



RSA

21st century enlightenment

Journal Issue 2 2017

Uncertain futures

Dan Gardner explains how we can improve forecasting

Lisa Nandy MP and Nus Ghani MP on the future of British politics

John Harris explores what brings pop stars and politicians together

RSA

House

Did you know?

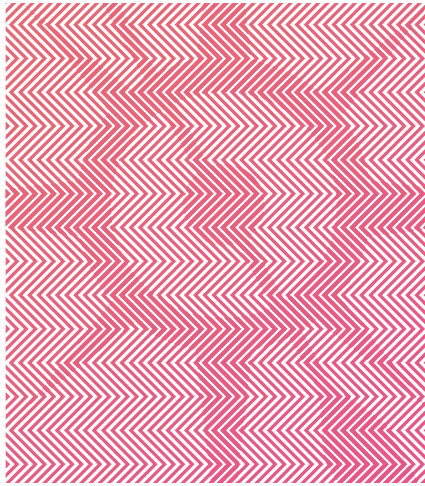
RSA House can host dinners, parties, meetings and more. Catered by Harbour & Jones, recently awarded Event Caterer of the Year!

To book your event contact us on

020 7930 5115

or email house@rsa.org.uk

www.thersa.org/house



“DIG INTO THE RECORDS OF ALMOST ANY YEAR AND YOU WILL FIND PEOPLE LOOKING BACK TO MORE CERTAIN TIMES”

DAN GARDNER, PAGE 10

REGULARS

- 06 UPDATE
The latest RSA news
- 09 EVENTS
Events programme highlights
- 48 GLOBAL
Although the US is withdrawing from leadership on international issues, more distributed forms of agency are emerging
- 49 NEW FELLOWS
Introducing six new RSA Fellows
- 50 LAST WORD
Philosopher Lisa Bortolotti on whether we should embrace a glass-half-full outlook or be more realistic in our expectations

FELLOWSHIP IN ACTION

- 25 *The Office of Civic Imagination could unlock a more collaborative approach to city governance*
- 33 *The Trades Guild Toolkit will help small businesses find their voice*
- 37 *Dis/Ordinary Architecture aims to change how inclusion is thought about in the built environment*

FEATURES

- 10 FORECASTING
Blurred vision
We must master the art of forecasting before we can understand the true nature of uncertainty, says author Dan Gardner
- 16 CONVERSATION
The routes of post truth
Journalist Matthew d’Ancona shares his ideas on navigating the alarming post-truth era with Matthew Taylor
- 20 POLITICS
State of change
MPs Lisa Nandy and Nus Ghani give their views on what sort of politics can guide us through this period of uncertainty
- 26 MUSIC
Stand by me
Politicians and pop stars normally keep a safe distance, but there are moments when they join forces. Journalist John Harris explores why
- 30 MARKETS
Spirited economics
New technologies could help us predict the irrational, says economist Paul Ormerod
- 34 HOUSING
Grenfell: taking stock
The RSA’s Jonathan Schifferes sets out the injustices exposed by Grenfell Tower and says we must now guarantee safe housing for all, regardless of social status
- 38 PLACE
Street values
A better empirical understanding of the value of place would help government and planners to enhance wellbeing in urban settings
- 40 TECHNOLOGY
System reboot
Organisations should forget what they know about business if they want to survive the second machine age, say MIT research scientist Andrew McAfee and MIT professor Erik Brynjolfsson
- 44 COMMUNITY
Lessons from Preston
Progressive local economic movements are finding a foothold around the world and offer a renewal of social hope, say the Centre for Local Economic Strategies’ Neil McInroy and Matthew Jackson, and Preston City Councillor Matthew Brown

Patron of the Society

HM The Queen

President

HRH The Princess Royal

Board of Trustees**Chair**

Vikki Heywood CBE

Deputy chair

Peter Fell

Treasurers

Sarah Ebanja

Stephen Gleadle

Jackie Elliman

Tanya Hine OBE

Rod Hyde

Jan Portillo

Keith Read CBE

Saleh Saeed OBE

Sue Siddall

Philippa Wilson

Executive**Chief executive**

Matthew Taylor

Director of external affairs

Nina Bolognesi

Director of innovation

and development

Rowan Conway

Chief operating officer

Carol Jackson

Director of the Action and

Research Centre

Anthony Painter

Director of Fellowship

Oliver Reichardt

*RSA (The Royal Society for
the encouragement of Arts,
Manufactures & Commerce),
8 John Adam Street,
London WC2N 6EZ*

Tel +44 (0)20 7930 5115

www.thersa.org

*Registered as a charity in
England and Wales, no. 212424
and in Scotland no. SC037784*

RSA Journal, Volume CLXIII

No. 5570, Issue 2 2017

ISSN: 0958-0433

RSA Journal**Editor**

Jane Douglas

(editor@rsa.org.uk)

