

Vision Review

Edition 17

Can investors
change the world?

Why more of us are investing
with sustainability in mind



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up in the
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genius**Editor**Jenifer Hall
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If you have any comments on this publication or suggestions for topics that you would like to see discussed in the future, please let me know.

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Welcome

to the Winter edition of *Vision Review*



What is today routinely referred to as responsible investing has existed in some form for decades and arguably even for centuries. Yet its rise has undoubtedly accelerated in recent years, particularly since the global financial crisis threw the broader notion of sustainability into sharp relief – and now the far-reaching impacts of COVID-19 appear to be fuelling it even further.

As a result, the incorporation of environmental, social and governance (ESG) considerations into investment decisions is no longer regarded as a nice-to-have. As we explain in our lead story, more and more individuals and organisations are now taking a keen interest in how their pensions and savings can be used to bring about positive change.

A fascinating aspect of ESG is that, once you become truly aware of it, you quickly appreciate how it plays a part in myriad aspects of life. Many of the articles in this edition of *Vision Review* illustrate this. See, for example, our pieces on the pros and cons of vertical farming, the inspiring efforts of the Redemption Roasters project, the new normal of working from home and the emergence of deep-sea tourism.

Elsewhere, as ever, we cover a wide range of topics. These include the quest to measure intelligence and the attractions of the luxury watch market. We also offer practical advice about two issues of growing significance in an increasingly digitised world – the advent of 5G technology and the management of digital legacies – and hear how members of the Vision team and their clients have responded to the challenges of the pandemic.

With regard to the last of these, I would like to thank all our clients for their loyalty and patience as Vision has adapted to remote working. I am extremely proud of how our business has reacted and how, with the benefit of technology, we have maintained our focus on putting our clients first. We look forward to normal times eventually returning, and we remain fully at your service in the meantime.

I wish you all the very best – and stay safe.

Paul Sweatton
Chief Executive of Vision

A 10-year-old girl picks radishes at a farm in the Bekaa Valley, Lebanon, where refugees from the civil war in Syria reportedly work 15-hour shifts for as little as \$8 a day.

Image: Eva Parey/Alamy





Can investors change the world?

A growing number of people are questioning how their pensions and other savings are invested. Can we make the world a better place through our investments? And if so then how?

Matt Crossman

Film director Richard Curtis has turned his focus to a new subject – the £3 trillion UK pension industry. But the man famous for *Love Actually* and *Four Weddings and a Funeral* is not trying to create a new cinematic blockbuster.

Instead, with his Make My Money Matter campaign, Curtis is aiming to give individuals more transparency around how their pension savings are invested. The initiative claims that moving money to a 'more sustainable fund' can have 27 times more impact in reducing your carbon footprint than giving up flying and becoming a vegan combined.

Until recently few people considered how their pensions and savings – often running into hundreds of thousands or millions of pounds – were being invested. Make My Money Matter highlights how attitudes are shifting. Investors are increasingly questioning how they can best use their savings to make a positive change in the world.

Avoidance

The most obvious way for many people is simply to avoid investing in certain industries. Those using 'negative screening', as it is known, typically screen out industries like fossil fuels, tobacco, munitions and gambling. They invest in funds that explicitly avoid these areas or instruct their investment managers to exclude them from their portfolios.

Where investors do not have direct power to exclude stocks – perhaps because they are part of a large employer pension scheme – they lobby for negative screening. Campaigners claim that around 1,250 institutions managing \$14 trillion between them have now decided to exclude fossil fuels from their portfolios, largely as a result of this kind of lobbying.

Half of Britain's universities have cut investment ties with the industry. So,



Employees at a metal factory in Dhaka, Bangladesh, work without protection, despite the presence of potentially toxic aluminium dust.

“It may take time and patience, but shareholders have the power to effect positive change.”

too, have two of the country's biggest pension schemes – the £75 billion Universities Superannuation Scheme, representing university lecturers, and the National Employment Savings Trust (NEST), a government-backed scheme that has nine million members.

Proponents of this approach say that by choking demand for shares in these industries you put downward pressure on the share price, which makes it harder and more expensive for companies to raise capital. In turn, you drive the value of sustainable companies up, reducing their loan costs.

You are effectively redirecting capital – the lifeblood of business – to sustainable industries and companies. You also avoid the risk of being left with stranded assets – holding shares

in valueless fossil fuel companies when the world has switched to renewable energy.

However, one of the downsides of this approach is that you limit your investment universe, which can impact returns. And negative screening on its own is insufficient. What about other sectors? You need to apply sustainability checks and filters around all your investments. This is where ESG – environmental, social and governance – comes into play.

Positive investing through ESG

Managers looking to invest sustainably judge companies not just by their financial prospects but by how they perform on ESG issues. They look for best-in-class companies that take seriously their responsibilities to the planet, their staff, customers and neighbours and that are run transparently and well.

There is a growing weight of academic evidence now to show that taking these

factors into account can boost investment performance. It seems that 'more sustainable' can also mean 'more profitable' over the long term.

Of course, ESG screening is not flawless. In July it emerged that workers in Leicester linked with making clothes for online fashion giant Boohoo were being paid just £3.50 an hour – nearly 60% less than the minimum wage.

Social media lit up with shoppers promising to boycott the company. Boohoo saw its shares lose nearly half their value in the space of a week.

Managers often rely on specialist agencies to help research and rate companies for their ESG performance. One ratings agency had given Boohoo an AA in June, with 8.4 out of 10 for 'supply-chain labour standards' (the industry average is 5.5), commending it for its strong policies and practices and its low reliance on regions where working conditions are poor.

Ratings agencies often focus on different factors and can reach very different conclusions from the same evidence. American car manufacturer Tesla, for instance, is graded A by one and ranked in the bottom 10% by another! So this is not as simple as it looks.

Divestment

Several of the country's biggest sustainable funds that had invested in Boohoo sold their holdings after the story broke. This is known as 'divestment'.

Divestment is often seen as a drastic last step for a manager, because your power to affect change within a

"There is a growing weight of academic evidence now to show that taking ESG factors into account can boost investment performance."

company shrinks dramatically once you are no longer a shareholder.

Pensions Minister Guy Opperman welcomes investors proactively seeking to use their savings more positively. But he disagrees with campaigners who have forced pension schemes to not only screen out but also divest of existing holdings of 'high-carbon stocks'.

Writing in the *Telegraph* in July this year, he said: "I strongly believe this is the wrong approach. Government believes a partnership with business is the way to achieve the innovative change required to get us to net zero.

"Holding assets places trustees in an influential position to nudge, cajole or vote firms towards lower-carbon business practices. The tactic of simply selling them to others without the same environmental concerns is counterproductive."

Opperman advocates a strategy of constructive engagement. This might involve direct dialogue with investee companies or filing shareholder resolutions at their annual general meetings (AGMs).

In 2006, for example, a number of investors used Shell's AGM to ask the company to do a much better job of ESG risk management. Four years later, in similar vein, the firm was challenged over its activities in the Canadian oil sands – vast swathes of land containing heavy deposits of glutinous bitumen or extremely heavy crude oil.

Shell was mining and processing the oil, leaving deep and ugly scars on the landscape, which needed to be restored afterwards. This is an expensive and carbon-intensive way to generate oil, and some investors questioned whether the environmental and economic risks could be justified.

In 2017 Shell sold most of its holdings. French energy giant Total also recently



Investors have challenged companies over the environmental damage caused by mining oil sands like these in Alberta, Canada.

announced that it was writing off around \$7 billion worth of oil sands assets in Alberta because the production costs are too high in a world transitioning to low-carbon energy.

In 2013 Shell began considering drilling in the Arctic. Amid investor pressure, it eventually retreated. It later also set itself an ambition to become a net-zero emissions energy business by 2050 or sooner.

Utility company Scottish and Southern Energy offers another illustration. This year, in light of investor pressure to accelerate its efforts to reduce carbon emissions in line with societal expectations, it announced that it had effectively set a plan to align itself with the Paris Agreement targets and would put an element of its executive pay at risk if it did not achieve its goals.

The lesson? It may take time and patience, but shareholders have the power to effect positive change.

Research by Professor Elroy Dimson, of Cambridge University's Judge Business School, has shown that engagement is much more likely to be successful if investors – and large investors in particular – coordinate their efforts. And the results are clear in returns. When a firm responds to engagement its share price rises in the following year – on average by 8.6% for corporate governance issues and 10.3% for climate-change matters.

It is not always easy to conduct collaborative engagement, and you inevitably get some companies joining such campaigns simply to look good. But few methods can match it when it goes well.

Broad canvas

There is a broad range of issues on which engagement is possible. You can press for improvements on environmental,



The recent scandal surrounding Boohoo exposed the use of 'sweatshops' in the fashion industry.

“When a firm responds to engagement its share price rises in the following year.”

social and governance matters – and you can continue to press.

Consider progress in tackling the scourge of modern slavery – a term covering forced labour, human trafficking, forced marriages and debt bondage, which together are estimated to affect 40.3 million people globally and 136,000 in the UK. The Modern Slavery Act was passed in the UK in 2015, and investors played a role in ensuring the inclusion of a clause compelling large companies to report on their efforts to deal with the problem.

In 2019 it was discovered that some of the 350 biggest listed companies in Britain were ignoring this requirement. As a result, a coalition of asset and wealth managers identified 23 businesses regarded as serious laggards and wrote to them ahead of the AGM season.

Each company was asked to comply with the Act and to disclose its actions in eliminating slavery from its supply chains. Each was also warned that

shareholders would vote against its reports and accounts if nothing was done. The response was significant, with the vast majority of these laggards quickly falling into line.

Ultimately, investors should not be satisfied with companies that simply report not having a modern slavery problem. Without evidence of the checks they have in place to ensure their supply chains are clean, such businesses cannot be believed. Firms should be open about potential issues and prepared to reveal how they are addressing them.

Transparency is everything – not just in the case of modern slavery but with regard to all aspects of ESG. Avoidance and divestment have value as strategies, but we sincerely believe that engagement is the best way for investors to bring about positive change.

The value of investments and income arising from them may fall as well as rise and you might get back less than you originally invested.

Rising to the challenge

Scientists estimate that if we are to feed the world's growing population we will need 70% more food by 2050. With a mere 10% of the Earth's surface suitable for cultivation and soil degradation putting much of that under threat, many suggest the answer is vertical farming. It seems the stuff of science-fiction. Can it work?

Susan Stevenson

A worker with freshly harvested baby kale grown in vertical farming beds in an indoor facility in a former paintball arena in Newark, New Jersey.

Image: Mike Segar/Reuters



Isaac Asimov believed that the job of science-fiction writers was to “foresee the inevitable”. He claimed that the problems and catastrophes that he and his fellow visionaries presaged were almost bound to happen. What they could not predict, he ruefully added, were the solutions.

Maybe the most obvious illustration of this argument today is *I Am Legend*. Published in 1954, it depicted the bleak aftermath of a global pandemic. While the basic premise has manifest resonance now, the hero's running battle with hordes of mutant vampires offers little in the way of applicable wisdom or practical responses.

Similarly, a number of classics in the dystopian sci-fi canon prophesied but failed to resolve the interrelated issues of overpopulation and resource scarcity. One, 1966's *Make Room, Make Room!*, was turned into a cult movie, *Soylent Green*, whose infamous payoff revealed an enterprising mega-corporation's plot to maintain food supplies by secretly transforming human remains into ready meals.

Thankfully, science-fact has repeatedly shown itself capable of taking up science-fiction's slack. Vertical farming, an idea that is already revolutionising agriculture, serves as a compelling example.

