustment tax – which would slap a tariff on goods like steel from countries with no carbon pricing – that could give a shot in the arm to the manufacturing of green steel and aluminium.

As the EU prepares for its target of net-zero emissions by 2050, some countries are planning to trade more green fuels. Portugal recently agreed to ship green hydrogen to the Netherlands, while Germany is weighing a deal to buy hydrogen from Morocco. "This is giving rise to a whole new set of bilateral trade relationships," says Van de Graaf. Countries with lots of sunshine, such as Spain and Portugal, are eager to find ways to convert that into a commercial fuel. Trading power is also on the rise: there are already more than 80 cross-border interconnectors in Europe, plus 20 planned or under construction.

'We created the [tech]... the rest of the world has capitalised on it. The west has been caught sleeping'

ISOBEL SHELDON,
CHIEF STRATEGY OFFICER OF BRITISHVOLT

This factory in Halden, Norway, produces specialised cables for subsea interconnectors

WAR OR PEACE?

There are two schools of thought about the energy transition. One believes it is a kind of clean energy realpolitik, marked by the desire to gain economic advantage. The actions of China, the US and Europe reflect this kind of thinking. But the other is that clean energy will involve a lot less geopolitics and might help reduce conflict – a more utopian future.

Paul Stevens, a fellow at think-tank Chatham House, subscribes to the latter view. "It's like the geopolitics of carrots," he says. "There are no geopolitics of carrots, and renewables are the same as carrots. You can be self-sufficient with them, and you don't need to rely on somebody to keep the Strait of Hormuz open." The spread of renewable energy will reduce potential conflicts by ending the dependence on oil-producing countries, he adds.

Levers of control in the clean energy system will still exist, but will never be as powerful as in the fossil-fuel world, says former Iceland leader Grimsson. Even though China is ahead in many respects, that should not be seen as a threat: "China can help countries on the road to renewable energy. But once they are there, they can no longer exert power, as the oil-rich countries have done over the years."

Danish climate and energy minister Dan Jorgensen agrees. "Hopefully this will lead to a more peaceful world, where international geopolitics in energy is less of a zero-sum game," he says. "We depend on each other's renewable energy sources, in a completely different way than if you just take it out of the ground." That view is reflected in Denmark's policy: the country is a significant trader of electricity with neighbours, and its grid will be fully powered by renewables by 2027.

During the next few years, as the energy transition gathers pace, the biggest resistance is likely to come from countries that produce fossil fuels. Even in the rosiest scenario, it will be decades before oil and gas are removed from the energy system. Many producers will keep pulling hydrocarbons out of the ground as long as possible. Australia is one example of how challenging the journey will be: the government has maintained its support for the coal industry and refused to adopt climate targets in line with the Paris agreement.

Forrest, the mining magnate, believes companies will push back against the energy transition. "Let's not underestimate the challenge. The fossil-fuel sector will react to falling green hydrogen prices by slashing the cost of oil and gas until it's almost zero," he said in a TV lecture. "At the end, it will be grim – think of a knife fight in a telephone box."

Whatever the resistance, the green transition has now gathered so much momentum – with net-zero goals enshrined in law in many countries – that what once looked impossible now seems inevitable. Just as the advent of coal and oil remade the world, clean energy is set to do the same. The energy transition will not only cut emissions: it will redistribute power. FT

Leslie Hook is the environment and clean energy correspondent. Henry Sanderson is the metals and mining correspondent. Additional reporting by Jamie Smyth

Not for sale

Red Roses, it's over

Valentine's Day.
It's one of the biggest days of the year if you're a florist.
But this year we've decided against selling red roses.

We don't believe that Valentine's Day is something to be tick boxed with a generic dozen.
Showing you care isn't about holding a single red rose in your teeth.
Or sprinkling red petals on perfect silk bed sheets.
As much as the movies might sell it to us.

At least, that's not the care we know from the thousands of notes that people send across the world with us every single day. It's taught us that care isn't the soft and cheesy cliché that it's been wrapped up to be.

Care isn't just soppy.
It's the fierce strength to carry people around you when they're most down.

Care isn't just big romantic gestures.
It's the little things we do for people, when nobody else is even looking.

Care isn't just celebrating birthdays or anniversaries.
It's the note sent without any need for an occasion.

Our relationships aren't all perfect red roses, so why pretend that they are?
They're messier and more complicated than that.
But that's what makes them beautiful.

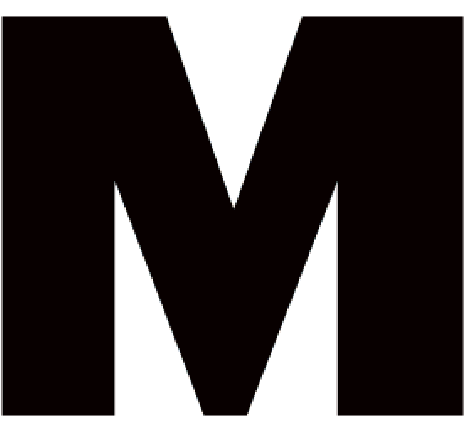
It's because you don't buy into these clichés,
that we're making a stand not to sell them.

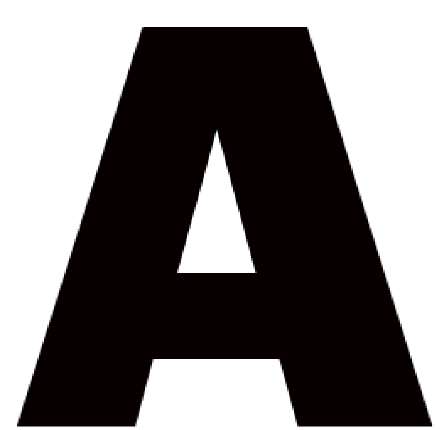
This Valentine's Day, don't just send a dozen red roses,
show somebody that you care wildly.

Love,

Show us how you #CareWildly this Valentine's Day

'I've changed from being someone who would shrug my shoulders and let it slide to saying something'





R

The England rugby star believes in tackling inequality as forcefully as any opponent. Ahead of the Six Nations championship, he talks to *Murad Ahmed* about activist athletes, levelling the playing field in race and education and how rugby has embraced change. Portraits by *Timi Marcel*

oon after joining Saracens, one of England's top rugby union clubs, Maro Itoje witnessed a white teammate greeting a fellow white player with the words: "What's up, my n****r?"

"I was sure I didn't hear it right," Itoje tells me. "Then I heard it again and I thought, 'Surely he's not being serious?' When I heard it for a third time, I actually went up to him and said, 'That is really offensive.'"

The teammate (whom Itoje does not name) gave excuses for using the racial slur: harmless banter, no intention to offend, not directed at Itoje anyway. Today, the 26-year-old looks back on the incident from his "early days" of playing professional rugby less in anger and more with a shake of the head. He has moved on to a glorious career, winning numerous trophies with Saracens and becoming an integral part of the England team that reached the Rugby World Cup final in 2019, though their painful defeat by South Africa in the biggest match of his life to date still rankles.

He is central to England's hopes of retaining the Six Nations, the annual European national team tournament, which kicks off this weekend. And he appears a cert for selection on the British and Irish Lions tour of South Africa this year, as long as he remains injury-free and matches are not cancelled because of the pandemic.

Speculation swirls that Itoje, a flanker who is regarded as one of the world's best players, could be appointed Lions captain. Such an elevation would make him the first black man to lead the side in its 132-year history, against a South Africa team led by Siya Kolisi, himself the first black captain of the former apartheid state.