Creative director

Ben Barrett

Senior designer

Johan Shufiyan

Publisher

Emma Fisher

Production director

John Faulkner

Production manager

Jack Morgan

Managing director, Wardour

Claire Oldfield

CEO, Wardour

Martin MacConnol

Commissioning editor

Rachel O'Brien

Distribution

Ann Gutowski

*The RSA Journal is published
for the RSA by Wardour,
5th Floor, Drury House,
34-43 Russell Street,
London WC2B 5HA
Tel +44 (0)20 7010 0999
www.wardour.co.uk*

Thematic Councillors**Creative Learning
and Development**

Alex Bell

Lucy Griffiths

**Economy, Enterprise
and Manufacturing**

Ian Coleman

Eric Woodcock

**Public Services
and Communities**

*Lorna Prescott ***

Steve Trevillion

Area Councillors**Central**

Edward Boott

Hasmita Chavda

Peter Clitheroe

Ireland

Dr Kieran

McGeown

Suzanne Lyle

London

Bhavani Esapathi

Amy Pryor

Judy Rees

North

*Rod Hyde **

Sharon Jandu

Pauline Moger

Scotland

Rachael Brown

*Tanya Hine OBE ****

South East

Caroline Clark

Maurizio Fantato

Clem Henricson

South West

Alan Bec

Chris Luffingham

Michelle Preston

Wales

Leonie Ramondt

Phill Burton

** Fellowship*

Council (FC) chair

*** FC deputy chair*

**** FC Trustee*

representative

International Affiliate Chairs**Australia and New Zealand**

Chris Hartley

United States of America

Lolita Jackson

The RSA Journal is printed on 100% recycled paper, which is Forest Stewardship Council certified and Carbon Balanced.



“WE NEED TO SPOT AND SEIZE OPPORTUNITIES THAT CAN ARISE UNEXPECTEDLY”



MATTHEW TAYLOR

In making predictions it can feel like we are in the grip of a paradox. On the one hand, through big data and processing power we have an ever-stronger basis for prediction. I am writing this article at a kitchen table in an out-of-the-way part of rural southern France. A few years ago, finding our way here across winding country roads would have been difficult. Yesterday at the airport we simply put the address of the farm into our phone. Not only did it instantly work out the route and tell us what time we would arrive, but it provided options to avoid road tolls and even regular real-time updates on traffic conditions. An experience that just a decade ago could have been stressful and uncertain was relaxing and worry-free.

Yet, in this information-rich world we are also continuously reminded of the role of contingency in human affairs. I suspect that neither Lisa Nandy nor Nus Ghani – both of whom have written for this edition of the journal – expected the recent general election result. The point was not just that Labour’s performance was surprising, but that it was, in a sense, an accident. Part of the reason Theresa May called the election and part of the reason she thought she could take risks, such as including unpopular policies in her manifesto and deciding not to debate them, was that Jeremy Corbyn was doing so badly. But the failings of the Tory campaign opened the door to Labour. Thus, Corbyn’s success was partly the result of his previous failure. Would an algorithm ever be able to predict something so perverse? Dan Gardner is wise to say in his article that human judgement cannot be written off.

Football provides another example. There is a thriving industry in the analysis of sporting statistics spewing out ever-more detailed data. The other day I read a detailed account of who is the best striker based on the statistical probability of players scoring from chances of varying

levels of difficulty (it was Harry Kane, in case you’re wondering). Yet, I am writing the day after Burnley, a team that failed to manage an away victory in the league last season, went to champions Chelsea and won. The game of football has so many moving and interdependent parts that unusual events are inevitable. Indeed, the irony of fans being so interested in predictive statistics is that if every game really did go according to plan we would soon lose interest. Paul Ormerod is surely right that we need to try to factor human subjectivity and irrationality into our calculations, but as the myth of the sporting hot streak shows, the same events can apparently inspire one player to greater heights while luring another into complacency.

So what are we to do in this world when we know ever more about the factors shaping social reality but are still a long way from being able to predict how these factors will interact to generate an outcome? The RSA has an answer. It was the subject of a well-received piece in the previous edition of this journal by my colleague Ian Burbidge. He explained the advice we offer to our partners in charge: ‘think like a system, act like an entrepreneur’. In other words, we must make the fullest possible use of the information available to us to understand the systemic forces underlying a social equilibrium, and to scope an alternative, better state. But when it comes to action we need to be agile, adaptive and pragmatic; ready to spot and seize opportunities that can arise unexpectedly, sometimes only momentarily, to open up a possibility for change.

Ian’s article has led to several further conversations; an example of how influential *RSA Journal* can be. Some of these conversations are turning into longer term partnerships for change. The hard issue, it turns out, is not accepting that we live in a world that is both data rich and unpredictably volatile, but becoming the kind of organisation that is able to think systemically and act entrepreneurially. The choice facing organisations, we find, is whether to simplify reality to suit a preferred method of operation or to acknowledge the nature of the world, to challenge assumptions and to work in whatever ways are necessary to be able to make a difference. ■



BREXIT

FUTURE FARMING

The RSA is to set up a major new commission that will investigate the future of food, farming and the countryside after the UK has left the EU.

The independent commission, funded by the grant-making charity Esmée Fairbairn Foundation, will launch in the autumn and run for two years. It will follow closely the timetable of the UK's exit from the EU, which marks a turning point for the food and farming system.