Its roots lie in crisis. It was inspired by a need to tackle several increasingly

“Farming is not quite being turned on its head: rather, it is being rotated through 90°.”



The pros and cons of growing up

Key advantages of vertical farming

- Potential to meet food-security demands
- Year-round crop production
- Immunity to weather events
- Less exposure to chemicals and disease
- Reduced environmental footprint

Key disadvantages of vertical farming

- Uncertain longer-term financial viability
- Unproven scale-up capacity
- Energy-intensive
- Overreliance on technology
- Suitable only for certain crops

“The general aim is to grow more in less space while avoiding the age-old drawbacks and caprices of relying on the once-great outdoors.”

pressing trends closely linked with food security – foremost among them population growth, industrial development, urbanisation, loss of arable land and climate change.

Proponents contend that all these factors demand a significant shift in our relationship with food. Traditional methods of production are no longer sustainable, they say, both because there is insufficient useable acreage and because such that is available is too distant from where the vast majority of people live.

As a result, farming is not quite being turned on its head: rather, it is being rotated through 90°.

“It's vertical because you're trying to grow more crops on a smaller land area, and this usually means going upwards into buildings,” says Dr Erik Murchie, an assistant professor of crop science at the University of Nottingham. “The beauty is that you can go as high as you want – if you have a system that works efficiently.”

A growth industry

Microbiologist and ecologist Dickson Despommier is routinely acknowledged as the father of vertical farming. He and his research team at Columbia University, New York, originally set about popularising the concept just over 20 years ago.



“One thing that vertical farming very much has in its favour is policymaker enthusiasm. The World Economic Forum has hailed the ‘numerous advantages’ of such an approach.”

Since then their thinking has been put into practice in a remarkable variety of settings. Today vertical farms can be found in warehouses, shipping containers and abandoned factories; on city-centre rooftops and behind the scenes at Michelin-starred restaurants; and in landscapes as diverse as the arid deserts of the Middle East, the frozen expanses of the South Pole and the teeming conurbations of Japan.



Ocado has made a multi-million-pound commitment to vertical farming. Its CEO, Tim Steiner, has said it will enable the company to satisfy “fundamental consumer concerns on freshness and sustainability” and that it could soon be possible for purchases to be “delivered to a customer’s kitchen within an hour of being picked”.

The Future of Food 2040, a study by the National Farmers’ Union, identified vertical farming as a potentially vital component of a radically different agricultural sector that is likely to emerge during the coming decades. It was recently estimated that the market could be worth \$7.3 billion by 2025.

So how does it all work? Essentially, vertical farming involves growing produce in multiple stacked layers that are sited indoors. Most systems are



1. A worker checks on a crop growing in a storage container at a vertical farm in British Columbia, Canada.

2. At least for now, vertical farming is suited only to growing a limited range of produce. Leafy greens are high on the list.

3. Whereas traditional farming is at the mercy of the weather, critics argue that vertical farming is overly reliant on technology.



What grows up can grow down

Between 1940 and 1942 short stretches of tunnel were built as giant bomb shelters beneath eight Tube stations. They were constructed to the specifications of the rail network with the intention that after the war they would be joined together to create a Northern Line express train route between Belsize Park and Clapham South.

Once lined with three-tiered wooden bunkbeds for war-weary Londoners, the tunnels at Clapham have now been transformed to provide the perfect environment for an underground farm.

Richard Ballard and Steven Dring, co-founders of Growing Underground, are on a mission to supply London with local produce grown sustainably, efficiently and at minimal environmental cost. In this section of tunnel they grow between one and two tons of crops – herbs, salad, pea and sunflower shoots – each week.

They use low-energy LED lighting, state-of-the-art hydroponics technology and no soil. An irrigation system recirculates water to the plants, reducing traditional usage by 70%. The underground farm uses renewable energy, and the company sends waste to be converted into electricity to offset its carbon footprint. It is on its way to becoming carbon-neutral.

The quality of the produce may be even better than that of field-grown crops. The highly controlled environment means optimum growing conditions can be maintained

year-round, dramatically increasing yields – pea shoots typically provide six harvests a year, but grown underground like this they can achieve up to 60.

Because of the farm's location in the heart of the city, plants can be in consumer kitchens within four hours of harvest. Thanks to short travel times and an absence of pesticides, they maintain a high level of nutrient density and require little washing.

Growing Underground, which employs 30 staff, is currently using just 500 square metres of the available 3,000-square-metre growing space here – but it has plans to expand to meet demand.

Ballard says: "The real game-changer for this technology comes in the near future, when the world has an abundance of cheap, renewable energy and better battery storage and is further along the exponential growth curve in adaptation of remote sensor technology. We can then start to produce the full spectrum of vegetables and staples like wheat, soya and maize cost-effectively.

"Then you will see companies like ours building major farms inside, over, under and on the outskirts of major conurbations. This, in turn, will allow agricultural land currently threatened from soil degradation or environments such as rainforests to replenish and return to their natural form."

Above: Richard Ballard, co-founder of Growing Underground.

"While an ability to grow crops throughout the year and almost anywhere in the world undoubtedly represents a major advance, vertical farming has not yet been perfected."

aeroponic or hydroponic, and there is rarely any need for soil. Lighting is strictly controlled and often comes courtesy of state-of-the-art LEDs. Temperature, humidity and plant density are thoroughly regulated. Thanks to recycling, water use can be up to 95% less than in conventional farming.

The general aim is to grow more in less space while avoiding the age-old drawbacks and caprices of relying on the once-great outdoors. COVID-19 and lockdown have seemingly only enhanced the appeal of such a philosophy: Infarm, the specialist with which Marks & Spencer has partnered, reported a 222% surge in sales during the second quarter of 2020.

"People want to eat the same food at all times of the year," said Emmanuel Evita, Infarm's global communications director, when the M&S deal was announced. "This, combined with lengthy transportation routes and overtaxed soil, takes a heavy toll not just on the environment but on the taste and nutrition of what we eat. Our approach allows us to be climate-independent and grow under any conditions, despite extreme

weather or disasters that normally interfere with food production and distribution.”

Storeys of hope

While an ability to grow crops throughout the year and almost anywhere in the world undoubtedly represents a major advance, vertical farming has not yet been perfected. Above all, its longer-term financial feasibility is still uncertain.

Critics suggest that the cost of constructing, lighting and heating vertical farms could outweigh the benefits that they can bring. In 2018 the Japanese Greenhouse Horticulture Association said that 60% of the country's projects were unprofitable.

Energy use is a particular worry. Artificial lighting and climate management can be notably energy-intensive. Andrew Jenkins, a research fellow at the School of Natural and Built Environment at Queen's University, Belfast, has warned that this could leave vertical farms in a “grey area” and “a long way from being a sustainable method of agriculture”.

Relatedly, dependency on technology is total. Vertical farms may be immune to droughts, floods, cyclones, dust storms and other natural phenomena, but they stand at the mercy of power failures and tech breakdowns. A single day without fully functional systems could devastate an entire crop.

Currently, there are also constraints on what can be grown. Only lightweight produce is suitable, which means that the likes of wheat and maize – which rank among the most important food sources – are too large and heavy to be cultivated.

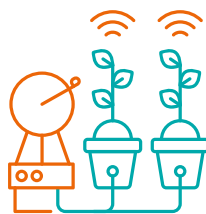


Marks & Spencer is one of several major High Street names to have embraced vertical farming. The company now grows and sells a selection of herbs at a number of its London branches, including this one near Clapham Junction Station.

The hope, of course, is that further innovation will address these concerns. If and when this happens, say vertical farming's advocates, the route to mass adoption should be clear. The ultimate proof will lie in the viability of scaling up.

Perhaps crucially, one thing that vertical farming very much has in its favour is policymaker enthusiasm. The World Economic Forum has hailed the “numerous advantages” of such an approach, underscoring the impression that this is perceived as an authentic solution.

Science-fiction gave us stories; science-fact has given us storeys. It is not difficult to determine which is likelier to have longer-term relevance. As the fight to stave off the inevitability of overpopulation and resource scarcity continues, we may soon discover if the sky really is the limit.





Redemption Roasters has offered Darren, 46, a fresh start.

Image: Redemption Roasters

Cup of cheer

Redemption Roasters is a remarkable business that gives prisoners hope for the future by training them to become skilled baristas.

Melanie Wotherspoon

Darren had been in prison for much of adulthood when two events transformed his life. The 46-year-old found God, and he found coffee. Faith gave him hope, coffee gave him passion, and Redemption Roasters gave him a job.

Eighteen months since his release from Wormwood Scrubs, Darren is still going straight, working as a barista in the Lamb's Conduit Street branch of the growing coffee shop chain.

He is one of a growing band of former prisoners now employed by Redemption Roasters, which has seven shops in London and a thriving wholesale business, working with restaurants, bars, cafés, offices and even some National Trust properties.

Accidental heroes

Founders Max Dubiel and Ted Rosner did not set out to build a commercial charity. Entrepreneurs first and foremost,

they developed the company as a spin-out of Dubiel's first coffee business, Black Sheep.

"We wanted a brand that had a proper story to tell," says Dubiel. "Through coincidence, we were approached by the Ministry of Justice, which was looking for industry partners to deliver barista training in prisons. We thought that was pretty out there. It could be an interesting story that we could build a concept around – and, rather than just doing barista training, why not actually build a roastery in a prison and teach the whole value chain around coffee?"

"Of course, we constantly tread the line between sustaining a successful, profitable business and doing good. People have a misconception that roasting in prisons is cheaper. If we were doing this purely for commercial purposes we would just open a warehouse – it would be easier – but it would take the story out of what we do."

"Being around people and having a purposeful job changes your whole outlook on life. The mindset from my old life is gone. I feel like I'm making amends."

Redemption's first roastery was at Aylesbury, a young offender institute. Now the business delivers barista training in seven male prisons and a community-based laboratory. It is looking to expand to a women's prison.

Inmates considered for the barista course are carefully vetted beforehand. Dubiel says: "We don't really look at the criminal offence they've committed but the risk they present – we would never want to put our staff at risk. We look at their behaviour record and then at whether they have an interest in coffee, any background in coffee shops and where they are going to be released and when."

Impact

Not everyone who takes the course progresses further than the initial three-week training. Dubiel says you can tell quite quickly who has the potential and who "just signed up to get out of their cell". Even for those who do the course for a change of scene, though, the benefits can be huge.

"Just three weeks of meaningful activity results in less violence, less depression, fewer incidents of self-harm and a better outlook on life, as well as better job prospects," says Dubiel.

This positivity carries on outside the prison gates. Nearly half of the adult prisoners released each year reoffend within 12 months, but two-thirds of those who are given education or training will still be walking the straight and narrow a year after release.

Inmates who shine on the course begin to develop an advanced level of coffee cognisance. Over three weeks they learn about espresso extraction, brew ratios and temperatures and how to steam milk to a fine micro-foam.

Dubiel says: "You really need exceptional skills to be a good specialty coffee barista.



1. Inmates learn to distinguish between different varieties of coffee. 2. The perfect pour can take thousands of attempts to fully master. 3. Max Dubiel, co-founder of Redemption Roasters.

"Just three weeks of meaningful activity results in less violence, less depression... and a better outlook on life."

It's something people who don't know specialty coffee underestimate. First of all, it's the knowledge about the coffee, where the coffee comes from, what sort of roast level it's got and how best to prepare it.