Still, the N-word incident at Saracens is a reminder of the sometimes hostile terrain that black athletes traverse in British sport; rugby, where most players, coaches and fans are white, is no exception.

Itoje belongs to a new generation of activist athletes that includes footballers Marcus Rashford and Megan Rapinoe and basketball star LeBron James, each using a public platform built on immense playing talents to discuss wider issues around race,

class, gender and education, as well as sport itself. Itoje says he has rarely faced overt and obvious racism. Instead, like anyone from an ethnic minority, he faces a thicket of more subtle prejudice. And it can be hard to know when to speak up.

"When you're the 'other', when you're the single person in a completely different space, it often puts you in a very awkward situation, because you [can] say something and rule it out, but as humans all you really want to do is fit in," he says. "I've definitely changed from being [someone who as a teenager would] shrug my shoulders and let it slide, whereas now I would actually say something and confront it."

On a Zoom call in January, Itoje's giant frame – he is 6ft 5in tall – looks deceptively small, set against a large painting on the wall behind him at his north London home. The work is a modernist depiction of women in traditional Yoruba dress by the Nigerian artist Ola Hemzy. Itoje acquired it during one of his family's frequent visits to the country his parents emigrated from around three decades ago.

His African heritage is "a huge way in which I navigate the world", he says. It also helps keep him grounded. Nicknamed "The Pearl" because of his sporting value, and "Super Maro" by England fans, he goes largely unrecognised in Nigeria, where rugby attracts little interest.

"Playing for England in the Six Nations wouldn't cross their vision," Itoje says of his extended family. "The only times I hear from my aunties and uncles in Nigeria is [when they say], 'I saw you on CNN, you're doing good stuff, keep it up!' Apart from that, they are none the wiser."

In recent months, adulation has been in short supply close to home as well. England open their Six Nations campaign this weekend against Scotland. The victor will take the Calcutta Cup, the trophy awarded to the winner of matches between the two nations for more than 150 years. England's home stadium, Twickenham in south-west London, holds 82,000 fans, the bulk of whom would be roaring on Itoje and his teammates. But lockdown means the ground will be largely empty. "I prefer playing with crowds, but I've got used to it," Itoje says with a sigh. But he insists motivation remains high. "The goal is obviously to win the Six Nations. I haven't played rugby for a while now. I want to put my best foot forward and play as well as I can."

Clockwise from top left: Maro Itoje celebrates Saracens' victory in the 2019 Champions Cup final against Leinster; hard into the tackle against Northampton Saints' Samu Manoa in 2015; in England colours against the New Zealand All Blacks in the 2019 Rugby World Cup

'IF THE GAME WASN'T PHYSICAL, I PROBABLY WOULDN'T BE PLAYING. I THINK IT'S A PART OF THE GAME EVERYONE ENJOYS'

Oghenemaro Miles Itoje was born in 1994 in Camden, north London, into a "busy" household led by businessman father Efe and mother Florence, who runs a property portfolio. The phone rang constantly. Itoje and his two siblings "were part-time children, part-time secretaries for my mum", he says. Family and friends would drop by unannounced and were always accommodated. "Like most Nigerians, the love language is food," he says. "The fridge was never empty. The freezer was always full."

Aged 11, Itoje went to St George's School in Harpenden, Hertfordshire, as a boarder. It was there that he first played rugby – a late starter by elite standards. Aged 16, he won a sports scholarship to Harrow School in north-west London, a boys' public school whose alumni include Winston Churchill, Cecil Beaton and Benedict Cumberbatch.

Efe worried that rugby would distract his son from making the most of a gilded education, telling him: "If the grade drops, the rugby stops." But Itoje gained three A-levels, then earned a politics degree from the School of Oriental and African Studies in London, while playing for Saracens in the north of the city.

Britain's top public schools have long been a breeding ground for rugby union stars. A 2019 report found that 37 per cent of male British professional players had been to fee-paying schools, compared with 7 per cent of the wider population. Itoje is keenly aware of class concerns. He supports a campaign to address the so-called digital divide, which has left 1.8 million British children unable to access online lessons during Covid-19 lockdowns because their families cannot afford computers and broadband connections. The government is supplying disadvantaged children with laptops; so far, it has provided 800,000 of a planned 1.3 million computers.

"Education is often talked about as a social leveller: get good grades, a good education, rise up the ranks," says Itoje. "What we're seeing is that the most disadvantaged children… suffer the most through the digital divide [because of] the gap between what they're learning and the ones [who can access online lessons]."

Itoje was inspired to start campaigning by Marcus Rashford, the Manchester United and England footballer who persuaded the government to extend the provision of free school meals for poorer households during school closures over the past year. (Itoje and Rashford are also connected as clients of Roc Nation, the management agency founded by American rapper Jay-Z.)

Rashford's efforts resonate, in part, because of his compelling backstory as the child of a single-parent family whose working mother struggled to put food on the table. At Harrow, by contrast, ▶

Below: Maro Itoje, right, aged three, with his mother Florence and brother Jeremy

◀ boarders are now provided with a computer in their room. So is Itoje the right man for his chosen cause?

If the lockdowns had happened 15 years ago, admits Itoje, he wouldn't have been in the position underprivileged children find themselves in today. "That's why I feel it's such a travesty, because a good quality education shouldn't be based on how much money you have in your pocket. I could quite easily never say a word on this again and I'll be fine. This isn't to benefit me."

Other causes he supports are based on "lived experience", he says. They include Black Curriculum, a social enterprise group that aims to give eight- to 16-year-olds a deeper understanding of black history. In UK schools, Itoje says this is often reduced to a few well-worn subjects: the slave trade, colonialism, maybe a nod to Martin Luther King Jr's contribution to the US civil rights movement.

"I would have loved to hear about the African empires in Mali and Benin, the trade they had with the Arab world, or [the 14th-century Malian king] Mansa Musa, arguably the richest man to have ever lived, according to some records. It took me until I was 18 [to realise] I don't know too much about the continent that I'm actually from."

'I DON'T THINK BEING BLACK HAS HELD ME BACK BUT DIFFERENT PEOPLE HAVE DIFFERENT EXPERIENCES'

If Itoje's activism succeeds, he may face a backlash. Marcus Rashford has been attacked by rightwing politicians and commentators who challenge the right of a millionaire sportsman to demand changes to government policy (not a problem often experienced with millionaires in other industries).

I suggest some likely lines of attack by his opponents: that Itoje has declared himself anti-Brexit. "I have got a blue passport today," he says with a laugh. "I actually kind of like it." Or that his efforts are more related to restoring reputational damage. Last season, Saracens were relegated from Premiership Rugby, the top division of the sport in England, for flouting salary-cap rules. Itoje was caught up in the scandal. According to leaked documents first obtained by Sky News, he was paid £1.6m for a 30 per cent stake in a company that controlled his image rights. Premiership Rugby decided he had been overpaid by £800,000.

The subject touches a nerve. "If Saracens feel like they need to do certain things to repair whatever, then that's on the organisation to do. I'm not here with Saracens. I'm speaking to you as Maro Itoje," he says.

My point is that many will demand, as they have with other athletes, that Itoje "stay in his lane" and "focus on the game". His popularity has proved lucrative: he has become the face of marketing campaigns for companies such as fashion brand Ralph Lauren. Is there a potential cost to being seen as divisive? US basketball player Michael Jordan, who became a billionaire from a sponsorship deal with sports brand Nike, once refused to endorse a Democrat politician, saying: "Republicans wear sneakers too."

Itoje knows this quote so well he mouths the words as I cite them. But it is not an attitude he subscribes to. "I have taken the odd stand in certain things," he says. "The one thing I've learnt through rugby is you're not going to please everybody."