The decision to leave puts agricultural policy firmly back in the remit of the UK government for the first time in decades. The commission will seek to understand how we can secure a sustainable and inclusive food and farming system for the UK in a post-Brexit world, and ensure that the health and well-being benefits of the countryside are safeguarded and accessible to all.

The RSA aims to put engagement with citizens at the heart of the process, giving a voice not only to the communities that rely on the food industry and farming, but also the wider public. The commission will work with a small number of locations to provide 'demonstration' models for implementing its recommendations and identifying where national policy is needed to unlock local solutions.

The commission will be a catalyst for change, inspiring a broad-based national conversation and shaping the long-term policy agenda at a moment when the UK is preparing for a new Agriculture Bill. Sue Pritchard FRSA has been hired as director of the commission, and the RSA will work with Fellows as part of the commission's research, engagement and policy development activity, following a public launch event.

For more information, email becca.antink@rsa.org.uk



AWARDS

SOCIAL DESIGN

An intelligent 'carpet' that uses human urine to grow crops in refugee camps, a board game that helps children understand cultural differences and a refillable mascara bottle that will cut the amount of rubbish going to landfill were among the winning entries in the 2016–17 RSA Student Design Awards.

The annual awards set a number of challenges to encourage student designers to tackle some of the world's most pressing issues. In 2016–17, more than 800 entries from 21 countries around the globe responded to 12 different briefs.

Participants were set challenges that included increasing mental agility in old age, ensuring mothers and children in developing countries have the greatest chance of survival through pregnancy and birth, and designing new products or services from disused office furniture.

Now in their 93rd year, the RSA Student Design Awards demonstrate the ways in which the practical application of design skills can benefit society. Students learn to apply their talent for social good and forge networks of creative individuals. The awards are an opportunity for partnerships between emerging designers and established industry giants that are leading the way in solving the world's most critical problems through ingenious and resourceful solutions.

Awards winners are rewarded with cash prizes and paid industry placements. Previous winners include Deborah Dawton, chief executive of the Design Business Association, Sir Jonathan Ive, Apple's design chief and Laurence Kemball-Cook, founder and CEO of renewable energy company Pavegen.

To find out what challenges we have lined up for the 2017–18 programme, visit www.thersa.org/student-design-awards



ECONOMY

NEW THINK TANK

Building on a long-term partnership with Nottingham Trent University (NTU), the RSA is helping to develop a new regional think tank in the city. Nottingham Civic Exchange, which was formally launched in June, aims to become one of the region's most authoritative voices addressing salient policy issues.

It will explore the implications of national policy from a Nottinghamshire perspective, drawing on the expertise of academics, the RSA and its regional Fellows, civic and commercial partners, community and voluntary groups, and NTU students.

The first phase of this work will examine the government's support for 'ordinary working families'. Research released by Nottingham Civic Exchange shows that, despite having an income higher than the national average, an estimated six million households are still struggling and find it difficult to balance their weekly household budget. In the case of Nottingham specifically, a high proportion of residents are employed in low-paid caring roles: 11.5% compared with a national average of 9%.

The RSA's work with Nottingham Civic Exchange will bring further focus on economic insecurity. Addressing insecurity is a neglected policy goal, and could lead to benefits for both the economy and individuals.

■ *If you are a Fellow in Nottinghamshire or the East Midlands and would like to get involved, contact jack.robson@rsa.org.uk*



ARTS IN THE SPOTLIGHT

THE POWER TO CONNECT

New FRSA Leah Stewart's reaction to the Brexit result last year is a good example of how speedily responsive arts can be to unpredictability.

"I hosted a pop-up poetry show exclusively for people on my street," said Leah. "The idea came from a sudden and overwhelming awareness that there had been little communication between us over the last years and, with news of Brexit dominating mainstream channels, I wondered if it might be possible to create an alternative, positive shared experience for one small microcosm of society; those who live on the same street."

"In the grand scheme of things, one show for one street is a tiny action, but the size meant it could be hosted quickly and I hoped the exclusivity would make it memorable, possibly even significant. I knew the hardest part would be reassuring my neighbours that this was for them."

On the morning of the show, Leah's neighbours received cards through their letterboxes with a url video link created in response to the previous days' conversations introducing the idea. The short 'welcome video' hinted at the show's themes while reiterating that no prior knowledge of poetry was required to access the content.

The response was strong and in some cases unexpected. "During the show one neighbour, transported back to her own childhood, shared a story of her teacher reading poetry and the wonderful experience of being part of her class," said Leah. "A seven-year-old girl chose to stay past her bedtime and wrote a beautiful thank you note afterwards. Another neighbour remarked that the sense of community we created reminded him of a similar kind of connection that arose spontaneously during a disastrous snow block on his previous street."

Referencing the recent One Love Manchester concert, Leah said: "From the arena to your living room, art and especially performance art has so much power to connect us during unpredictable times."

Good Work

The Taylor Review of Modern Working Practices

WORK

TAYLOR REVIEW REPORTS

The government should adopt an ambitious strategy aimed at making work fair and decent for all. This was the conclusion of Matthew Taylor's Review of Modern Working Practices, launched in July. Stressing the importance of employment that provides fulfilment and development, the Review argues that quantity of work alone is not enough for a thriving economy and fair society.