"There's quite complicated chemistry involved when it comes to brew ratios, temperatures and extraction times if you want to extract an espresso well. Then most coffees in the UK are drunk with milk. That's also not as easy as it seems. Steaming milk well is difficult, and you really need several weeks of training and hands-on experience. If someone steams the milk well then it caramelises beautifully, frothing to a

Bean counters

399 inmates

have completed Redemption's barista training programme, as of March 2020

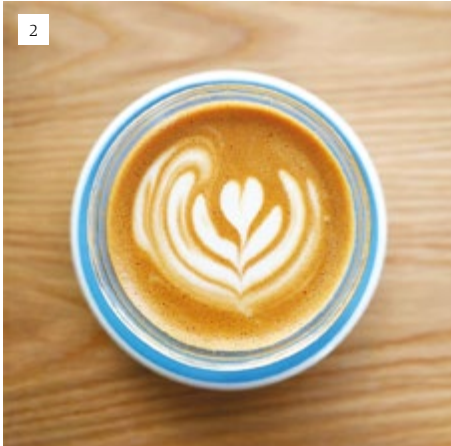
17 graduates

have been employed by or had employment facilitated by Redemption Roasters in 2019

7 prisons

are working with Redemption Roasters





really fine micro-foam that almost has the consistency of honey and makes your flat white into something lovely.”

Successful graduates of the course who do not find a job with Redemption are helped into employment elsewhere within the hospitality industry. “Ex-offenders are incredibly loyal,” says Dubiel. “They work harder than anyone else, because they have to.”

COVID impact

COVID-19 has inevitably been a serious blow to the business this year. It came just after a successful funding round in December and the opening of a new, much bigger roastery. Dubiel says: “The timing of the fundraiser was lucky, because I don’t think we would have found any investors foolish enough to invest in the hospitality business a few months after it.

“We were at complete capacity at our previous roastery in Aylesbury – we



Fair trading

Redemption Roasters blends most of its coffee from Brazilian, Colombian and Honduran beans. In addition, it offers single-origin coffees in season from countries like Kenya, Uganda, El Salvador and Ethiopia.

The business does not subscribe to the Fairtrade movement. Dubiel says: “It was brilliant at making people aware of commodity prices in the 1990s, but we pay between four and six times what the Fairtrade Foundation prescribes for our coffee today. We work with smaller farmers who couldn’t afford the Fairtrade audit.

“It’s eye-opening to see how coffee provides entire livelihoods and how much manual labour goes into its production. Just pouring away a single cup of coffee pains me after having seen all the manual work that’s gone into every single bean that’s made it.”

Redemption’s original roaster in action at Aylesbury, a young offender institute.

“We constantly tread the line between sustaining a successful, profitable business and doing good.”

were actually working seven days a week. We opened a much larger space at HMP The Mount and got a huge roaster in there. From a 50-square-metre workshop, we moved into an 800-square-metre workshop. From a roaster that could do about 12 kilos per batch (or 1.5 tons a week), we could now do 70 kilos a batch (or 10 tons a week). Then COVID struck and we were literally doing all our week’s roasting in about half a day. But at least it gave us scalability for when this is all over.”

Dubiel’s biggest concern was his staff. “When it all kicked off and our shops were forced to close, it was a big shock at first. One thing that the UK government isn’t actually given a lot of credit for is that its help came through so quickly, which is so important – especially in our industry, where you’re dealing with ex-offenders. These guys are extremely vulnerable and live hand to mouth. They don’t have savings. They have to turn to some imaginative means of finding money if you’re only two weeks late with their pay.”

For Darren, Redemption Roasters has quite literally been a godsend. He says: “It’s a good environment for me. I’m in society. Being around people and having a purposeful job changes your whole outlook on life. The mindset from my old life is gone. I feel like I’m making amends.”

Home comforts?

Working from home rather than in the office was once regarded as the preserve of a fortunate few. COVID-19 and lockdown have now democratised the concept, but are we witnessing an authentic new normal or an exigent fad whose relevance and appeal will fade over time?

Harveer Mata

In 2019, in his role as the world's first professor of health humanities, Paul Crawford co-authored *Florence Nightingale at Home*, an exploration of how the founder of modern nursing achieved many of her greatest feats while bedridden with a condition contracted during the Crimean War. Little did he know that less than a year later, thanks to COVID-19, working from home would become a new normal for millions of us.

As this trend has accelerated, several major companies have already indicated that their staff need never return. PwC chairman Kevin Ellis has declared that "lockdown has done away with presenteeism", while one major employer in the City has hailed a "rethinking of the rulebook on flexibility".

But does it automatically follow that the future lies in remoteness, cloud computing and video conferencing? Maybe not. There is already a growing suspicion that what might strike us as

"There is already a growing suspicion that what might strike us as novel and refreshing today could prove less appealing over the longer term."

novel and refreshing today could prove less appealing over the longer term, with unhappy consequences both for the economy and for our basic notions of humanity and social cohesion.

Viewed in this light, the shift to remote working does not constitute a classic instance of crisis giving rise to positive change: rather, it represents a salutary illustration of the old axiom that you should be careful what you wish for. So which, if either, is true?

Crawford, director of the Centre for Social Futures at the Institute of Mental

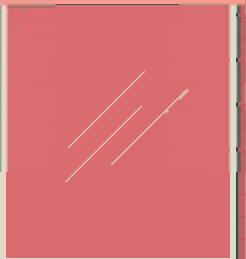
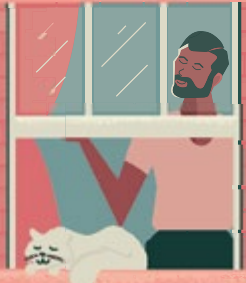
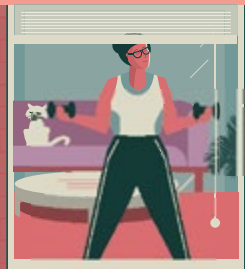
Health, appreciates both sides of the coin. This year, alone in his own property for almost six months, he has written *Cabin Fever: Surviving Lockdown in the Coronavirus Pandemic*. "Florence Nightingale was able to accomplish more from her bed than most people could accomplish in a traditional office," he says, "but for many individuals the impact of prolonged confinement may lead to a home environment that can just as easily resemble a prison as it can a sanctuary."

A dream come true?

Confronted by the apparent monotony and perceived rigours of office life, most of us will at some point have dreamed of working from home. We will have fantasised about trading a tedious commute and a nine-to-five regime for the comfort of our own abode and the elasticity of a self-imposed timetable. We will have yearned to abandon our chairs, desks and suits and instead embrace our sofas, laptops and pyjamas.

Few of us, though, will have expected these longed-for privileges to be granted in such abrupt and extraordinary fashion. Working from home is one of the most prolific new normals to emerge from the COVID-19 pandemic, and suddenly the office has rarely – if ever – looked more passé.

According to research by Morgan Stanley, UK workers have been reacquainting themselves with their in-trays at a slower



rate than their counterparts in other major European countries. Only 34% of British white-collar employees surveyed in July had returned to the office, compared with an average of 68% for France, Germany, Italy and Spain.

Similarly, ManpowerGroup, a specialist in staffing and talent management, reported 'negative sentiment' about going back to work among 73% of UK employees. The analysis, published in August, revealed this level of disinclination to be unmatched elsewhere in other large European economies and equalled only in the US.

Estate agents have also identified trends that appear to demonstrate a reluctance to resume old routines, with Rightmove recording a major post-lockdown surge in city dwellers looking to relocate to rural areas. "The most popular village moves are still within the same region the home-hunters are currently in," says Rightmove founding director Miles Shipside, "as it's likely they'll keep their current job but may have more flexibility to set up their working space at home."

"The crisis has shown that more jobs could be successfully done remotely if the right conditions are met, but it is also true that human interaction can be important."



Reality bites

All these findings seem to indicate that many people, having at last enjoyed a long-awaited taste of it, prefer remote working. Above all, they welcome the freedom that comes from controlling their own work environment, conditions and schedule. Studies have repeatedly linked working from home with increases in job satisfaction and individual productivity.

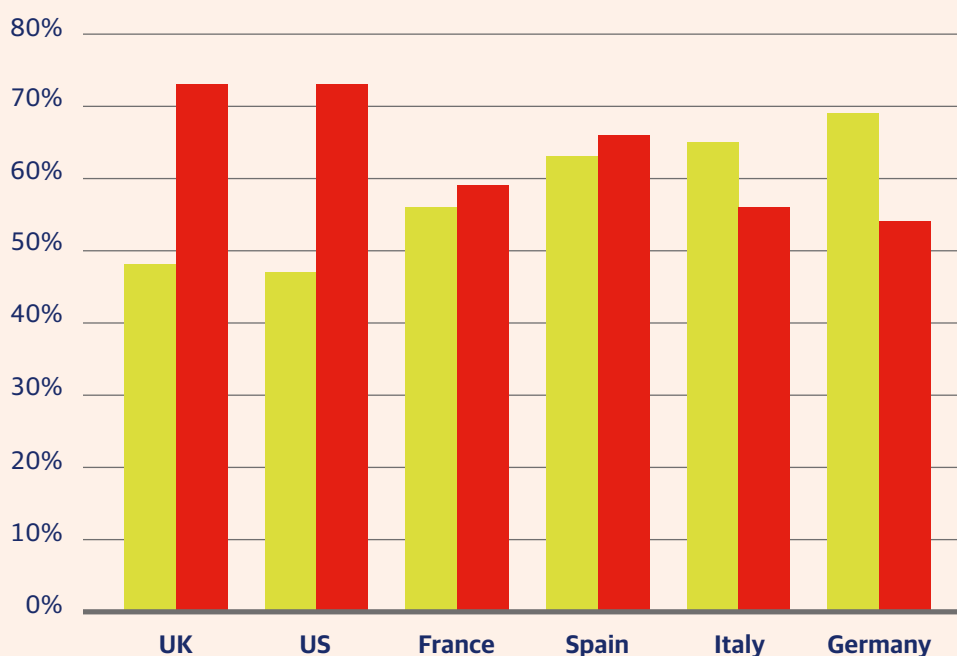
There can also be benefits for employers. While reduced spending on office space is the most obvious, research has suggested that employees are likely to be more committed to their work, which should result in lower staff turnover, and more efficient, which should contribute to enhanced profits.

But there are also disadvantages. Take the experience of Stanford University economist Nicholas Bloom, author of a widely cited study that found home-based call-centre staff to be 13% more productive than their office-based peers: in May 2020, five years after his seemingly prescient findings featured in the *Quarterly Journal of Economics*, he ruefully admitted

Point of no return

Published in August, research by ManpowerGroup revealed the extent of UK workers' reluctance to go back to their offices. The study questioned 8,000 employees around the world, asking if they had positive and/or negative sentiments about the prospect of returning to work.

■ **Positive sentiment**
■ **Negative sentiment**



Source: ManpowerGroup, August 2020

to *The Atlantic* that his own productivity during lockdown was being dented by his children's bagpipe lessons.

The reality, as Bloom discovered, is that working from home – like working in an office – is not for everyone. Many people are likely to miss their colleagues, authentic collaboration, a sense of belonging, a creative spark, guidance, banter, gossip, team spirit, a reliable broadband connection, a true feeling of work-life balance, even office politics.

Dr Ekaterina Nemkova, of Paris's IÉSEG School of Management, recently carried out a study of designers exclusively reliant on digital platforms. She found that many have “feelings of despair and anger” and think of their working lives as “devoid of meaning”. “The COVID-19 crisis has shown that more jobs could be successfully done remotely if the right conditions are met,” she says, “but it's also true that human interaction can be important.”