Discussions like this walk a tightrope. Those who believe "woke" is a derogatory term will tune out, minds closed. Those on the other side of today's culture wars tend to ignore the nuances, eager to get behind whoever is deemed to be punching up. Am I – as an Asian, state school-educated, Cambridge graduate – entitled to ask whether Itoje is too privileged to speak up on issues of race and education?

The writer Roxane Gay argues that people should "stop playing Privilege or Oppression Olympics because we'll never get anywhere until we find more effective ways of talking through difference. We should be able to say, 'This is my truth,' and have that truth stand without a hundred clamouring voices shouting, giving the impression that multiple truths cannot coexist."

Itoje's truth is that he has emerged from a melting pot – male and wealthy, black and privately educated – at ease with both his Nigerian and British lives. Yet he is aware this is often not the fate of others, particularly those who share his skin colour. "I don't think being black has held me

back," he says, pausing for a few seconds to collect his thoughts. "But I think different people have different experiences."

Still, he is not immune from being made to feel the "other". Itoje has been told he does not "talk like a black guy" or "dress like a black guy", somehow failing to fit a stereotype that his race comes with a standardised accent and uniform. He is aware that he will never be considered anything other than black too. "I was in a club once and there was a song that had the N-word in it," says Itoje. "And every time they said the N-word, [a white acquaintance] was pointing at me." It is another example of banter gone wrong, he says, more crass than malicious. But separating effect from intent is no solution.

"Whether I say something with all the anger in my heart or with blissful joy, it doesn't change the fact that what has been said is racist," he says. "I think that's something that a lot of people don't understand or don't fully get."

He reckons attitudes, at least within rugby, are changing fast and points to the example set by England head coach Eddie Jones, an Australian with Japanese heritage: "Eddie has always [said] we need diversity. I think he means in every stretch of the word: diversity of thought, diversity of background, diversity of experiences. Because when you have all those different types of diversity, you have a more robust team, able to contribute through different ideas, able to challenge each other and work towards a common goal."

Last year, a study analysing statements made during the commentary on matches in European football found darker-skinned players were often praised for physical attributes such as "pace" and "power", while lighter-skinned players were more likely to be complimented on their "intelligence" and "quality". If such deep-rooted attitudes exist in rugby too, I say, surely that could harm Itoje's ambitions, such as being made captain of the Lions, a leadership role that requires taking decisions on behalf of a team that alter the course of a match?

"Those attitudes are more popular among commentators as opposed to coaches," he says. "Coaches get to see you day in and day out. They get to have a deeper understanding of you and your skill set. I'll say [the problem] is more prevalent in football than rugby."

Itoje doesn't hold back on the pitch, either. He smashes into tackles without a backward step. After thunderous collisions, he has been seen laughing, patting an equally hulking opponent on his head. "If the game wasn't physical, I probably wouldn't be playing the game," he says. "I think it's [a] part of the game which everyone enjoys."

But such violence has put rugby's future in doubt. In December, Steve Thompson, who played in England's 2003 World Cup-winning team, was joined by seven former rugby players to start legal proceedings against the sport's governing bodies over claims that years of concussions had left them with permanent brain damage.

Itoje sympathises with the plight of former players but reckons it is another area where the sport has made strides. This includes the introduction of concussion protocols, such as having an independent doctor assess whether players should be taken off following head injuries. "If you look at rugby in 1999 – with the type of tackles, type of scrums, type of rucking that was allowed compared with today – it's a completely different game," he says.

The approach of players has changed markedly, too. Itoje remembers when he first played professionally: "If you go off, then you're [considered] just a bit soft. There's been a paradigm shift to today, where if I see one of my teammates get a knock, I will be like, 'You need to get off.'"

It is another debate where participants must address difficult truths. But Itoje's default stance, whether in sport or the world in general, is optimism.

"I went to one of the Black Lives Matter protests [in London's Hyde Park last year]," he says. "One thing that took me by surprise was there were loads and loads and loads of white people. For some reason, I wasn't expecting that."

It is another signal of progress, reckons Itoje. Further encouragement that more people are willing to have conversations like ours – knotty, sometimes uncomfortable, but civil and honest. "You're going to have some people who like the status quo and are going to defend it vehemently. But you are also going to have people who will admit: 'I didn't think of it like that, I understand your point of view.' I think that's what's going to happen." FT

Murad Ahmed is the FT's sports editor

YELLOW, 2012

DAYS DOWN SOUTH

Photographs by the writer, visual artist and Oscar-nominated film-maker *RaMell Ross*, documenting the rhythms of African-American life in Hale County, Alabama, go on show in New York this month

TOLD ON THE MOUNTAIN, 2013

To be black is the greatest fiction of my life. Yet I'm still bound to its myth. I can't help but think about the myth's childhood and its backyard of the South. How the myth of blackness aged into fact and grew into laws. How it evolved from there to become tacit, and join the secret order of things. How it became the dark matter of the American imagination.

I've lived, worked and photographed in Hale County for nearly 12 years. Sometimes, there, I feel like I have no race. And if the light was right, no one else did either. Still the myth of blackness is entangled at the root of the South's mythology – a mythology upheld in textbooks, institutions, media and film and literature. And photography is implicated.

ANTONIO, 2012

RON, 2015

HERE, 2012

FROM THE SERIES 'SOUTH COUNTY, AL (A HALE COUNTY)', 2012-14; COURTESY RAMELL ROSS; MACK

RaMell Ross's work appears in "But Still, It Turns", edited by Paul Graham (Mack, £50) and in an exhibition of the same name that runs at the International Center of Photography (ICP), 79 Essex Street, New York, until May 9; icp.org

OPEN, 2015

DREAM CATCHER, 2014

Rowley Leigh Recipes

Bisque factor

Langoustines have become a luxury item and chefs just have to have them on their menus, yet this high esteem is relatively recent. Chefs used to prefer lobster, freshwater crayfish and Dover sole; the Dublin Bay prawn slipped, literally and figuratively, through the net. We most often knew it by its Italian name, scampi, usually breadcrumbed and fried. While perfectly nice, such treatment hardly does the langoustine justice.

It is best served very simply - and aspirant chefs sometimes struggle with simple. Too much elaboration and this very special crustacean loses that saline sweetness that makes it so glorious. Cooked when still kicking and served with good mayonnaise, a wedge of lemon and bread and butter, it is hard to beat a plate of boiled langoustines. Should you have some perfectly fresh but "resting" langoustines, a simple grilling with a little herb and spice is just the ticket.

Now so prized, *Nephrops norvegicus*, to give it a fourth name and the one that is used commercially, had become a significant British export before this January. Yet, at the time of writing, that trade is at a virtual standstill, as delays in obtaining health certificates, customs certificates and other paperwork have slowed down the hauliers' cargo to the point of ruin. Those markets in Paris, Madrid and Barcelona have no appetite for langoustines that are three days old. No doubt these teething problems will be overcome in time, but damage has definitely been done.

We can, of course, campaign and lobby our MPs to avoid total catastrophe but, for now, the best way to help the fishermen may be to pay the piper and eat more langoustines. Here are two recipes to give maximum returns on the investment. FT

Photographs by Andy Sewell

More columns at ft.com/leigh

Grilled langoustines

The bigger and fatter the langoustines the better. I use a mat (like an oven liner) on my hotplate. Nothing will stick to it and it's slightly gentler than a griddle pan.