Speaking at the launch at RSA House, the Prime Minister Theresa May welcomed the Review. "I absolutely share Matthew's ambition that all work should be fair and decent, with scope for development and fulfilment... good work and plentiful work can and should go together. The quantity of jobs remains vital, but quality matters too."

Setting out the case for why good work matters, Taylor highlighted those people who are in work but struggling to make ends meet, the impact of bad work on health and wellbeing and the potential of quality work to tackle our productivity challenge, among other reasons.

The Review proposes a series of measures, including a new role for the

Low Pay Commission exploring how to improve quality and progression in sectors with a high proportion of low-paid workers. It recommends a national framework for employability skills to develop the kind of transferable capabilities that can be acquired in formal education and also informal and on-the-job learning. It also stressed the role that employers can play in promoting health and wellbeing, and the need to make it easier for employees to access rights to independent representation, information and consultation.

"If the ambition for good work is sincere, we need also to address those factors which make this more difficult," said Taylor. One of the factors identified by the Review is a lack of clarity about the boundary between self-employment and worker status. It proposed that primary legislation is needed to ensure that there is a clearer distinction understood by both business and workers and that new categories are aligned with both tax regulation and employment regulation. One factor should be the extent to

which employees were subject to supervision and control.

The Review also addressed issues of exploitation. "Of all the issues that were raised with us as we went around the country, the one that came through most strongly was what the report calls 'one-sided flexibility'," said Taylor, highlighting the problems created by zero-hours contracts. In response, the Review recommends that the Low Pay Commission explore the potential of a higher minimum wage level for those hours that people are asked to work but are not guaranteed, as well as the right for workers to request fixed hours and permanent contracts.

The government is expected to respond in detail to the Review later this year. Describing what he would consider to be a success for the Review, he said: "More than anything I hope this Review will come to be seen as marking the point at which good work becomes an accepted and widely supported national goal."

For the full report, visit www.thersa.org/taylor-review

EVENTS



WHAT IS CREATIVITY?

'Rock star of neuroscience' **David Eagleman** teams up with composer **Anthony Brandt** to present an agenda-setting investigation into human creativity. Together, they show how we need to better understand our ability to innovate if we are to meet the challenge of remaking our constantly shifting world.

Where: RSA House
When: Wednesday
11 October at 1pm



ECONOMICS FOR THE COMMON GOOD

Nobel Prize winning economist **Jean Tirole** introduces a bold new manifesto for a world in which economics, far from being a 'dismal science', acts as a positive force for good in society.

Where: RSA House
When: Thursday
19 October at 1pm



THE EXTREMISM PARADOX

Terrorism and extremism expert **Julia Ebner** argues that far right and Islamist extremist narratives are, ironically, mutually supportive, and are escalating the global terror threat.

Where: RSA House
When: Thursday
26 October at 1pm



WHO'S DESTROYING THE AMERICAN DREAM?

Brookings Institution Senior Fellow **Richard Reeves** busts the myth of the 99%, and reveals how the opportunity-hoarding 20% who make up the US upper middle classes are making it much harder for others to climb the economic ladder.