Confusion and caution

Policymakers spent much of late summer using both economic and emotional arguments to encourage workers to return to their offices. Bank of England governor Andrew Bailey reportedly expressed his shock at the deserted scenes encountered on his daily drive to Threadneedle Street. Fearing vacant real estate, plummeting rents and the collapse of small businesses desperate for footfall, Mayor of London Sadiq Khan lamented that remote working presented “a big problem” for the capital. A resurgence in COVID-19 infections then brought a dramatic change in sentiment in early autumn. Amid continued uncertainty,

“It may be natural to enthuse about working from home now, but the idea might not be so attractive after another six months or so.”

The tech-sector paradox

The home working challenge is not new to some sectors. In the 2000s, reflecting their more relaxed approach to corporate culture, fledgling tech giants such as Yahoo and Google encouraged employees to abandon the office – but more recently, before the pandemic struck, they brought everyone back again.

This may explain why Microsoft CEO Satya Nadella recently warned against “over-celebrating” any perceived productivity gains from remote working. What he really missed, he told the *New York Times*, was genuinely “connecting” with his colleagues. “I feel we’re burning up some of the social capital we built up,” he said. “Where’s the measure for that?”

The irony, of course, is that these companies, whose technology makes home working possible, are now ideally positioned to profit from everyone else burning up their own social capital.



employees and employers alike face tricky choices.

“The overall picture is mixed, to put it mildly,” says Nottingham University Business School's Professor David Falzani, a venture capitalist and the president of the Sainsbury Management Fellowship. “I know of a company that secured a 10-year lease on a new office in anticipation of doubling in size. Now it's struggling to figure out what to do, because the staff aren't keen to go back to ‘the old ways’. I know of a company that's set to save hundreds of thousands of pounds a year by going completely remote. And I know of a company that plans to reduce its office space by 50% through hot-desking. As ever, there are risks and opportunities.”

Given this confusion, further surveys about happiness and productivity might be taken with a pinch of salt for the time being. It may be natural to enthuse about working from home now, but the idea might not be so attractive after another six months or so – especially when some efforts to ensure that productivity is *maintained*, such as accessing employee webcams, could be seen as draconian intrusions.

All things considered, it may be that we have not yet found a genuine new normal. At least for some of us, sofas, laptops and pyjamas could turn out to be every bit as susceptible to the Groundhog Day effect as chairs, desks and suits. It is still too early to say, and for now we would be wise to proceed with care.

“The key message at this stage is simply that remote working doesn't suit everybody,” says Crawford, “and that's why the liberation that we expect from working from home should be met with great caution. The potential damage from spending long periods without flesh-and-blood sociality needs to be carefully factored into all post-pandemic innovation, because the home can prove both sweet and sour.”

Adjusting to lockdown

Commuting has become a rarity when the severest lockdown measures have been in place, rendering once-crowded routes to and from the office practically deserted.



Martin Fisher is a Regional Director with Vision. Here he explains how the rapid emergence of remote working and other consequences of lockdown affected his professional and home life as the COVID-19 pandemic took hold.

I've been with Vision for seven years and have been a Regional Director since January 2016. I'm responsible for five Area Directors and a total of 50 Independent Financial Advisers and Mortgage Advisers.

In an average week, traditionally, my job entailed two days in my home office and three days out visiting Area Directors and advisers – the latter often involving client meetings as well. Responsibility for adviser recruitment and the IT department at our head office in Falmouth also added to my travels. All things considered, it was prudent to keep a close eye on the mileage limit agreed with the car-leasing company!

I actually noticed the number of in-person meetings starting to decline even before lockdown was declared. People were already becoming more and more aware of the problems that were emerging. And then the official announcement came.

As a senior management team, we had to act quickly to ensure we all followed the correct guidance while maintaining an excellent service. With the markets experiencing dramatic falls, it was especially important to stay in effective contact with clients.

We considered every aspect of our operations and basically redefined best practice. As is often the way in times of crisis, many of the changes we were forced to make turned out to be very positive. We identified various improvements that not only helped in the face of unprecedented events but should also continue to help when normality returns.

As relative calm was restored to the markets, we stayed focused on how to make doing business as easy as possible



for clients and IFAs. With the help of our amazing back-office team and IT experts, we were able to start fully remote working within a matter of days – quickly embracing the likes of electronic signatures, email confirmations and virtual conferencing.

I'm convinced that all these innovations should benefit our business and clients over the longer term. In addition, thanks to the wonders of Zoom and Microsoft Teams, we've now also found out what all our colleagues' homes look like inside!

Work-life balance

Overall, the transition was smooth in some ways and challenging in others. Like ducks, we may have appeared to be gliding effortlessly on the surface – but beneath the water we were paddling pretty furiously.

Everyone worked in excess of normal business hours at the height of lockdown. As well as doing all we could to maintain our usual levels of service, we used isolation to catch up on an array of pending matters. It was easy to feel like you were welded to your seat in front of your computer.

After a few months – which sometimes, I must admit, felt like a few years – we were gradually able to begin meeting again, in accordance with government guidelines. Both as a business and as humans, we were delighted to take a significant step back towards normality. I did notice a few more beards than previously.

Did we cope with lockdown? Yes. Was it enjoyable? Not really. Like everyone, we had to balance multiple demands.

On the whole, though, our industry got off quite lightly compared with many



“As is often the way in times of crisis, many of the changes we were forced to make turned out to be very positive.”

others. My wife, for example, runs an event management company: with hospitality among the hardest-hit sectors, work dropped off a cliff almost overnight.

My son also had cause to be disappointed. He had to return from Oxford University after just two terms to carry on his studies at home – and he certainly wasn't going to get any expert input from me, as my knowledge of biochemistry is somewhere between rusty and non-existent.

He soon perked up, though, when 'sport within the family' became possible again. He's an excellent cricketer, so we headed to the local nets two or three evenings a week for some practice.

Focusing on the positives

This time spent in the nets proved useful, as cricket matches were allowed to take place during the second half of the season. My son played several times for his club and for Oxford, including in the Varsity match against Cambridge.

The pandemic has compelled millions of employees to transform a little corner of the home into a makeshift workspace – or maybe even a permanent one.

He finally returned to university in early October – and was locked down twice in the first week, pending COVID tests on fellow students. Thankfully, the results were negative. It has since been interesting to hear how peer pressure is increasingly discouraging irresponsible breaches.

Meanwhile, back at home, I took great joy in the reopening of golf courses. Suddenly it became essential to set an alarm for early on a Saturday morning, which is when the only tee times suitable for my schedule are available.

Premier League football also recommenced, albeit in empty stadiums. The downside was that my team, Watford, were relegated – pipped to the last 'staying up' position by Aston Villa, a side supported by an Area Director colleague (he may have mentioned it – and still does).

Most importantly of all, my wife and I were able to see our mothers again. While I understand the need for restrictions, I always thought the rules around visiting the elderly took little account of the problem of loneliness. Neither of our mothers is au fait with video communication – my mum would be more likely to tie a message to a pigeon's leg than to use Zoom – so contact had been limited to phone calls. It was brilliant to resume 'real' relations.

By the time you read this, of course, much may have changed again – for better or worse – but I think it's essential to remain focused on the positives. As a business, we've become even more efficient; my wife's firm has begun taking bookings again; my golf handicap has improved by one; and my car lease has got cheaper. It's by no means a great situation, but at least we're all still talking to each other.

The next-gen network

5G is being rolled out across the UK. Some say it will revolutionise life as we know it, while others fear it will damage our health and threaten national security. Here we try to answer the need-to-know questions about the new network tech.

Adam Drummond

What is 5G?

5G stands for 'fifth generation' cellular wireless – the next step up from 4G network technology.

How does it work?

Operating on the same mobile networking principles as 4G, 5G taps into higher, short-distance frequencies that older technology cannot access. There are three frequency bands – low, mid and high – providing a range of speeds.

Experts estimate that 5G could provide download speeds 10-20 (and some say eventually a hundred) times faster than those of 4G. It will also reduce latency – the time it takes for a device to make



Images: Cavan Images/Alamy

a request and receive a response from a server – to almost zero. There will be increased bandwidth, meaning the network can handle more connected devices.

How will it change the world?

Aside from providing faster connection, 5G is set to advance several industries.

Increased connectivity could revolutionise healthcare, especially in time-critical situations. Wearable fitness trackers may be able to monitor current health and alert doctors as soon as an emergency arises. Caregivers in rural or remote locations could receive real-time instruction from professionals based elsewhere, meaning patients who previously would have needed to uproot their lives and move to access care could stay in their homes.

5G is likely to accelerate smart cities and autonomous vehicle development. Cars will be able to connect not only to other vehicles but to live map and traffic data, picking up information on road conditions, weather, accidents and upcoming obstacles.

'Smart agriculture' may even be a possibility, boosting the efficiency of farming by encouraging more targeted use of fertilisers, pesticides and water.

The Internet of Things – the network of devices connected to the internet – is also likely to expand. It is expected to reach 43 billion 'things' by 2023. 5G will allow increased machine-to-machine communication, as well as making appliances easier to control remotely.

Will it work?

It is likely to depend upon location. If you are in a densely populated urban

"5G could provide download speeds... up to a hundred times faster than those of 4G."

area with close access to transmitters – yes. If you live on a farm 10 miles from your nearest neighbour – probably not (or at least not yet).

As 5G uses higher frequencies, which are most effective over short distances, a greater number of smaller transmitters – roughly the size of a suitcase – need to be installed, at huge cost to phone companies. It makes financial sense to fill cities with the tiny transmission towers, but the commercial reality is that rural or remote areas are at the bottom of the waiting list.

Will it work on my current phone?

No, unless you have bought one of the 5G phones released by the likes of Samsung and Huawei (Apple's 5G model is imminent as we write). And even if you have the right phone you may not get a signal. The 5G network is being rolled out but is far from nationwide.

Who will pay for it?

Major phone companies will make the massive initial investment needed to install transmitters. Some have already launched their networks. Eventually, though, consumers will bear the brunt, as even a handset with a basic SIM is likely to cost over £100 more upfront than its 4G equivalent.

What are the cybersecurity concerns?

5G may present a world of tech opportunities, but experts fear it will open more windows of opportunity for

hackers, too. It is only as secure as the weakest link, and if there are more links then there are more vulnerabilities. If 5G enables smart cities and self-driving cars, as expected, what happens if a hacker crashes the system, shuts off a city's water supply or takes control of delivery drones?