To serve six

- 4-7 langoustines per person, depending on size
- 2 limes
- Salt
- Brown sugar
- 1 tsp ginger, grated
- 2 red chillis, chopped
- 1 tsp Thai fish sauce
- 100ml sunflower or similar oil
- 1 bunch coriander

1 — Grate the zest of the limes into a bowl – with a fine microplane, if possible – before halving and squeezing the strained juice in with the zest. Add a pinch of salt and brown sugar, the grated ginger, chopped chillis and the fish sauce. Whisk together before stirring in the oil. Leave to stand for 20 minutes. Pick the coriander leaves and chop quite finely, adding them to the sauce at the last minute.

2 — Split the langoustines in half by inserting a large kitchen knife straight down into the head and then through the centre of the tail. Remove any black trail in the tail. Brush the exposed flesh with oil and place the langoustines this side down on a hot griddle (or mat, if you have one). Leave for barely a minute before turning and cooking for a couple of minutes on the shell side. Once the tails are cooked, the claws might need another minute, especially if they haven't been in contact with the grill. Serve shell-side-down and with the tails coated in the sauce.

Langoustine bisque

A recipe based on the premise that you are not so squeamish that you won't collect the shells off people's plates. Roasting, flaming and long stewing will destroy bacteria very effectively. The soup will freeze well, as long as you do the final touches after defrosting.

To serve six

- The shells (heads, tails, legs, all) from at least 1kg of langoustines
- Olive oil
- 60ml brandy
- 150ml white wine
- 2 shallots
- 1 carrot
- 1 celery stalk
- 2 cloves garlic
- 200g tinned chopped tomatoes
- Thyme
- Bay leaf
- 1 tbs rice
- 100ml double cream

1 — Rinse the shells briefly in cold water and then roast in a hot oven (220C) with a film of olive oil for a good 15 minutes, until they have coloured and are dry. Pour in half the brandy and give the pan a shake to ignite the alcohol. Pour in the wine and scrape up the juices in the tray.

2 — While the langoustines are roasting, peel and chop the vegetables in small dice. Colour these in a heavy saucepan on a high heat with a little olive oil. Once nicely browned, add the tomatoes and herbs and pour in the shells and their juice. Add the rice and just enough water (or fish stock) to cover. Bring to a simmer and cook for 45 minutes.

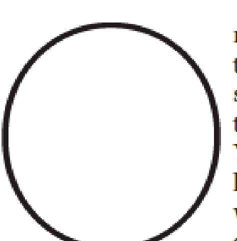
3 — Strain the bisque in a colander placed over a bowl, pushing through as much of the juice, rice and pulp as possible. Place the soup in a blender until it's well blended. Now pass it through a fine strainer. Put the soup back on the heat and add the cream and the rest of the brandy. Taste for seasoning, using lemon juice and Tabasco as well as salt.

Wine: plenty of options with very dry champagne (white or pink), Chablis, dry Riesling or Chenin all in the frame. Or you could open a bottle of good Provençal rosé and pretend it's summer.

Fuchsia Dunlop Recipe

The year of the radish

A traditional winter dish in China, this 'cake' turns a humble ingredient into an extraordinary dim sum brunch – or midnight feast. Photography by *Yuki Sugiura*


n Friday, the Year of the Ox begins. With the scourge of the pandemic, traditional Chinese New Year's celebrations are likely to be subdued. But while a noisy, lavish, multi-generational New Year's Eve dinner and a fortnight of feasting with friends may be impossible, many classic foods of the season can be enjoyed on a more modest scale.

Radish cake is one of them. The name of this classic dim sum hardly does justice to its extraordinary deliciousness. A huggy, comforting mass of Asian white radish slivers in a rice-flour batter, threaded with nuggets of pork and shrimp, it is typically cut into thick slices and browned in a frying pan, so the crisp outer layer contrasts blissfully with the smooth, voluptuous interior.

Chilli sauce, chilli oil and Laoganma black bean sauce all make fine accompaniments. Strangely, its name is often translated on English menus as "turnip paste".

Radish cake is just one of a whole family of "cakes" made from various starchy ingredients that are particularly beloved by the people of the Chaozhou region of south-eastern China, as well as the Cantonese and Taiwanese. They include the denser five-spiced taro cake (*yutou gao* 芋头糕) and a translucent, golden cake studded with crisp morsels of water chestnut (*mati gao* 马蹄糕). Radish cake is often made in huge round dishes and scattered with fried shallots, sliced spring onions, coriander and sesame seeds, to be sliced, fried and eaten when guests arrive.

While the classic version is made with cured pork and dried shrimp, it's fun to play around with extra ingredients. Many cooks add some diced Chinese wind-dried sausage; I've sometimes used thick-cut smoked English bacon. Overleaf you'll also find a vegetarian version with smoked tofu, dried mushrooms and peanuts. The batter can be made with rice flour alone but introducing a proportion of other starches (potato flour, cornflour or water chestnut flour) lightens and loosens the texture. In China the cake is usually cooked in a steamer over a wok but I prefer to use a pressure cooker for ease and speed.

Mindful of pandemic restrictions, I've written this recipe for restrained quantities: enough radish cake to fill a 750ml rectangular Pyrex food box, which yields at least eight decent slices and should fit in a pressure cooker. Feel free to scale up the quantities if you are feeding a crowd or wish to stash some in the freezer (in convenient slices separated by parchment paper).

The cake will keep in the fridge for up to four days. Eat it on its own or with steamed or boiled dumplings, bought or home-made, for a dim sum brunch, served with Chinese tea. Alternatively, a fried slice or two makes a superb breakfast or midnight feast with scrambled eggs and chilli sauce. FT

Recipe overleaf

Radish cake
Luobo gao 萝卜糕

- 2 dried shiitake mushrooms
- 2 tbs dried shrimps
- 60g Chinese cured streaky pork or thick-cut streaky bacon
- 2 spring onion whites
- 1 tbs vegetable oil, plus a little more for brushing
- 110g Chinese rice flour (not glutinous rice flour)
- 20g potato starch or cornflour
- 600g Asian radish (daikon/mooli)
- 1 tsp salt
- 2 good pinches ground white pepper
- 1 tsp sesame oil

1 — Place the dried mushrooms and shrimps in a bowl and cover with boiling water from the kettle. Leave to soften for at least 30 minutes.

2 — Remove any rinds from the pork or bacon and cut into 5mm dice. Trim the spring onion whites and smack lightly with the flat of a cleaver blade or a rolling pin to loosen. Lightly oil your cooking container to prevent sticking (it should have a capacity of 750ml and fit into your steamer or pressure cooker).

3 — When the mushrooms have softened, discard any stalks and cut the caps into dice of a similar size to the meat, retaining the soaking water. Chop the dried shrimps in the same way.

4 — Heat 1 tbs oil in a seasoned wok over a high flame. Add the spring onions and stir-fry until golden, then remove and discard, leaving the fragrant oil in the wok. Add the pork or bacon and stir until it has released its oils, then tip in the drained shrimps and sizzle until both are tinged with gold. Finally, add the mushrooms and stir-fry briefly until they have lost some of their moisture. Remove the mixture from the wok, with the oil, and set aside.

5 — Combine the rice flour and potato starch or cornflour in a bowl. Add 130ml cold water and stir until smooth.

6 — Peel the radish. Cut diagonally into broad slices about 5mm thick, and then into 5mm slivers (alternatively, cut into thin juliennes with a food processor). Place the radish slivers in the wok. Add 175ml of the strained mushroom-soaking water. Heat over a high flame, stirring often and covering the radishes with a lid between stirs so that they steam (try to keep the slivers piled up in the liquid so that they don't catch on the side of the pan). Cook this way for about 10 minutes, until the slivers have become floppy; add another tablespoon or so of the mushroom liquid or water if you need to. You want to end up with slivers that are cooked but not browned, and only a tablespoon or two of liquid remaining. Switch off the heat.