Where: RSA House
When: Tuesday
31 October at 6.30pm

PAST HIGHLIGHTS

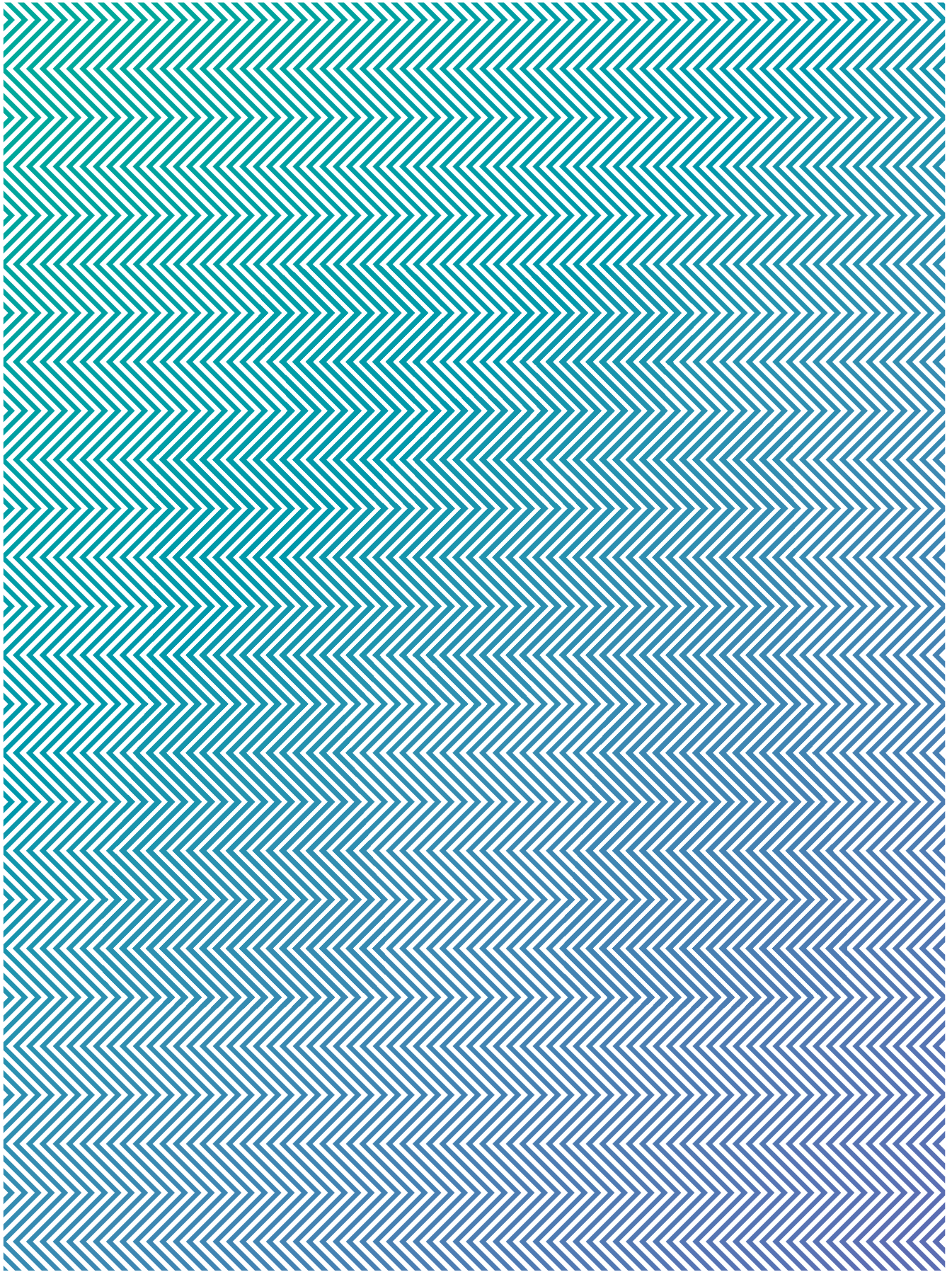
In partnership with World Values Day, **Alison Cottrell** of the Banking Standards Board joined a panel of organisational leaders who shared their experiences of the challenges of sustaining a values-based work culture. In response to continuing debates around the current crisis of faith in democracy, law professor and 'good

lobbyist' **Alberto Alemanno** presented a toolkit for citizen-led change, while philosopher **Roman Krznaric** argued that progress can only be achieved if we reject apathy and spectatorship, and instead 'seize the day', taking a proactive approach to political citizenship. Pioneering legal theorist **Catherine MacKinnon** shared lessons

from the frontline of gender equality activism, and showed how engagement with the law can set in motion a butterfly effect of social transformation. Journalist **Matthew d'Ancona** delivered a rousing talk on fighting back in an age of 'post-truth' politics. And at Wilderness Festival, **Jess Phillips**, MP for Birmingham Yardley, *the Guardian's*

John Harris, and *The Spectator's* Katy Balls joined Matthew Taylor to reflect on the shock snap election result, and predict future political fortunes as Brexit negotiations continue.

■ *These highlights have been selected from a large number of events. For full listings and free audio and video downloads, visit www.thersa.org/events*



BLURRED VISION

To understand the true nature of uncertainty, we must master the art of forecasting

by Dan Gardner
 @dgardner

In November 1958, halfway through the sleepy Eisenhower era, *Newsweek* magazine ran on its cover images from 30 years earlier. Staring out from the page was Charles Lindbergh and the Spirit of St Louis, a grinning flapper dancing the Charleston and a jazz saxophone. “For Americans, 1958 has been a year of nostalgia,” the magazine reported. “Americans do not, ordinarily, look back wistfully to happier times – they are too busy with the future. But in 1958, with its anxieties and uncertainties, the ‘20s suddenly have become a Golden Era.”

Those words could just as easily be written today. Plagued with anxieties and uncertainties, we readily cast wistful glances back to simpler times. While our nostalgia is not generally focused on a particular era — Donald Trump, for one, has never identified when he thinks America was last great — if we were asked to identify when life was ‘simpler’ many people would identify the long idyll of the Eisenhower era. In the UK, a new show called *Blue Peter* was delighting British children, there was peace and rising prosperity, and the most alarming development was Elvis Presley’s thrusting pelvis. Yet, here is a correspondent from that blessed time informing us that Americans were so troubled by “anxieties and uncertainties” that they were pining for the good old days.

DAN GARDNER IS A SENIOR FELLOW AT THE UNIVERSITY OF OTTAWA'S GRADUATE SCHOOL OF PUBLIC AND INTERNATIONAL AFFAIRS AND CO-AUTHOR OF *SUPERFORECASTING*

This is a recurring theme through history. Dig into the contemporary records of almost any year and you will find people worrying about the future and looking back to more certain times. You will also occasionally find people claiming, in frightened tones, that this moment, unlike all others, is so afflicted by uncertainty that we live in nothing less than an ‘age of uncertainty’, or some variation of that phrase. Former Harvard economist John Kenneth Galbraith wrote a book and BBC series under that title in 1977. Thirty years earlier, poet WH Auden published *The Age of Anxiety*; the same phrase that *New York Times* journalist David Brooks used in August 2017 to describe the present era.