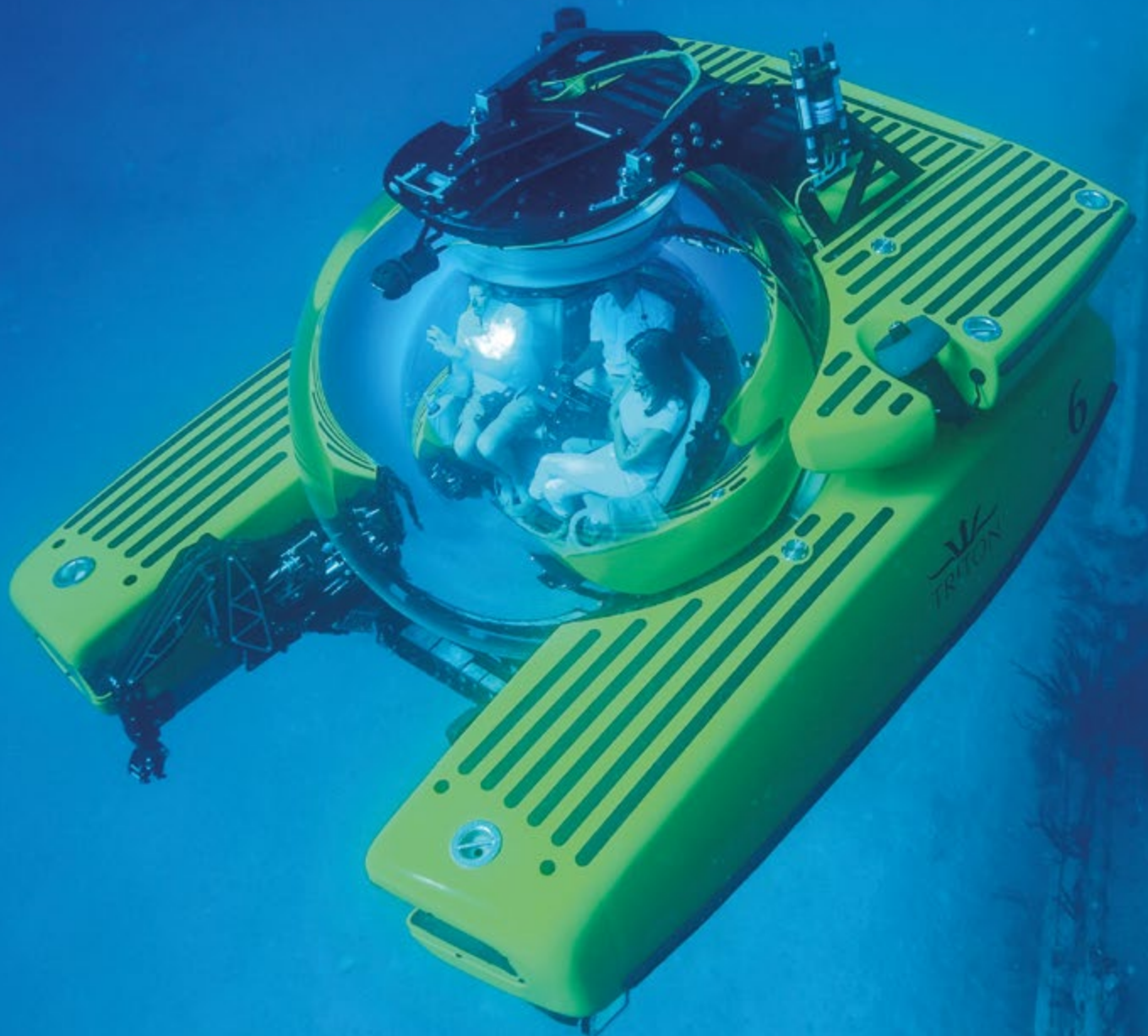
The US's anxiety about Chinese tech firm Huawei's involvement in the construction of 5G networks is ostensibly about national security concerns. There are fears that through Huawei the Chinese government might get access to intellectual property and critical communications infrastructure.

Is it safe?

News sites are full of negative public reactions to 5G, with some even linking it to coronavirus. Transmission towers have been set on fire. Telecom engineers have been attacked, with Openreach reporting 50 incidents of abuse in April alone.

5G employs the same radio frequencies that have been in use for decades. The radio waves are non-ionising, meaning they lack the energy to cause cellular damage. The highest band of 5G frequency is millimetre-wave – so weak that it can be blocked by clothes and skin. It is likely that 5G will be even safer than 4G, as the smaller transmitters will be able to run at lower power levels. This means less radiation exposure from antennas.

There are many who have concerns about our increased exposure to devices. The World Health Organisation has classified all radio frequency radiation as "possibly carcinogenic", due to inconclusive evidence that exposure causes cancer in humans. However, pickled vegetables are in the same category. Cynics argue that if 5G worries you then sauerkraut should, too.



A Triton 1650/3 LP explores a shipwreck off the coast near Nassau in the Bahamas. This is the world's lightest and most compact three-passenger production submersible. It can reach depths of 500 metres (1,650 feet).

Image: Nick Verola/Triton

A yellow and black deep-sea submersible is shown underwater, illuminated by its own lights. The submersible has a large circular viewing port and various mechanical components visible on its exterior. It is positioned in the upper left quadrant of the page, with the rest of the page featuring a solid blue background.

Uncharted waters

Four thousand people have scaled Mount Everest, tens of thousands have visited Antarctica, and even the Moon has had a dozen visitors leaping through its dust. Until recently the bottom of the ocean presented the biggest challenge to travellers. But that is all changing. Welcome to the world of deep-sea tourism.

Ian Tansley

Close to seven miles beneath the Pacific Ocean surface, at the southern end of the Mariana Trench, lies the deepest point on Earth. Known as Challenger Deep – after HMS *Challenger*, which first sounded the spot in 1875 – it is a mile deeper than Everest is high.

In 2012 James Cameron became only the third person to touch its floor. The director of classic films like *Titanic*, *The Abyss* and *Aliens* plunged solo in his deep-diving submersible, *Deepsea Challenger*.

This is a world that sees no sunlight. Temperatures are freezing, and the pressure is immense – the equivalent of 291 fully loaded jumbo jets on your head.

But even at the bottom Cameron found life. He recorded sightings of small amphipods – shrimplike bottom-feeders. Scientists studying footage from his voyage believe they have also identified a new species of sea cucumber – “like a fat worm with long feeding appendages”.

“There are more species to be discovered in the ocean than have ever been seen on land.”

More recently the fourth person to visit the site, American private equity investor and undersea explorer Victor Vescovo, found something more depressing – a plastic bag.

In 2019 Vescovo completed a record-breaking expedition to map and visit the bottom of all five of the world's oceans in his British-designed submarine, *Limiting Factor*.

Research and tourism

Soon visiting the ocean bed may be as common as climbing Everest – something Vescovo has also done. Isle of Man-based Eynos Expeditions helped Vescovo fund another expedition in June this year to take seven more people

to Challenger Deep in individual trips. At least one of them paid \$750,000 for the privilege.

This was the first time the general public has been offered tours into the 'hadal zone', the murky depths of 20,000 feet and further beneath the waves, named after Hades, Greek god of the underworld.

Slightly more mass-market, another company is offering to take five crew at a time on its new vessel, *Titan*, to visit the *Titanic*, some 12,500 feet below the surface of the Atlantic, in 2021. *Titan*, a 22-foot-long submarine that has a five-inch-thick carbon-fibre shell, can dive to 13,000 feet.

Stockton Rush, founder and CEO of OceanGate, which is organising the six-week trip, wants to combine research and tourism. He says: "That was how exploration was funded in the past – through wealthy donors. Every dive we do has a mission. On the dive to RMS *Titanic* scientists and citizen explorers will collaborate to survey and document the world's most famous shipwreck. The scientific goals include assessing wreck decay, surveying marine life and creating archaeological maps.

"We recognise that this historic site is a memorial, and we are committed to undertaking our mission with great respect for those who lost their lives during the tragic sinking in 1912. We will not disturb the site or remove artefacts."

Each week nine tourists will join the expedition crew and be trained as what Rush calls "mission specialists" to carry out dive support roles, like

"Everyone who travels into space and who has the good fortune to travel beneath our oceans becomes an environmentalist."

Join the superyacht sub club

Submarines are becoming a must-have accessory for superyacht owners. Aston Martin has joined forces with specialist manufacturer Triton to build state-of-the-art submersibles for the luxury world, promising "all the performance, beauty and elegance one has come to expect from the British marque".

The submersibles make extensive use of transparent acrylic in the pressure hull to give the pilot and two passengers visibility in every direction. And they are designed to stow easily, so as not to take up too much precious deck space.

The Triton 1650/3 LP offers owners 12 hours below water in a climate- and temperature-controlled cabin, with hand-stitched leather seats and an integrated sound system. It will take you to depths of 1,650 feet. And if money is tight then a second-hand model can be had for just \$3.3 million.

Even luxury car manufacturers are going underwater. Targeted at superyacht owners, this submersible has the design and luxury you would expect from Aston Martin's involvement.

navigation and sonar or laser scanning. They will each complete one nine-to-10-hour dive to the historic wreck with a pilot, a scientist or a *Titanic* expert and two other tourists. They will pay \$125,000 for the opportunity.

Space parallels

Deep-sea exploration may be becoming more common, and no-one has ever been killed in a modern deep-sea submersible. But the risks are still there. Trips are always unpredictable.

Cameron's famous voyage was supposed to give him a six-hour stay on the ocean floor. It was curtailed to three after a hydraulic fluid leak caused the loss of the submersible's starboard thrusters.

Rush has been trying to run a trip to the *Titanic* for a couple of years. His first bid was thwarted by lightning, the second by ship problems. He hopes next year will be third time lucky.

Explorers repeatedly compare themselves with astronauts – they call themselves aquanauts. Indeed, the first woman to visit Challenger Deep this year was NASA veteran Dr Kathy Sullivan – also the first woman to walk in space.



Images: Project Neptune/Triton, iStock, Reeve Jolliffe

0-600 feet:
90% of ocean life lives here

820 feet:
Dive depth of a
nuclear submarine

1,090 feet:
Deepest recorded
scuba dive

3,280 feet:
Last trickle of sunlight (midnight zone)

6,600 feet:
Anglerfish

9,816 feet:
Deepest-diving whale

12,100 feet:
Average depth of the ocean

12,467 feet:
Titanic's final
resting place

20,000 feet and below:
Hadal zone — named after Hades,
Greek god of the underworld

26,831 feet:
Deepest living fish
ever filmed (snailfish)

29,029 feet:
Mount Everest
inverted

36,200 feet:
Challenger Deep



Above left: *Limiting Factor* — a world-beating two-person vessel designed to withstand the crushing water pressure

that exists nearly seven miles below the ocean surface. Above right: Explorer Victor Vescovo boards *Limiting Factor*.

Jim Delgado, once the chief scientist mapping the *Titanic*, says: "What we're doing is tapping into the final frontier. Beneath the ocean I can boldly go where no-one's gone before. I can seek out new life as well as evidence of past civilisations."

Rush, who has an aerospace engineering degree and always wanted to be an astronaut, says: "Spaceships and submarines are similar. They have to deal with some of the same challenges, like recycling air and how you go to the bathroom."

Fragile planet

Dr Scott Parazynski is a veteran of five Space Shuttle flights. He has discovered the thrill of deep-sea exploration and plans to join Rush's *Titanic* trip. He says: "Space flight makes you feel infinitely small. When you look back on your home planet and see this beautiful orb beneath you, then turn 180° and see the vastness of the universe and trillions and trillions of stars, you realise what an oasis our planet is. It makes you feel very appreciative and humble."

"Deep-sea exploration is similar. Everyone who travels into space and who has the good fortune to travel beneath our oceans becomes an environmentalist, because you realise how fragile our ecosystem is and how lucky we are to even be alive."

"The pressure is the equivalent of 291 fully loaded jumbo jets on your head."

Rush shares that environmental passion and believes that it is important to open the opportunity to more people. He says: "I had an epiphany that if I couldn't be an astronaut I wanted to be an explorer. I built a two-person sub, and on my first dive I was just amazed at how different it was from scuba diving and how incredible the experience was. I thought everybody needs to go underwater."