7 — Add the pork mixture, along with the salt, pepper and sesame oil, and quickly stir through the radish slivers. Give the rice batter a stir and then tip into the wok, mixing thoroughly to incorporate – it will thicken slightly as you do this. Turn the mixture into your prepared container. Press it down and smooth the top. Cover with a piece of kitchen foil.

8 — If you are using a pressure cooker, place the container on the rack inside and steam at high pressure for 30 minutes, allowing pressure to release naturally. Otherwise, place the container on a rack in your wok and cover with a wok lid (or place in a bamboo steamer), half fill the wok with boiling water and steam over high heat for 10 minutes and then medium heat for about an hour, until a skewer comes out clean. Make sure you top up with hot water from the kettle as necessary so that the wok doesn't boil dry.

9 — Allow the radish cake to cool completely, brush the surface with a little oil and keep in the fridge until needed (up to four days). Alternatively, cut into slices 2cm thick, interleave with baking parchment and freeze.

10 — When you wish to serve the radish cakes, cut off slices about 2cm thick and pan-fry in a little vegetable oil over a medium heat until piping hot and lightly browned on both sides. Serve with your preferred chilli sauce.

Vegetarian version
Instead of the pork and shrimp mixture, use the following recipe:

- 2 tbs cooking oil
- 2 spring onion whites, smacked to loosen
- 2 shiitake mushrooms, caps only, soaked and diced
- 30g smoked tofu, diced
- 2 tsp light soy sauce
- A small handful of dried laver seaweed (*zicai* 紫菜), soaked in hot water for a couple of minutes (optional)
- 25g skinless fried or roasted peanuts, very roughly chopped*

1 — Heat the cooking oil in a wok over a high flame. Add the spring onions and stir-fry until golden; remove from the oil and discard.

2 — Add the mushrooms to the wok and fry briefly until they have lost their moisture. Tip in the tofu and stir-fry until slightly golden, seasoning with the soy sauce.

3 — Add the drained seaweed, if using (it will still be quite wet), and stir-fry to evaporate some of its liquid.

4 — Off the heat, stir in the peanuts and set aside. Add to the radish slivers, in place of the pork mixture in the main recipe.

*To fry your own peanuts, place in a wok with just enough oil to cover and heat gently for 10-15 minutes, stirring often, until golden. Do not overheat the oil – it should just sizzle softly around the nuts. Drain and set aside.

RANA'S GUESTS, FROM LEFT: ORHAN PAMUK, BARIS MANCO, JASON GOODWIN, AYGEN DOGAR, SEVAN BICAKCI

FANTASY DINNER PARTY

RANA FOROOHAR

At dusk by the Turkish seaside, the FT's global business columnist gathers writers, a musician, a jeweller and her father for a feast, lovingly prepared by her grandmother

Back in the 1970s, my family would often spend summers in Turkey, my father's home country. An intrepid (not to mention thrifty) traveller, dad's idea of a good time was to pile the extended family – seven of us, including my grandparents, parents, uncle, brother and me – into his brother's old Volvo and drive from Istanbul down the Aegean coast, stopping at whichever seaside town or village looked best.

I didn't relish hours spent riding shotgun in the front seat wedged between dad, the gear shift and my chain-smoking uncle, who would keep the one American cassette tape he owned, Billy Joel's *The Stranger*, playing on repeat. But I did love the places we stayed: tiny family-owned pensions, modest but sweet, often with lovely seaside restaurants that twinkled with fairy lights and smelled of salt and lemons.

One such place, in Assos, a historical village that looks across the Aegean sea to the Greek Island of Lesbos, is the setting for my fantasy dinner. At dusk, just when the outline of the island begins to fade and dots of lights appear across the water, I gather at a wooden table in front of an old stone inn by the sea with my guests.

Truth be told, I don't like fancy dinner parties or fancy guests – they stress me out. I'd far rather eat with my family and a few close friends. As I get older, I find myself ruthlessly editing the people I spend time with. However, given the setting and the needs of this piece, I have invited the writer **Orhan Pamuk**, who can tell us why Turks are such a melancholy people (his book *Istanbul* is all about that), and my favourite jeweller, **Sevan Bicakci**, who spreads out his wares on the table – magical pieces with birds and flowers carved inside precious stones – and lets me choose from among them. **Baris Manco**, the late, great Turkish pop singer, can come too and serenade us in his full 1970s Turkish hippie regalia – long black locks, handlebar moustache, kaftan and big silver rings on every finger. The author **Jason Goodwin** reads to us from his wonderful *Lords of the Horizon: A History of the Ottoman Empire*. And of course, my dad **Aygen Dogar** is there, with his backgammon set in tow.

We start the meal with *raki*, the anise-flavoured liqueur beloved of Turks and Greeks alike, and meze cooked by my grandmother, who passed away several years ago. She makes her trademark *borek*, delicate cheese-and-parsley-filled tunnels of filo dough fried in olive oil, and *kofte*, Turkish meatballs blended with breadcrumbs, lots of cumin, onions, salt, pepper and loads of garlic, which she doesn't chop but crushes into a fine paste with a mortar and pestle.

> 'My grandmother didn't write her recipes down, but would talk them to me'

I help her in the kitchen as I used to. My grandmother didn't write her recipes down, but would talk them to me, giving instructions along the lines of "the dough for this dumpling should feel like your earlobe" as she touched her own ear, the armful of gold bracelets that were her dowry dangling as she worked.

Cooking was her pleasure, but she was a tough customer with merchants, so she insists that the son of the innkeeper gets in his boat and goes out to fish for the main course, seafood prepared simply over charcoal with lemon and oil. We have it with warm pita bread dotted with black sesame seeds – crisp and chewy at the same time – and perfectly cooked rice with lots of tomato and butter. Alongside this, we enjoy my grandmother's *zetin yagli*, a particularly Turkish green-bean dish with tomatoes and onions. She cooks hers slowly, layering onions, tomatoes and beans over and over again in a giant pot, before topping with a few spoons of sugar and salt, and lots of olive oil, then simmering for an hour. The dish is left to cool, and eaten at room temperature or even cold.

All this is enjoyed with plenty of cold Efes Pilsen beer and maybe a nice light Spanish wine – nothing too fancy.

After dinner, it is time to hike up the 235-metre hill that leads to the Temple of Athena at the top of an acropolis that crowns Assos. The structure, which dates back to 530BC, is in remarkably good shape and, as a child, I was amazed that I was allowed to play around it and even pocket a rock or two (thankfully, the place is now protected as a historical site).

The walk is enlivening; at the top of the hill, I unwrap a basket of my grandmother's honey-syrup cookies (each with a blanched almond in the centre) and individual pots of *sutlac*, her trademark dessert. Cooking it is an ordeal, but totally worth it. You start with unpasteurised local milk, as fresh from the cow as possible, with plenty of golden cream on top. Into this goes rice and sugar, which is then stirred nonstop for an hour or more, put into bowls, sprinkled with cinnamon and chilled. Some people try to speed things up by using rice flour to thicken it but that would be cheating.

If it were daytime, we might enjoy a three-sided view of Lesbos, Pergamum and Mount Ida in Phrygia. But since it's evening, we stargaze instead, the perfect end to a fantasy dinner. FT

GETTY IMAGES; AFP/GETTY IMAGES; ALAMY

Advertisement Feature

Cyber threats to financial organisations in 2021

Forecast by Kaspersky

Last year – despite the prediction shattering effect of the COVID-19 pandemic – eight out of ten Kaspersky predictions about cyber threats for financial organisations proved to be true[1]. Before we reveal our 2021 predictions, here's what happened last year.