The cause of this curious phenomenon is a psychological misperception that I call the ‘uncertainty illusion’. When we look forward into the future and think carefully about how events could unfold, we see an enormous amount of uncertainty. Things could spin off in a vast array of directions, many of them quite unpleasant. The number of shocks and surprises is limited only by imagination. That is not the illusion; it is real. In fact, we tend to underestimate the immense variety of the possible futures arrayed before us.

The illusion begins when we look back for comparison and see far less uncertainty in the past. Typically, that perception is false and is the product of what psychologists call ‘hindsight bias’. Very simply, knowing that something did or did not happen skews our perception of how predictable it was. >>

“WE MUST NOT SUCCUMB TO SUBJECTIVE PERCEPTIONS”

We know there was no nuclear war in 1958, which makes it seem much more likely that there would be no nuclear war than it appeared at the time. So when we think of 1958, we think of Elvis Presley and Blue Peter, not fear of mushroom clouds, which makes it seem a blessed time. Were we to look back at history as it was experienced by people at the time, we could be comforted by the fact that humanity has always grappled with profound uncertainty. But instead, we see much less uncertainty in the past, and conclude the uncertainty we face is unusual, even unique, which makes it all the more alarming. That is the uncertainty illusion.

REALITY CHECK

Unfortunately, exaggerated perceptions of uncertainty can inflict far worse harms than occasional bouts of nostalgia. They may convince ordinary people and corporate executives to put savings in a pillow rather than invest. If enough of us hunker down in this way, the economy suffers. And it is not only a matter of money; invention, exploration, experimentation and creativity in its manifold forms all require a certain degree of confidence in the future that can be undermined by the uncertainty illusion.

However, current perceptions of high uncertainty are not entirely the result of a cognitive mirage. Uncertainty clearly fluctuates and there are good reasons to think we are in a period of at least heightened uncertainty. One is the current occupant of the world’s most powerful office. Donald Trump is a US president like no other and his impulsiveness and penchant for upsetting the status quo are sending waves of doubt around the world. But far more fundamentally, complexity theory teaches us that when tightly interlocking systems malfunction, they can generate unpredictable cascading effects, as we saw when the global financial system went into meltdown in 2008. Given the growth of information technology and globalisation, and the creation of vast numbers of large, tightly interlocking systems – along with too little consideration of how these systems would cope with what Yale sociologist Charles Perrow dubbed “normal accidents” – there are good reasons to think we face large and growing uncertainties. Combined, these points lead to a simple but critical conclusion: we are right to think harder about uncertainty, but we must be careful to proceed on the basis of rigorous analysis of uncertainty. We must understand its nature, extent and remedies, and not succumb to subjective perceptions. Perhaps that sounds like common sense, but it is far less common than it is sensible.

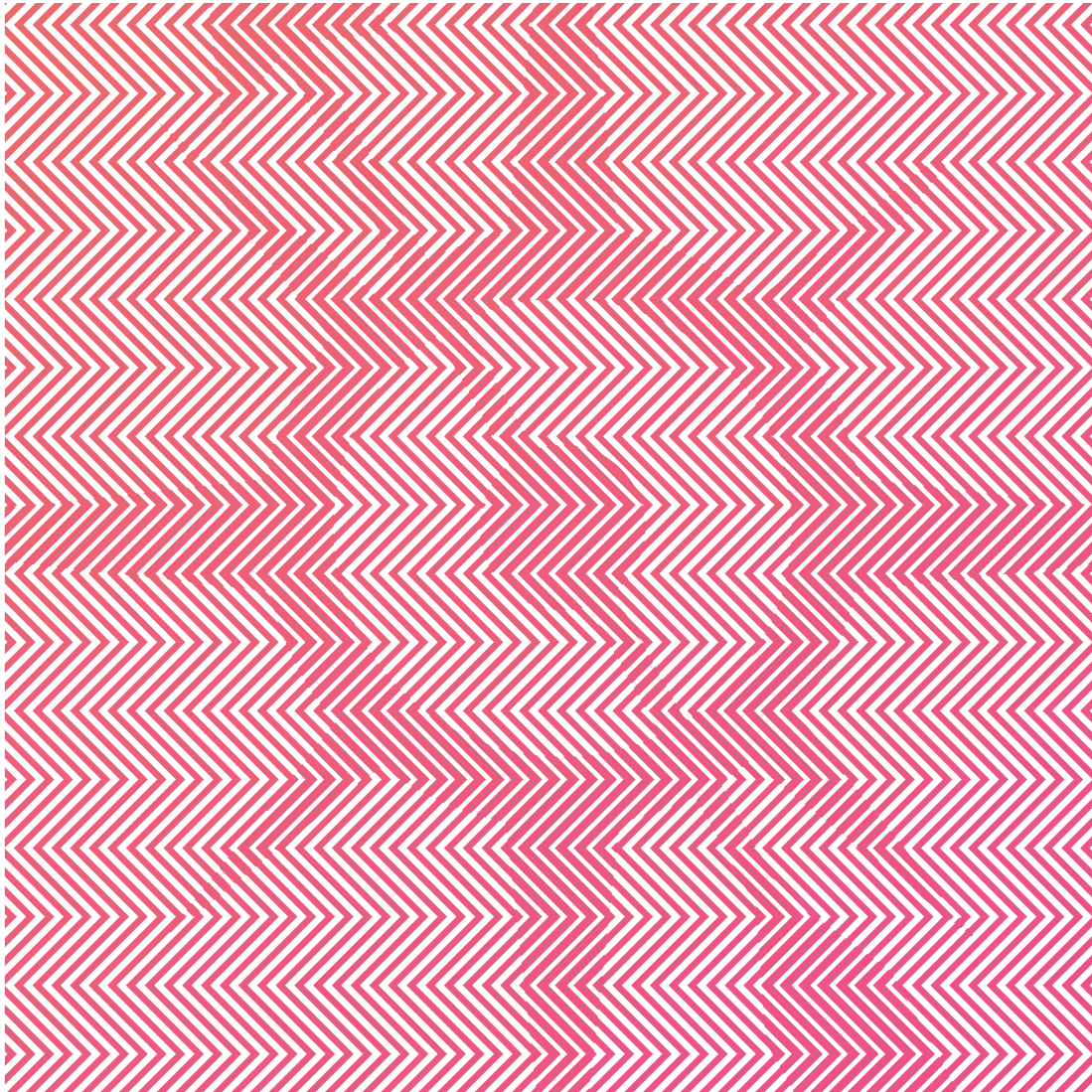
The best tool we have to probe and push back the veil of uncertainty is forecasting. If we know what is coming,