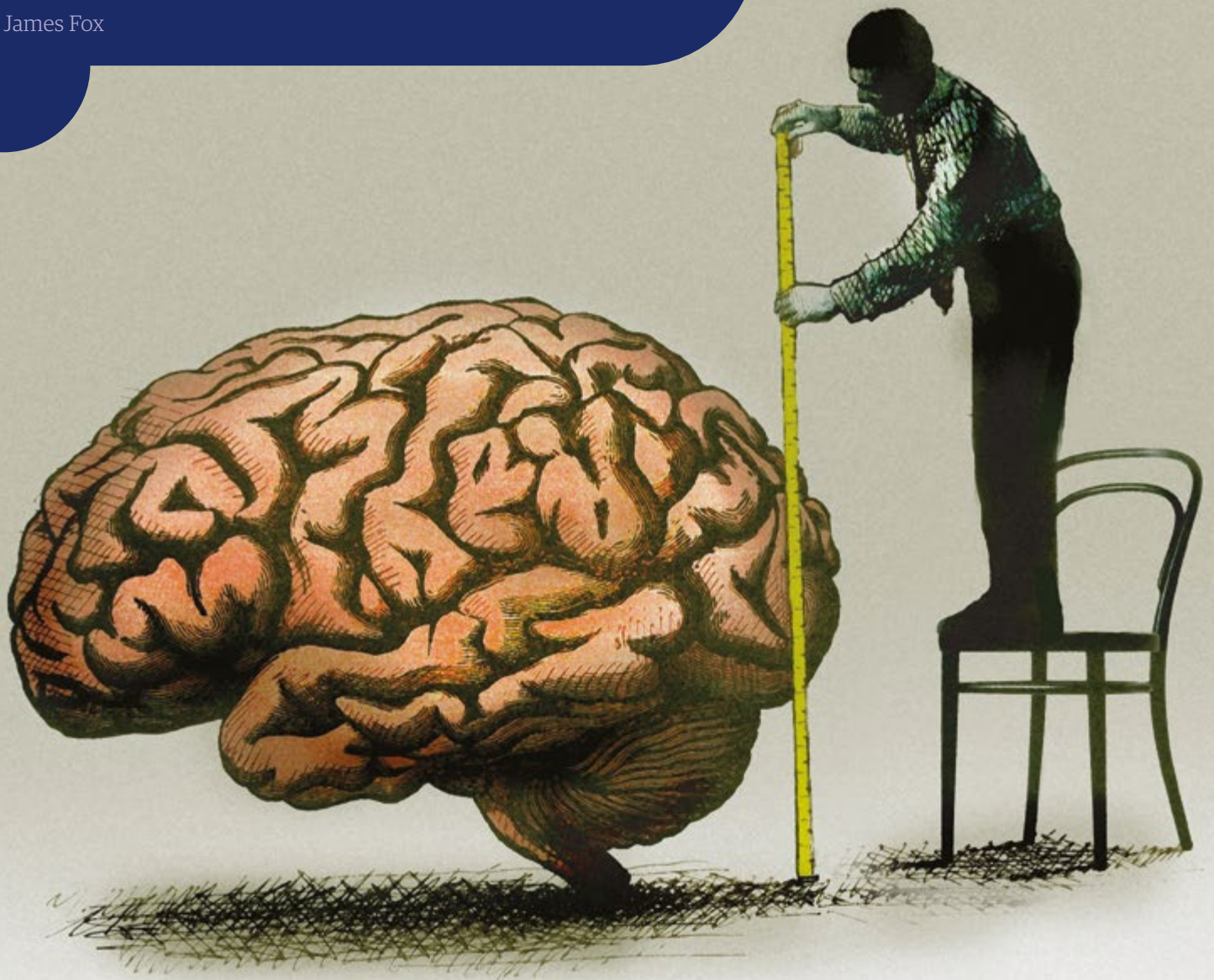
"If you look at liveable volume, 98% of the planet is ocean. There are more species to be discovered in the ocean than have ever been seen on land, yet most of the world doesn't know that. When I learnt to scuba dive my instructor would say: 'Below 130 feet? You don't want to go down there, because there's nothing down there.' That's been proven to be false."

"So many amazing things are underwater that it's humbling as a human to say we've been on this planet all this time and we're only now getting any kind of understanding of the deep ocean."

Understanding intelligence

Attempts to gauge intelligence have invariably invited controversy. Will the idea of being 'gifted' always defy meaningful metrics and, if so, are there other ways in which we might better appreciate the innate nuances of brainpower?

James Fox



“Not everything that can be counted counts, and not everything that counts can be counted.”

– William Bruce Cameron, *Informal Sociology*, 1963

Like so many highbrow aphorisms, the above is routinely – and wrongly – attributed to Albert Einstein. As a pithy commentary on the science of measurement, it is especially suited to the long-running debate over how to assess intelligence.

In such a context, without wishing to denigrate the eminent Professor Cameron, we might well prefer to think of Einstein as the originator. His place in the pantheon of supreme intellects is, after all, undisputed.

For more than a century, in one form or another, the most popular method of measuring intelligence has been the IQ test. Conceived in the early 1900s, it is still largely regarded as superior to every alternative that cutting-edge science might offer.

In the final reckoning, though, what does any effort to evaluate intelligence really tell us? Does it provide a rich picture of a person's traits and potential or merely a one-off snapshot that cannot begin to capture myriad nuances and possibilities?

For example, while there is no evidence that he ever took an IQ test, we do know that Einstein flunked an exam. In 1895, when he applied to study at what is now the Swiss Federal Institute of Technology, his overall grade was insufficient for a pass.

So are attempts to understand what we call ‘intelligence’ essentially futile? Is the presumption that intellectual prowess

guarantees success misguided? And will we ever conceive an irrefutable means of quantifying what makes someone ‘gifted’?

The story of IQ

Alfred Binet was director of the psychology laboratory at Paris's Sorbonne. In 1904 he was commissioned to conduct a study that would help spot children requiring special education.

Binet assembled a series of brief tests, each based on everyday problems and demanding basic reasoning. German psychologist William Stern, who tweaked Binet's initial scoring system, coined the term ‘intelligence quotient’ – IQ – eight years later.

Crucially, Binet saw his invention only as a way of determining which youngsters might need assistance. Above all, he was averse to IQ being used to condemn a child as without hope – an abuse that he branded “brutal pessimism”. “Intellectual qualities cannot be measured as linear surfaces are measured,” he warned.

As evolutionary biologist Stephen Jay Gould observed in his celebrated book, *The Mismeasure of Man*, Binet's aim was “to identify in order to improve, not to label in order to limit”. Unfortunately, others thought differently.

Within a few years, particularly after their arrival in the US, IQ tests were seized upon as a prospective means of social engineering. It was proposed in

“Neurodiverse individuals frequently exhibit a marked mixture of exceptional abilities and patent weaknesses.”

some circles that respondents recording the lowest scores be funnelled into lives of drudgery and those recording the highest be singled out for advancement and opportunity.

Today's IQ tests are designed to be much more multifaceted and are certainly not used for the mass reordering of society. Nonetheless, many people's opinion of them might still be best encapsulated in Christopher Hitchens' claim that there exists "an unusually high and consistent correlation between the stupidity of a given person and a propensity to be impressed by the measurement of IQ".

Novel approaches and neurodiversity

Are there alternatives? Two forms of scanning, magnetic resonance imaging (MRI) and positron emission tomography (PET), have recently been gaining momentum in the research community.

At Washington University in St Louis, Missouri, experiments have found that around 10% of differences in intelligence can be ascribed to the strength of specific neural pathways in the brain. The findings to date suggest that the left lateral

"It may be that what we call 'intelligence' forever defies truly meaningful measurement; yet this is not to say that we cannot continue developing our understanding of it."

prefrontal cortex – in other words, the part of the brain towards the front-left of the head – 'directs' the rest of the mind.

Scanning has also been used to detect the volume of grey matter and to show which regions of the brain excel at which challenges. Researchers hope that this could reveal more about how, when and why particular processes associated with intelligence connect with each other.

Even the experts conducting them concede that these studies are in their infancy. However, such state-of-the-art approaches may eventually tell us more about what is now commonly referred to as neurodiversity – the neural variations that affect learning capacity, attention span, sociability, mood and other mental functions.

This phenomenon contradicts many long-established precepts of 'intelligence'. A vital contention is that neurodiverse individuals frequently exhibit a marked mixture of exceptional abilities and patent weaknesses – for instance, an enhanced facility for focusing on difficult tasks and a conspicuous lack of empathy.

Consider one of Einstein's peers, Paul Dirac. He was so oddly disconnected from those around him that he once silently listened to two students' painstaking elucidation of their hypothesis and then, as they braced themselves for his perceptive critique, simply asked if they could direct him to the local post office. "I have trouble with Dirac," Einstein admitted. "This balancing on the dizzying path between genius and madness is awful."

The many faces of 'intelligence'

So Einstein failed an entrance exam but went on to formulate perhaps the most celebrated theory in the history of science. And Dirac – now believed to have been profoundly autistic – was almost incapable of human interaction but, like Einstein, won a Nobel Prize for his revolutionary thinking.

It seems realistic to infer, as is now widely acknowledged, that those whose promise might not be immediately apparent can be capable of greatness. But is it also possible that those whose promise appears manifest can fall woefully short of expectations?

One of the most important insights into this question emerged almost 50 years ago at what was then the Administrative Staff College in Henley-on-Thames – now Henley Business School. It was there that management consultant Meredith Belbin embarked on his groundbreaking research into collaboration in the workplace.

Belbin devised a range of 'business games' to analyse management teams



An improved understanding of intelligence is already redefining our notions of how the brain continues to develop and how lifelong learning can help us stay more active and productive.

Image: iStock

in action. One pitted a so-called Apollo Team – named after NASA's space programme, a renowned hotbed of talent – against teams less obviously blessed with the brightest and most highly qualified members.

It was soon discovered that the Apollo Team, contrary to intuition and expectation, regularly lagged behind its rivals when playing Belbin's 'games'. The problem, Belbin realised, was that 'intelligence' alone was insufficient to enable it to work as a unit: in the absence of other skills, prodigious potential did not translate into performance.

This finding contributed to Belbin's fundamental conclusion, which has increasingly shaped the sphere of business ever since: the most effective teams are those that bring together different kinds of people. Outlined in his seminal book, *Management Teams: Why They Succeed or Fail*, this represented a landmark in the cause of diversity in the workplace.

Beyond measurement

Today, as our concept of 'intelligence' becomes more sophisticated, new ideas are further refining the thinking of companies, individuals and even policymakers. One is that we should pay much more heed to how intelligence alters over time.

Generally speaking, research and experience indicate that our speed of calculation peaks when we are in our late teens, that our short-term memory is at its sharpest when we are in our thirties and that our emotional intelligence maxes out when we reach

"While there is no evidence that he ever took an IQ test, we do know that Einstein flunked an exam."

Different people, different gifts

Meredith Belbin's pioneering research challenged long-held notions of 'intelligence' and propelled the idea of diversity beyond considerations such as gender and race and into the realms of skills, thinking and creativity. Belbin outlined nine 'team roles':

Resource investigator

Uses inquisitive nature and networking to find ideas and bring them back to the team

Teamworker

Helps the team gel, using versatility to identify and complete tasks

Coordinator

Focuses on the team's objectives, delegates duties and seeks equity within the team

Plant

Highly creative, inventive and adept at solving problems in unconventional ways

Monitor evaluator

Strategic, discerning and able to offer impartial judgments and logical perspectives

Shaper

Delivers the drive required to ensure that the team maintains momentum and focus

Implementer

Draws on practical thinking to plan a workable strategy and provide what the team wants

Completer finisher

Most effectively deployed at the end of tasks to apply 'polish' and ensure quality control

Specialist

Single-minded, self-starting, dedicated and able to bring in-depth knowledge to a key area of a task

our forties or fifties. This broadly fits into the accepted three stages of life – education, work and retirement.