According to our data, cybercrime skyrocketed in 2020, and that is especially true for attacks on organisations, with criminals seeking to either steal data or extort money from them. That forced businesses to pay more attention to cybersecurity and to invest more of their IT budget into purchasing solid security solutions despite the unstable economic conditions. So what can we expect in 2021?

1 Continued rise in cybercrime

The World Bank says the coronavirus pandemic is likely to cause a massive wave of poverty around the globe, with COVID-19-induced new poor rising to between 119 and 124 million people. As more people struggle to earn a sufficient income, our analysts predict financial crime may become an attractive alternative for some individuals. As such, our experts anticipate a discernible rise in cybercrime originating from the worst affected countries.

2 Moving server side

Our analysts report that the number of threat actors relying on client-side attacks (JavaScript) is diminishing by the day. Our experts predict therefore, that MageCart – a consortium of malicious hacker groups who target online shopping cart systems – will move attacks to the server side.

3 More 0-day and N-day exploits used by ransomware groups

As ransomware continues to generate large profits for cyber gangs, our analysts expect ransomware operators to increase their use of 0-day exploits (exploits that are as-yet unknown) as well as N-days exploits (recently discovered exploits that are still being patched) in order to expand the scale of attacks and further boost profits.

4 Cracking down hard on the cybercrime world

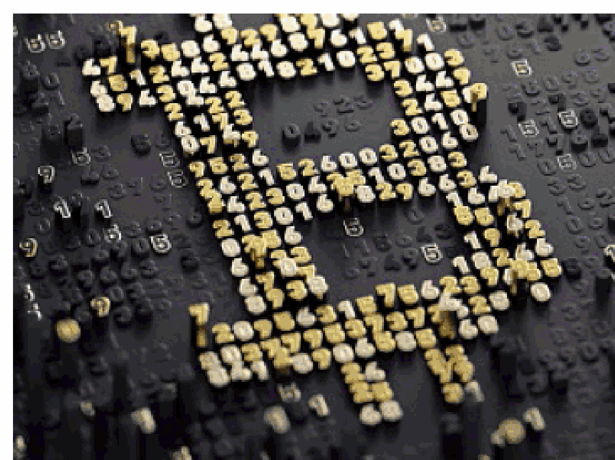
In 2020, the US Office of Foreign Assets Control (OFAC) announced that they would supervise any payment to ransomware groups. Our analysts expect an expansion of the "persistent engagement" strategy to financial crime, which to the uninitiated means: relentless tracking of adversaries, and increasingly, taking offensive action against them. There is also a possibility of governments imposing economic sanctions against institutions, territories or even countries which show lack of resolve to combat cybercrime that originates on their territory.

5 Extortion on the rise

One way or another, our experts believe cybercriminals targeting financial assets will rely on extortion. If not ransomware, then DDoS or possibly both. This could be especially critical to companies that lose data, go through an exhausting data recovery process and then get knocked out of online operations.

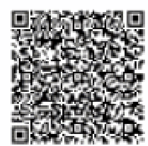
6 Staying safe in 2021

To withstand such threats, businesses will need to carefully assess their threat landscapes and build a proactive security setup that goes beyond endpoint protection solutions. More complex systems such as endpoint detection and response (EDR) and anti-targeted attack solutions should be deployed together with reliable threat intelligence services as well as routine cybersecurity training for employees. Kaspersky offers a variety of tools that may help your enterprise stay protected against all kinds of attacks as well as be informed about the developments in the cyber world.



[1] Kaspersky Security Bulletin 2019: advanced threat predictions for 2020

Note: All predictions have been provided by Kaspersky's Global Research and Analysis Team, and are purely speculative in nature.



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Jancis Robinson
Wine

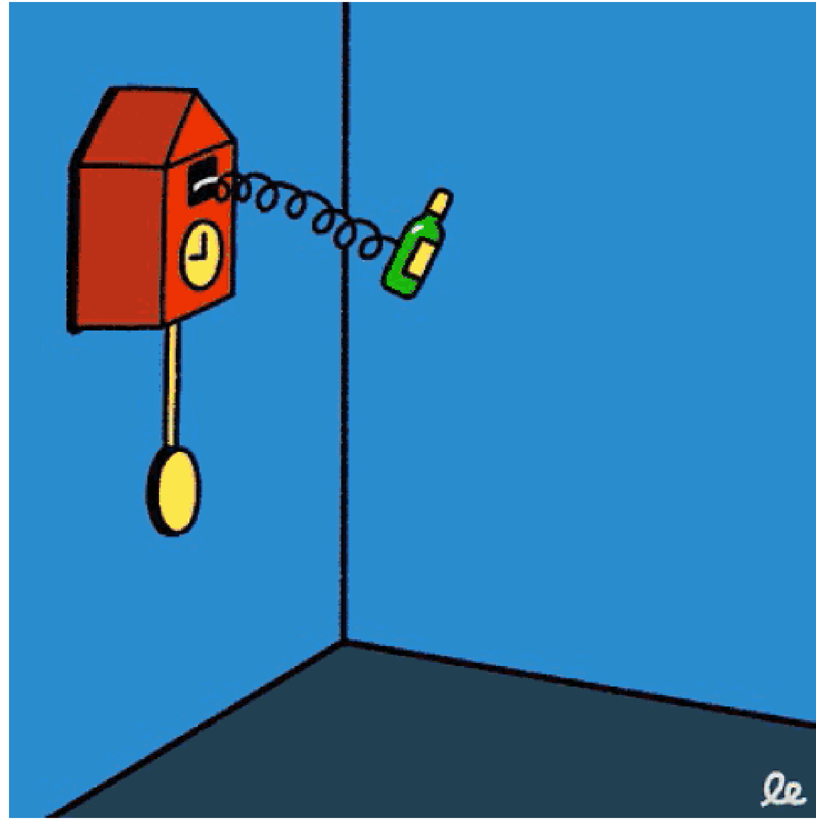
Blanc checks

There can't be many wine cellars or personal collections in which white wines are more plentiful than reds – although there may be the odd exception to this rule in Germany, whose white wines outnumber reds and have a great track record for ageability.

Riesling, the signature grape of Germany, makes wines that are virtually immortal, in my experience. Not only do opened bottles of Riesling last weeks if kept reasonably cool, but the wines continue to improve in bottle for decades. At present, I am happily drinking examples from the 1980s and 1990s. They tend to taste drier with time, so that a Spätlese, for example, whose natural grape sugar may have been pretty obvious when the wine was young, can be quite dry enough to serve as an aperitif after a decade or two in bottle. And the nuances of flavour, the crystalline expressions of the vineyard responsible for the wine, should be all the greater. A lower-alcohol alternative to a sparkling wine perhaps?

Even a mass-market Riesling, wherever it's grown (and there are particularly fine examples not just from Germany but also Alsace, Australia and Austria), will last much longer in bottle than wines made from other grapes. Whereas many supermarket whites should be drunk almost immediately, I would have no qualms about keeping a supermarket Riesling for a year or more.

Like rosé, Sauvignon Blanc is an obvious candidate to drink young. Certainly, most inexpensive examples are best enjoyed before their aroma and fruit – their chief attributes – start to fade. Yet some examples, especially those aged in oak and some of the more sophisticated, terroir-driven Sancerres and Pouilly-Fumés, are deliberately designed for a longer life.