we can prepare. But, here again, there are some common misconceptions. First, it is not true, as many often say, that the future cannot be predicted, nor that nothing important can be predicted. Successful prediction is a routine part of our lives that we could not function without. However, the opposite extreme is just as misguided. We know there are inherent limits to our ability to forecast thanks to chaos theory, complexity theory and painful experience, so the pundits who speak with granite certainty about energy, technology or the global economy in the second half of this century are overconfident.

Predictability is not binary, it falls on a continuum and varies radically by subject matter. I am quite comfortable forecasting the number of senior citizens a decade from now but I would need long odds before I bet money on the price of oil in even five years’ time. To reduce uncertainty, we first need to identify what exactly it is we wish to forecast and where it falls on the continuum of predictability. Then we can try to push it along that spectrum, reducing uncertainty as we achieve progress.

Meteorology is the gold standard. Much as we like to joke about weather forecasts, they are actually quite reliable, in most circumstances, 24 or 48 hours ahead. Three and four days in advance, their accuracy declines. Beyond a week, they are not much use. The reason we know how accurate weather forecasts are is the same reason they are good: meteorologists make a huge number of precisely expressed weather forecasts that are checked against outcomes, producing a constant flow of high-quality feedback. Models are continually tested and they are constantly adjusted in light of the testing, which makes them better. This approach is as rare as it is reasonable. Yet, inspect most domains within business, finance, public policy or any other field and you will find that forecasting is both integral to decision-making and is seldom subjected to anything like the analytical rigour it receives in meteorology.

A particularly unfortunate illustration comes from the world of intelligence analysis. Governments spend immense sums on agencies whose job, in large part, is to forecast geopolitical events and thus inform decisions of the utmost importance. How good is that forecasting? What are its limits? Lots of people have opinions but no one really knows because it is not tested for accuracy. As a result, feedback is sporadic and ambiguous. Lacking good feedback, intelligence forecasting is unlikely to be as good as it could be, and it is surely not improving to the greatest possible extent. Even more alarming, researchers have shown that when professionals repeatedly use a skill without receiving clear, prompt, accurate feedback, they may not get better at it, but they do get more confident. Flat-lining skill and growing confidence is a dangerous combination.