However, these stages do not necessarily coincide with the idea of 'fluid intelligence', which refers to our aptitude for learning new skills, and 'crystallised intelligence', which refers to our accumulated wisdom. In a new book, *The New Long Life*, London Business School academics Andrew Scott and Lynda Gratton argue that demographic trends clearly lend themselves to exploiting this distinction by remoulding education as a lifelong process.

The key to teaching old dogs new tricks, say Scott and Gratton, is to *keep* teaching them. This, in turn, has implications for our working lives: we can all carry on making a significant contribution if employers and legislators recognise – and maximise – the combination of fluid and crystallised intelligence that everyone possesses.

It may be that what we call 'intelligence' forever defies truly meaningful measurement; yet this is not to say that we cannot continue developing our understanding of it. We can see this in the pride of parents who appreciate that their children can be gifted in countless ways and that even genius can sometimes be a burden; in the policies of organisations that treat diversity not just as a matter of gender, race and other patent distinctions but as a matter of 'invisibles'; and in the spread of attitudes that, reflecting Binet's formative ethos, endeavour to use metrics – however inadequate they might be – to help rather than to hold back.

Ultimately, the true measure of anyone's brilliance or otherwise is unlikely to lie in an isolated score, ranking or data point. It can be gauged only by his or her achievements over the entire course of a life. So it was for Einstein and Dirac; and so it should be, given the chance, for all of us.

Managing your digital legacy

Lockdown has increased the amount of time we spend using our phones and computers. As more of our music, photos and documents end up stored online and shared through social media platforms, there is growing unease about what happens to these digital assets when we die.

Matthew Barnett, Partner, and Jessica Brittain, Associate,
Edwin Coe LLP



In 2019 a YouGov survey found that only 7% of people want their social media accounts to remain active after they die. However, it is estimated that by 2100 there could be 4.9 billion dead users on Facebook alone.

With the growth of online storage solutions, many items of sentimental value, such as family photographs, are now stored only 'in the cloud', potentially causing difficulties and stress for executors, family members and loved ones.

A 2017 Law Commission report entitled *Making a Will* identified no consistency of approach to the problem in the terms and conditions of service providers.

What are digital assets?

There is no formal definition of digital assets in English law. It can often be helpful to consider digital assets as falling into one of three categories:

- **Financial value** (online bank, shopping, betting, forex and investment trading accounts, PayPal and cryptocurrencies)
- **Social value** (social media accounts, like Facebook, Twitter and Instagram)
- **Sentimental value** (digital photos, iTunes library and YouTube account).

Generally, digital assets with financial value are legally owned by the individual and can pass in accordance with a will to the intended beneficiaries. Where these assets have a financial value, this must be calculated and included in any inheritance tax assessment on death.

In contrast, the situation for digital assets with social or sentimental value is less clear. Sentimental digital assets, such as personal photographs stored electronically on smartphones, tablets and computers, fall within your estate.

However, gaining access to content on these devices after death can cause practical challenges. Device manufacturers are not inclined to grant access to third parties, even

law enforcement agencies. Apple has famously defended this position against the FBI on a number of occasions.

The ownership of digital assets with social or sentimental value that are stored on or accessed via an online account or cloud service is regulated by the contract or the terms and conditions of use between the individual and the service provider.

In some cases the right to use the content and/or service will terminate on death and therefore cannot be passed to beneficiaries. In other cases providers allow access to executors with a suitable grant of probate, individuals with a court order or individuals appointed to manage the asset on death, such as Google's Account Manager and Facebook's Legacy Contact options.

Practical tips

Given the variety of types of digital asset and how they will be treated on death, there are various sensible steps you can take to try to ensure the smooth transmission of these assets when you die.

- Prepare a private, hard-copy inventory of all your devices and accounts with logins and passwords. Include details of any 'keys' or 'wallets' for cryptocurrencies, as without them valuable assets may be lost. Try to maintain and regularly update this inventory and store it with your solicitor (with your will) or with your private papers. Include instructions that devices and accounts are to be accessed only by either your executors after death or your attorneys under any registered Lasting Power of Attorney (LPA) in case of mental incapacity. Do not share these details during your life. This is particularly important in relation to social media accounts, whose terms and conditions often prohibit the disclosure of login details and passwords to third parties.
- Consider consolidating your digital assets by closing any unused accounts.

"Keeping your digital affairs in order should be part of your day-to-day financial housekeeping."

Head in the clouds



Seven out of 10 UK adults now make video calls at least once a week.

Source: Ofcom



On average, UK adults have spent over four hours a day online since lockdown.

- When preparing your will, consider how you would like your digital assets dealt with and whether your chosen executor has the ability to access and deal with them in accordance with your wishes and the relevant law.
- Consider preparing a separate letter of wishes in relation to your digital assets. It is beneficial to set out your wishes in a private letter accompanying your will. The letter should address whether you would like any or all of your digital assets to pass to specific beneficiaries on death and whether you would like any or all social media or online accounts to be deactivated or memorialised.
- Familiarise yourself with service providers' terms and conditions regarding what happens on your death. Some social media websites allow executors limited access to memorialise an account. Others offer you the option to nominate a legacy contact during your lifetime.
- Where your rights of ownership of the assets terminate on your death, as in the case of various cloud-based photo storage facilities, you should consider backing up your most important digital content on an external hard drive or similar physical storage device.

Who can access my digital assets if I lose capacity?

Separately, it is worth considering who you would want to look after your affairs, including your digital life, during your lifetime if you do not have mental capacity. LPAs can be prepared, appointing attorneys to protect your financial and personal interests in such circumstances. There are two types of LPA: one covering property and finance decisions, the other covering health and welfare decisions.

Property and financial affairs LPAs will grant your chosen attorney authority to deal with digital assets that have financial value (for example, online bank accounts and online shopping). Among other things, health and welfare LPAs empower the attorney to deal with the donor's social and leisure activities. There are differences of opinion in the legal world as to whether this authority extends to social media accounts. This will be subject to the relevant terms and conditions of each social media platform.

Conclusion

Digital assets pose a number of difficulties for English succession law, which has certainly not kept up with our ever-increasing online dependence. The best advice is that you should not delay putting your digital affairs in order. As well as the legal and tax consequences of having a digital estate, the practical administration of such assets can cause a great deal of stress for your executors and loved ones. Keeping your digital affairs in order should be part of your day-to-day financial housekeeping.



Matthew Barnett, Partner and Jessica Brittain, Associate, Edwin Coe LLP



Roger W Smith Watches produces only around a dozen examples a year. Prices can reach up to a quarter of a million pounds.

Buying time

Luxury watches increasingly retail for tens of thousands, hundreds of thousands and even millions of pounds. Many only increase in value when sold second-hand. Is this simply because they are exquisitely made or are other forces at play?

Nicholas Hall

In 1974, while stationed in Asia, a US Air Force mine-clearing expert ordered a watch through his base's post exchange, the standard conduit for servicemen and servicewomen wishing to obtain consumer goods. He paid \$345.97 – roughly a month's salary – and took delivery the following year.

His purchase was a Rolex Oyster Cosmograph, otherwise known as a Daytona. He had seen something similar adorning the wrists of several pilots employed by Air America, the airline covertly operated by the CIA during the Vietnam War, and he knew from the outset that it was a fine watch.

However, it quickly proved to be much more than that in his eyes. It was, he decided, simply too beautiful to wear. Unwilling even to remove the foil sticker from its rear casing, he eventually locked it away in a safety deposit box – where, with all its packaging and documentation, it stayed for the next four decades.

In January this year it at last re-emerged to appear on an episode of the American version of *Antiques Roadshow*, where it was duly hailed as probably the most original example of its kind and valued at up to \$700,000. Amid gasps from onlookers, its owner – a man supposedly accustomed to bombshells – crumpled to the ground before slowly getting back



The Heuer Monaco has been iconic ever since Steve McQueen wore one in his 1971 motor-racing film, *Le Mans*.

“Factor in advertising, branding and other generators of kudos and you have what could be regarded principally as a status symbol.”

to his feet and mumbling: “You gotta be kiddin’.”

How can a timepiece bought for a few hundred dollars nearly half a century ago be worth almost three quarters of a

million today? More broadly, why are some watches so expensive and why do so many of them not only maintain their value but become ever more desirable?

The veteran's never-worn nest egg may perfectly encapsulate the two sides of the explanation. On the one hand – no pun intended – it is a matter of tangibles, such as materials, engineering and craftsmanship; on the other, it is a matter of *intangibles*, such as prestige, self-expression and emotion.

Traditionally, of course, it is suggested that you cannot put a price on elements such as those in the latter camp. But the reality, as the ever-flourishing watch market's many devotees will readily attest, is that we do.

Ticking all the boxes

One of the most fascinating things about an expensive watch is that, strictly speaking, it might not perform its primary function any better than a cheap counterpart. Rightly or wrongly, some sceptics would argue that it may even be inferior in this respect.

After all, humble battery-powered watches tend to be pretty precise – at least over the short-to-medium term – whereas mechanical watches, which are typical of the high-end bracket, require winding and might thus be more prone to losing a second or two. Meanwhile, automatic watches, which do away with batteries and winding alike, often still rely on components that legendary horologist Abraham-Louis Breguet first conceived more than 200 years ago (see *Ahead of his time*, page 38).

Luxury watches might therefore be viewed as distinct from, say, luxury cars or luxury hi-fi systems. A luxury

Ahead of his time

Abraham-Louis Breguet invariably features in experts' lists of the greatest-ever watchmakers. He more often than not tops them. Born in 1747 in Neuchâtel, then a Prussian principality, he entered the world of horology at the age of 15 after his family moved to France.

His glittering career was punctuated by landmark breakthroughs, many of which are still used today. He invented the self-winding watch, the minute repeater and the tourbillon – a cage that protects against the possible negative effects of gravity by regularly rotating a watch's entire movement.

His crowning glory, though, is indelibly associated with a revolution of another sort: in 1783 he was commissioned to produce a watch for Marie-Antoinette, the last Queen of France before the storming of the Bastille. It featured every known 'complication' – the term nowadays used for any feature beyond the registering of hours, minutes and seconds. Unfortunately, Breguet took 44 years to complete it, by which time the intended recipient had been sent to the guillotine.

The Marie-Antoinette, as it became known, eventually served as an exhibit at Jerusalem's LA Mayer Institute for Islamic Art. But in 1983, along with a number of other Breguets, it was sensationally stolen by a burglar named Na'aman Diller.

It remained lost until 2007, when Diller's widow revealed that her husband had stored it in a bank vault in Paris. He had immediately realised that it was too famous to offload on the open market. Subsequently valued at \$30 million, it is now back at the LA Mayer Institute.



Breguet's Marie-Antoinette is widely considered the *Mona Lisa* of the watch world and has been valued at \$30 million.

"On the one hand, it is a matter of tangibles, such as materials, engineering and craftsmanship; on the other, it is a matter of *intangibles*, such as prestige, self-expression and emotion."

car should handle better than a modest runabout; a luxury hi-fi system should sound more exquisite than a £10 pair of headphones attached to an iPad; but a luxury watch, for all its fabulously intricate 'complications', may not boast a time-telling ability conspicuously superior to that of a less celebrated alternative – or, for that matter, an ever-present smartphone. So what are you actually paying for?

Most obviously, you are paying for quality. It hardly need be said that an 18-carat-gold, gem-encrusted masterpiece whose arcane inner workings have been painstakingly assembled by an artisan in Switzerland should retail for more than a stainless-steel, mass-produced model churned out at a factory in the Far East. In the words of Thierry Stern, CEO of Geneva-based Patek Philippe, it is the difference between "buying a painting and buying a TV screen projecting the image of a painting".