As imagined by Leon Edler

Wines based on Chenin Blanc grapes, mainly from the Loire or South Africa, don't seem to age very quickly. Ditto Jurançon from south-west France based on Petit Manseng grapes. This may be because, like Riesling, Chenin Blanc and Petit Manseng are relatively high in acidity. (So is Sauvignon Blanc but it's the precious Sauvignon aroma that can be so evanescent.) I tasted an inexpensive 2019 Chenin Blanc in a can the other day (by The Copper Crew) that was still fresh as a daisy at nearly two years old. As was the 2017 Romanian Feteasca Regala that Tanners is selling for just £7.50 a bottle. It was screwcapped, which almost certainly helps by keeping out the oxygen that ages wine.

> 'To round off a birthday dinner in 2014 I enjoyed a Château d'Yquem that was a century old and still very much alive and kicking'

The one sort of white wine that absolutely deserves to be cellared is sweet wine whose sugar has been concentrated by the famous Botrytis cinerea fungus, sometimes called noble rot, which attacks ripe grapes and shrivels them, covering them with mould and working magic within the fruit. A really top-quality Sauternes can outlast even Riesling, helped perhaps by its extra alcoholic strength. To round off a birthday dinner in 2014, I enjoyed a Château d'Yquem that was exactly a century old and still very much alive and kicking. Various other Sauternes from the 1920s have been utterly glorious when tried over the past few years.

The ageability of sweet whites seems to depend on how they were made. Icewines, for example, which owe their sweetness to freezing, don't seem to have the longevity of wines made from botrytised grapes.

The really big ageability question mark hangs over wines made from Chardonnay grapes. In very general terms, Chardonnay makes wines that are slightly more alcoholic and less acid than most of those described above, and because they are mostly aged in oak they are often exposed to more oxygen than, say, a Riesling, so tend to age a bit faster. Most American Chardonnays, for example, are ready to drink on release.

On the other hand, some of the greatest white wines in the world are fully mature white burgundies – all made from Chardonnay. I cannot remember tasting a more stunning dry white than the Domaine de la Romanée-Conti 1978 Montrachet I was lucky ▶

When burgundies are shipped

I asked the principal UK merchants with offers of 2019 burgundy when they expect to ship the whites and the reds. Unless stated otherwise, they will try to ship whites this spring or early summer and reds in the autumn, avoiding the heat of midsummer. If they buy both reds and whites from a single producer, they tend to wait to ship them together in the autumn. Both of these considerations apply to Goedhuis & Co, H2Vin, Howard Ripley Wines and Lay & Wheeler.

BERRY BROS & RUDD
Some white wine producers bottle too late to catch the spring shipment so ship in autumn.

CORNEY & BARROW
They ship May-June and then October-November to avoid the heat of summer.

HAYNES HANSON & CLARK
As above, although they currently ship three times from Olivier Leflaive Frères, from whom they make a particularly early offer. This may change because of Brexit bureaucracy.

JEROBOAMS
The trend towards earlier bottling helps to get most Chablis and Côte de Beaune wines shipped in spring.

JUSTERINI & BROOKS
October and November mainly but some Mâconnais and Côte Chalonnaise whites in the spring.

LEA & SANDEMAN
Early bottlers from April onwards, but mostly in the autumn and some late bottlers not until after the Christmas 2021 rush.

MONTRACHET
Customers generally receive their en primeur burgundies in two batches, the first of which may include lighter reds as well as whites.

STANNARY WINE
As they now use refrigerated trucks all year round when shipping from Burgundy, they don't need to worry about heat spikes.

TANNERS
They ship when producers say they are ready to release and are generally keen to deliver rapidly in order to make space in their warehouse.

Tasting notes on more than 1,000 2019 burgundies on Purple Pages of JancisRobinson.com

'Once I would have said a top-quality white burgundy could be kept for up to 20 years. Now I feel I may be risking it to suggest 10'

◀ enough to taste to celebrate the new millennium.

However, the reputation of white burgundy has taken a serious knock since some of the wines made in the 1990s turned brown and lost their fruit after only very few years in bottle – a phenomenon known as premature oxidation, or premox. Burgundy producers have been doing their best to diagnose and correct the problem but it leaves people like me, who are expected to suggest ideal drinking dates for individual wines, extremely wary.

In pre-premox days I would happily have suggested that a top-quality white burgundy could be kept for up to 20 years. Nowadays I feel I may be risking it to suggest 10. And I would argue that the qualitative difference between a five- and 10-year-old white burgundy is less than the Riesling equivalent would be; Chardonnays seem to gain less complexity with time in bottle (wild generalisation alert).

The classic exception to this is Chablis, the far northern outpost of Burgundy, whose wines, all made from Chardonnay, have traditionally relied less on oak than acidity and really can evolve enormously and beneficially in bottle. I have enjoyed 40-year-old examples.

There is also the fact that today's winemakers are making white burgundies that can be enjoyed much earlier than in the past. Although I have quite a bit of old white burgundy in my own cellar, it is there partly for experimental reasons. I would feel guilty insisting that everyone should follow my example. The great majority of the 300 2019 white burgundies I have so far had the pleasure of tasting seemed ready to drink now.

This is also true of white bordeaux, which is generally based on Sauvignon Blanc with a bit of Sémillon. Lately, I have been tasting a raft of 2018 bordeaux of both colours, as the reds were bottled relatively recently and so are much more worth judging than they were when offered as cask samples en primeur in April 2019. It struck me that quite a high proportion of the whites were past their best already, even though they are entering commercial circulation only now.

At least with many white burgundies offered en primeur, they are not just bottled but shipped sooner than the reds, which means they are far less likely to be over the hill once they reach the end consumer. See left for the general burgundy shipping protocols of UK merchants with offers of the popular and very appealing 2019 vintage. FT

More columns at ft.com/jancis-robinson

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Games

A Round on the Links
by James Walton

All the answers here are linked in some way. Once you've spotted the link, any you didn't know the first time around should become easier.

1. In which multimillion-selling book of 1960 does the naturalist Gavin Maxwell chronicle his relationship with a pet otter?

2. The IBM Simon Personal Communicator, first sold in 1994, is generally credited with being the first ever what?

3. Who produced and directed the film *The Sound of Music* (above)?

4. What's the common nine-letter word for calcium oxide?

5. Which four-word phrase, coined by Bill Clinton's strategist James Carville for the 1992 US presidential election, is now in the *Oxford Dictionary of Quotations*?

6. Which two-word phrase was first used in its controversial modern sense in the anti-Darwinian 1989 book *Of Pandas and People: The Central Question of Biological Origins*?

7. Whose song "Get Lucky" was named the Record of the Year at the 2014 Grammy awards?

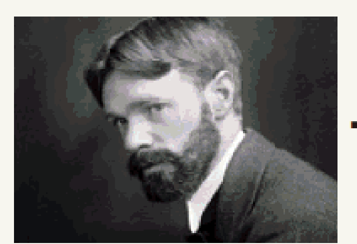
8. Which nursery-rhyme character speaks the words, "Let me taste your ware"?

9. Who was the main presenter on the 1990s children's TV show *Fun House*?

10. The hitmen Ben and Gus are the only characters in which Harold Pinter play?

The Picture Round
by James Walton

Who or what do these pictures add up to?