Notwithstanding Breguet's enduring influence, you are also paying for research and design – as illustrated, for instance, by Richard Mille's RM 001 Tourbillon. When it was launched in 2001, attracting high-profile 'ambassadors' such as tennis ace Rafael Nadal, it drew on innovative techniques more commonly found in Formula 1 and the aerospace sector, among them cutting-edge particle-binding processes and the use of titanium parts. An RM 001 sold for almost a quarter of a million pounds at auction in 2016.

Finally, you are very likely paying for exclusivity. There are precious few unworn Rolex Oyster Cosmographs – hence *Antiques Roadshow's* vertigo-inducing appraisal. A Lange & Söhne Grand Complication, each example of which contains almost 900 moving parts and is fashioned over the course of a year at the company's HQ in Glashütte, Germany, costs around \$2.5 million. A unique iteration of Patek Philippe's World Time, which displays 24 time zones simultaneously, fetched more than \$4 million in 2002 and is reckoned to be worth substantially more now.

"The way we interact with people about very sought-after watches is very important," says Daniel Compton, UK general manager of Audemars Piguet, maker of the acclaimed Royal Oak. "Invariably, the question is: 'What number am I on the list?'" Small wonder, perhaps, that in 2019 the annual global market for pre-owned watches, where sellers can register a tidy profit and buyers can jump a queue, was estimated to have grown to \$16 billion.

The world is your Oyster

However, any aficionado will insist that this is only part of the story. As *Antiques Roadshow's* resident specialist was quick to point out, a key reason for the Rolex's jaw-dropping worth is that the Daytona is the stuff of cachet, history and even celebrity.

Paul Newman made the model famous – if not near-mythical for some



Roger Smith, of Roger W Smith Watches, has been called the world's finest watchmaker. He insists that his clients, rather than simply wanting an expensive item, are "very technically orientated".

enthusiasts – by sporting his own Daytona in *Winning*, an otherwise forgettable motor-racing movie released in 1969. In 2017, at an auction in New York, the watch was sold to an anonymous telephone bidder for a world-record \$17.8 million. "Many people are saying this is the greatest watch on the planet," vintage Rolex collector Geoff Hess told *Forbes*. "It transcends watch-collecting. It transcends the watch community."

Similarly, Steve McQueen, Newman's fellow Hollywood icon, immortalised the Heuer Monaco while headlining another tale of on-track derring-do, 1971's *Le Mans*. Having recently marked its 50th anniversary, the model remains the leading light in the rebooted TAG-Heuer line-up today. McQueen's Monaco sold for almost \$800,000 in 2012, and even battered examples of the rudimentary Benrus military watch that the 'king of cool' wore in *Bullitt* now go for hundreds of pounds on popular websites such as Chrono24. Such is the power of association. Factor in advertising, branding and other generators of kudos and you have what could be regarded principally as a status symbol.

One revered industry figure who might disagree with this slightly unflattering interpretation of the market is Roger Smith, who fulfils around a dozen bespoke commissions a year at his isolated workshop on the Isle of Man.

He personally makes every part of every watch, and his prices range from £120,000 to £250,000. He insists that his clients, far from merely wanting to show off, are "very technically orientated".

Smith does add, though, that a luxury watch is undoubtedly a "nice-to-have" – and this, above all, is surely what our lucky USAF friend told himself before making what would turn out to be his life-changing trip to the post exchange back in 1974. Ultimately, there is an innate satisfaction in owning *anything* nice. Moreover, should you somehow fall out of love with your extravagance of choice, the prospect of losing very little, recouping your initial outlay or even making a profit is likely to provide no mean comfort.

Nonetheless, it is vital to remember that not every luxury watch represents a guaranteed investment. Many lose value as soon as they are bought, just like countless other goods characteristic of what American economist Thorstein Veblen branded "conspicuous consumption".

Remember, too, however bizarre the notion might seem, that it may pay to keep your prize possession well away from your wrist. As the Rolex's dazed owner was gently warned when he had regained his senses: "If you wear it, it drops down to \$400,000." Hard times, indeed.

Cometh the hour...

As the market for luxury timepieces grows, watchmaking in the UK is experiencing a renaissance. A number of specialists, including the Great British Watch Company, Robert Loomes, Wessex and Garrick, are earning increasing acknowledgment in an arena long dominated by Switzerland and Germany.

Thomas Tompion (1639-1713) is widely regarded as the father of British horology. One of his students, George Graham (1673-1751), was responsible for several innovations before passing the baton to Thomas Mudge (1715-1794), who invented the lever escapement – still the most commonly used escapement today.

Arguably the most celebrated member of the current generation is Roger Smith, of Roger W Smith Watches. One of the few people to have mastered all 32 of the skills necessary to construct a watch from start to finish, he has often been acclaimed as the finest watchmaker in the world.

"It's not a label I really think about," he said when interviewed in 2019. "I just get up each day and try to make watches you can't find anywhere else. Being a watchmaker is all I've ever done since I was 18, and that's where I'm happiest."

Like many of his British contemporaries, Smith sees low volume as a hallmark of excellence. "Companies tend to announce their annual increase in production as though it was a recognition of doing well," he said, "but if I made 20 watches a year I'd know something must have gone down in quality."

Q&A

Paul Roberts *IFA and Director
Gilder Wealth Management*



Paul Roberts

Born: Deganwy, North Wales

Lives: Abergele, North Wales

Professional qualifications: Associate of the Institute of Bankers (ACIB) from the London Institute of Banking and Finance; Diploma in Financial Planning (DipPFS) from the Chartered Insurance Institute

First job after school: I had a summer holiday job as a clerk at Barclays Bank. I worked in the machine room in a branch with more than 50 staff. My roles were answering the telephone to customers – which was a new experience for me, because we never had a telephone at home – and splitting bank statements. I dreaded one customer, a local housebuilder who wanted all his paid cheques back with his statement, but I always thought he was at least keeping an eye on his costs. Years later, when his company floated, I remembered my experiences with him and invested my annual bonus in the shares – which have multiplied several times since. The company is Redrow, now one of the largest housebuilders in Britain.

Hobbies: cycling and following F1

Married to Alison; 18-year-old twins Alex and Amelie

How long have you been an adviser?

Since 1988. My first customer was a farmer, and I was accompanied by my manager. He told me to park my car facing out, just in case we needed to make a quick getaway! It's a tip I still practise to this day.

How have things altered since you first became an adviser?

Back then my Know Your Customer form was a single side of A4 paper. Appetite for investment risk was expressed through body language. And there was no compliance checking.

I used to joke with clients when meeting them in the bank manager's wood-panelled room that one day they would deal with a virtual me via video link – never imagining that 30 years later I would still be around and, thanks to COVID-19, undertaking meetings via Google Meets.

What have been your career highlights so far?

I have to thank HSBC and my colleagues there for giving me a fantastic career of over 34 years of friendships, work experience and knowledge. I joined Midland Bank, as it was back then, in 1984 as a management trainee and was fast-tracked through various branch functions before becoming an adviser in personal financial services, private banking and trust company – and then, finally, an adviser to high net worth customers and private clients.

What service do you feel you offer clients today?

A first-class personal service built on trust. It's an absolute pleasure to look after my clients, and I feel we're more like friends.

"I used to joke with clients that one day they would deal with a virtual me – never imagining that 30 years later, thanks to COVID-19, I would be undertaking meetings via Google Meets."

What do you do after work?

When I'm not taxiing my twins to their various sporting activities, I like to unwind by watching travel programmes. I enjoy Michael Portillo's *Great Railway Journeys* – hence the picture of us at the Rathbones Investment Conference in 2019.

He was telling me about his next show, *Great Australian Railway Journeys*, and I told him about my travels on the Ghan – probably the most famous train in the country. We laughed, because the Ghan travels through the Outback and all I saw was bush – not even a kangaroo.

What is your typical day like?

I believe I have a good work-life balance.

I wake up early and read the business pages over breakfast, check the markets on Bloomberg TV in my home office and attend to any emails. I take my twins to school and then either undertake a client meeting – face to face, by telephone or via video link – or attend a technical webinar from a wealth manager.

In the late afternoon I pick up my twins from school. After that, if the weather is sunny, I go for a long bike ride. If it's wet and windy then I'm available to immediately answer any queries or concerns that might come

from clients, many of whom may be doing their 'homework' by that time.

What would you like to change in the financial services arena?

Put a stop to micromanagement. It's detrimental to mental wellbeing.

What were the biggest challenges that your business faced in anticipation of and during lockdown?

I suddenly found all my family at home, all using the Wi-Fi, with the kids constantly complaining: "The Wi-Fi is playing up again." Thankfully, we've now upgraded our network.

I also have to spare a thought for my wife. She works from home in the conservatory, and she resembles a tomato in summer and a snowman in winter.

Did the changes that you were forced to implement tell you anything about your established notions of best practice?

I've been working from home and using all the relevant technology for over two years now. Vision quickly facilitated digital procedures to continue servicing clients, with providers accepting digital applications and e-signatures. You can adapt quickly when you have to and when you're properly motivated.

How have your clients responded to the innovations that the industry has witnessed in the face of the pandemic?

They've really embraced the technology. For example, it was brilliant to organise a video call between myself, a client at his home, his GP son at his surgery, an Investment Manager working remotely and a Vision Area Director to ensure compliance with new technology and protocols.

Do you think that these new normals will prove precisely that or are many of them likely to be relatively short-lived?

When Londoners were asked how they coped with the bombing during the Blitz they replied: "You get used to it. You can get used to anything if you have to."

The use of technology in online banking, shopping and healthcare will remain for basic interactions. I also believe working from home will become part of the working week.

But the human interaction of being in the office is still important and will return when it's safe to do so. More complex solutions or diagnosis will still need the human touch.

Should face-to-face engagement and in-person interaction still be regarded as the bedrock of a good adviser-client relationship? Or does the future inexorably lie in ever-greater leverage of technology?

I mentioned earlier that my first KYC form was on a single side of A4 paper. Laptops and mobile phones were yet to be invented, but these tools are essential nowadays.

On the day of the 9/11 attacks in 2001 I came home for lunch before meeting a client. I turned on the telly and saw the first plane hit the Twin Towers – and then the second. It took the Dow Jones 15 minutes to nosedive. Today the markets move instantly with the tweets of a US president.

"The sands of time are certainly shifting, as they always have. Whatever a client's preference, though, providing advice is built on trust and long-term relationships."



Michael Portillo, host of *Great Railway Journeys*, met Paul at a Rathbones Investment Conference in 2019. They were soon discussing their shared love of travel.

Paul journeyed through the Australian Outback aboard the Ghan, arguably the most famous train in the country – although the absence of kangaroos proved a disappointment.



The silent generation – those born between 1928 and 1945 – still prefer old-fashioned methods of communication. Members of Generation Z – those born between 1997 and 2012 – have been brought up with technology.

So the sands of time are certainly shifting, as they always have. Whatever a client's preference, though, providing advice is built on trust and long-term relationships.

For me, ultimately, the most effective way of doing business is still face-to-face engagement, and I look forward to greeting my clients with a handshake once again.

Would a return to direct engagement alongside increasingly effective use of tech represent a dream scenario for advisers and clients alike?

Humans are flexible and can adapt. I'm amazed at how quickly our profession has become comfortable with communicating via video link. At the end of the day the most important person is the customer, and whatever the customer feels most comfortable with is what counts above all.

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