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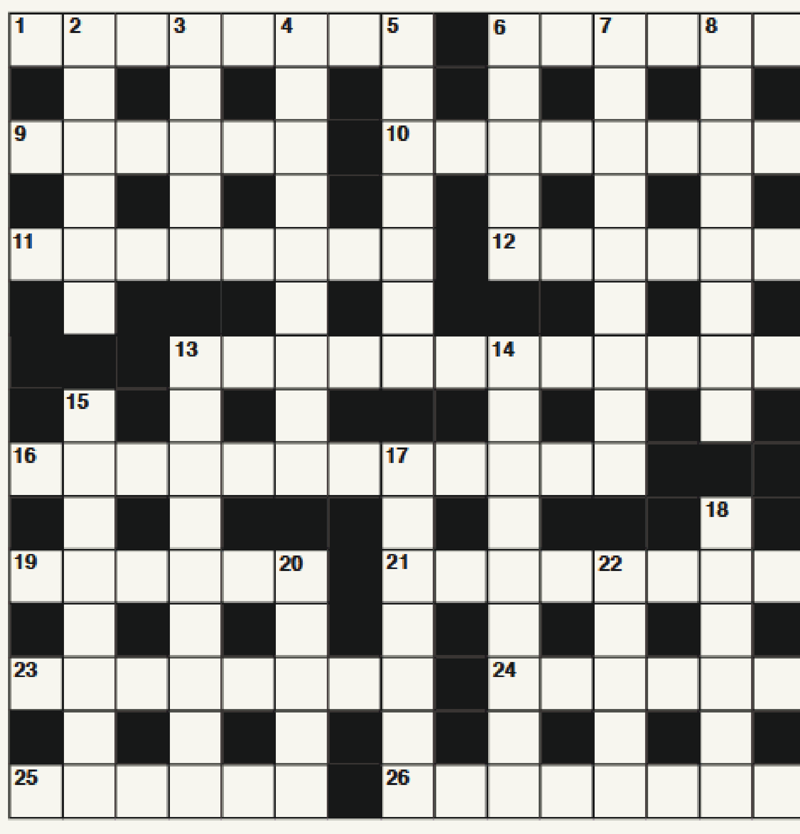
GETTY IMAGES

Answers page 8

The Crossword
No 525. Set by Aldhelm

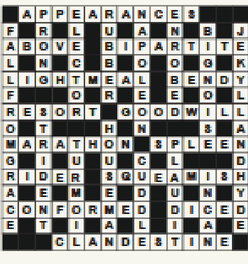


The Across clues are straightforward, while the Down clues are cryptic.

ACROSS
1 Maybe (8)
6 Destructive insect (6)
9 Turned into (6)
10 Sharpening (8)
11 Colleague (2-6)
12 Ball (6)
13 Fiery weapon (5-7)
16 Cross-country horse-race (5-2-5)
19 Horrified (6)
21 Rustic (8)
23 Legal agreement (8)
24 Drink (6)
25 Mind, soul (6)
26 Spin (8)

DOWN
2 Coot's upset about the Spanish wild cat (6)
3 Eccentric has knockout old headgear (5)
4 Meal for terribly fat bakers (9)
5 With time we're somehow sheltered by the old churchyard plant (3, 4)
6 City is in front, we hear (5)
7 Very keen to arrange chat with tutor (3-6)
8 Like some tomatoes due to be cooked with rinds (3-5)
13 Great supporter thanks staff endlessly (9)
14 Spooner's to divide affliction as an object of penance (4-5)
15 Lovely old American canyon at the top (8)
17 Famous singer drinks with sailor (3, 4)
18 Plant a bomb around centre of Nicosia (6)
20 Find outline (5)
22 Compass's golden piece (5)

Solution to Crossword No 524



GILLIAN TETT

PARTING SHOT

The Robinhood drama teaches us to open our eyes

Last week, amid the Robinhood market drama in which the trading app's users produced wild swings in several stocks, I stumbled on one of my favourite small books, *Networks of New York: An Illustrated Field Guide to Urban Internet Infrastructure*. At first glance, that title might seem distinctly dull – and not obviously connected to the current Wall Street fireworks. The book was penned almost five years ago by Ingrid Burrington, a Brooklyn-based artist turned social commentator, because she was frustrated by so few people truly understanding how the internet works.

Most notably, while we are all addicted to cyberspace, the majority of us are ignorant about the physical connections that enable the internet to work. *Networks of New York* explains how to decode the urban features of the internet around us: it suggests that, say, we follow the squiggly symbols that are painted on our streets to track the path of underground internet cables (just as a hunter in a jungle might track animal droppings to find a herd). It also describes data centres sitting inside anonymous, unmarked buildings on Broadway and Avenue of the Americas.

That might seem like trivia, but this exercise shows two things: first, how prevalent the physical underpinnings of the "disembodied" internet are; and second, how selective human vision can be. Most of us, for example, are not even aware that there are internet squiggles on the street (I certainly wasn't). But once you read Burrington's guide, they are hard to ignore. As she writes, the internet infrastructure "is not so much invisible as it is hard to see; it hides in plain sight".

What does this have to do with Robinhood? A lot. In some senses, digital brokers such as Robinhood have delivered once unimaginable transparency in finance, just as cyberspace has given us a seemingly magical window on the world. The Robinhood app makes it childishly simple for users to track asset prices, not least because "digital confetti" dances across the screen when you make a transaction.

The internet has also made it easy to watch investor debates about asset prices and to see which fees are being charged to trade stocks (fees that a site like Robinhood, which is commission-free for customers, can then undercut). This radical transparency means that investors can track market distortions and trade against them; the dash by small investors to buy assets such as silver or GameStop stock, for example, was partly driven by internet users' research into which shares institutional investors were shorting, or betting would fall. (The small investors wanted to take the opposite side of these trades.)

Yet even as small-time investors have celebrated the fruits of this transparency, many of them have been selectively blind to how the plumbing of finance actually works. Until last week, it seemed that most had not questioned why Robinhood's services could be commission-free. Answer: it is paid fees by the companies that execute its trades because they hope to squeeze out some profit of their own from the action. Those companies, however, include some of the very institutions the small investors were attacking.

Retail investors were also unaware that when share-price volatility rises, a broker like Robinhood has to post cash with a clearing house – and to meet these demands it can curb trading (which is precisely what happened last week, to the Reddit army's apparent shock). The piece of the financial markets that ordinary investors see, in other words, is just the tip of an iceberg of transactions, interlinkages and prices. This convoluted plumbing tends to be ignored until something goes wrong – just like the real plumbing in a house.

> **'The piece of the financial markets that ordinary investors see is just the tip of an iceberg of transactions, interlinkages and prices'**

This selective blindness is nothing new. Outsiders have always been at a disadvantage compared to City of London or Wall Street insiders when it comes to understanding how financial infrastructures work. But what is striking about our current age is that the internet creates the impression – or illusion – that outsiders can peer into the system and rally together to stage protests in cyberspace. That, in essence, is what happened with the Reddit crowd on Robinhood, when they ganged up on some hedge funds.

Yet precisely because most Reddit investors did not grasp the full scale of linkages in the financial system (such as the relationship between Robinhood and the clearing houses), their onslaught on its infrastructure appears ultimately to have failed. It was not because the facts were concealed by any nefarious plot – 10 minutes' online research would have shown how brokers are constrained by clearing houses. But most small-time investors were too mesmerised by the movement of share prices on their cellphone screens to look into the dull arena of financial plumbing – just as internet users are blind to the cables under the streets.

The internet has created a peculiar blend of new transparency and lingering opacity in our world: we cannot assume that the former will remove the latter unless we open our eyes to what lies beneath – in finance or anything else. FT

gillian.tett@ft.com; @gilliantett

ILLUSTRATION BY SHONAGH RAE

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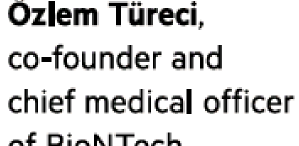

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