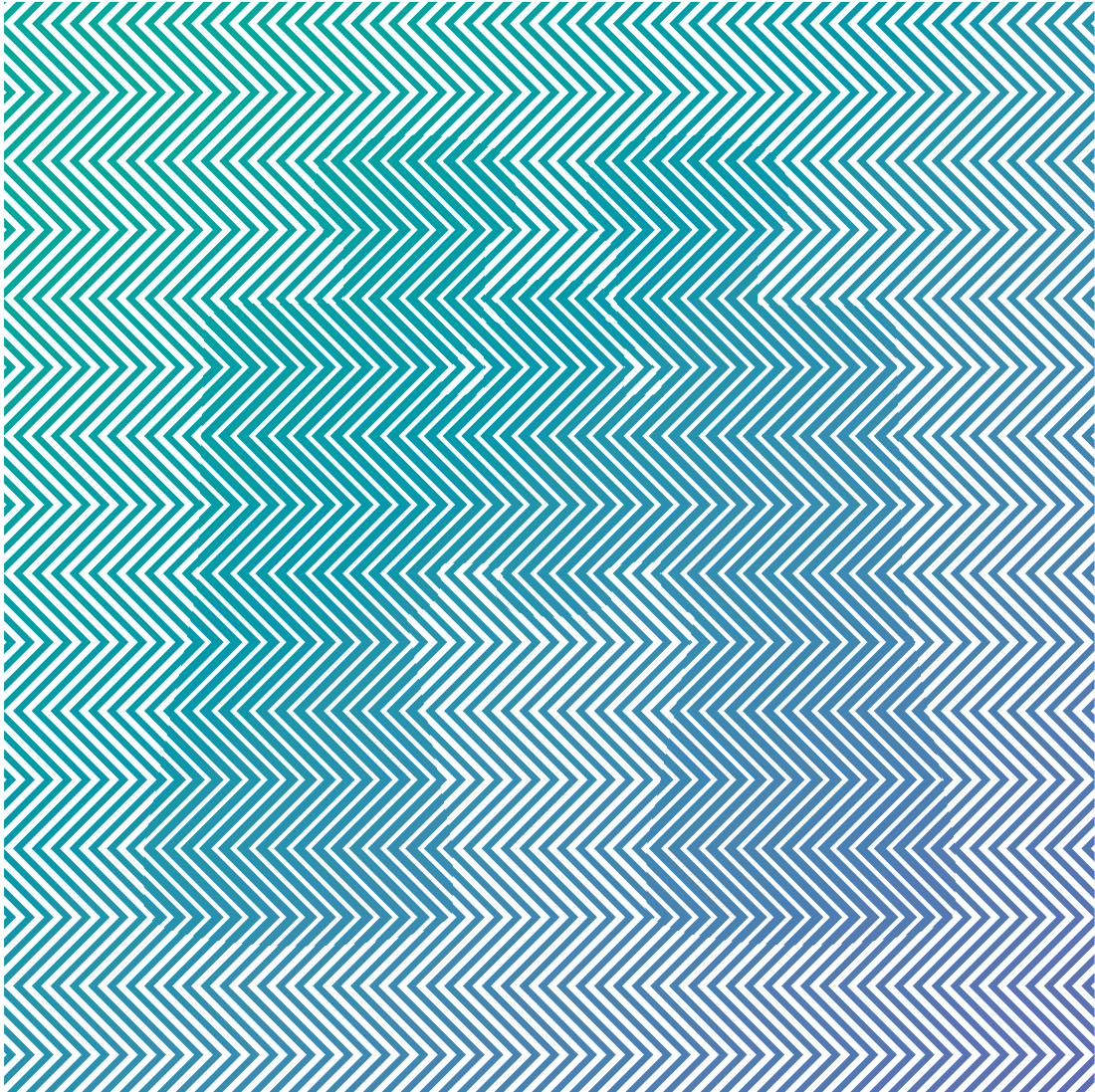
Several years ago, Bill Gates observed that, “you can achieve incredible progress if you set a clear goal and find a measure that will drive progress toward that goal. This may seem basic but it is amazing how often it is not done and how hard it is to get right.” That is painfully true of forecasting. One promising way out of this dead-end is predictive analytics, which, by their very nature, deliver precise forecasts whose accuracy can be tested and results used to improve performance. Netflix and Amazon measure how good they are at predicting which movies and books you want, and they use the results to get better, with a good degree of success.

But some of the buzz around predictive analytics seems distinctly unrealistic. Relying on historical data, predictive analytics is not likely to be much use in spotting outliers and low-probability or high-impact events. And there is a world of difference between finding a film I like and forecasting the next economic recession or move by the Kremlin. The promise of technology is enormous, but so are the challenges of using that technology to predict a non-linear, chaos-riddled reality.

Human forecasters are not about to be rendered entirely obsolete. Even when proven data-driven solutions are at hand, humans will still supervise their design, operation and use, which means humans will still be forecasting, if only at a meta level. Of course, that is itself a forecast, but it is widely accepted by leading researchers in the fields of technology that some suppose will render human forecasters jobless.

THE HUMAN FACTOR

An interesting parallel is the famous 1954 observation of American psychologist Paul Meehl that statistical prediction consistently outperforms the subjective judgement of clinicians. Confirmed countless times in the decades since, it is irrefutable evidence that guts should give way to algorithms. But that does not mean humans should mindlessly obey computers. If we want to predict whether someone will go to see a film on a Tuesday night, to use Meehl’s example, data from prior behaviour and good statistical analysis are likely to produce an excellent, >> reliable algorithm that will do better than any human



could. But what if we learn that the person in question broke their leg that morning? The algorithm will not take note and adjust accordingly, but a human would. Of course, in future, the algorithm may be adjusted to learn from this experience, but whether it is a broken leg or something else, the unexpected will always arise. A human with good judgement will always be needed to work out what it means and revise the forecast.

If we cannot expect technology to be a panacea, and human judgement is and will remain an essential component of forecasting, then we need to get serious about testing and improving that judgement. Fortunately, this trail has been blazed by University of Pennsylvania psychologist Philip E Tetlock. Starting in the late 1980s, Tetlock started to seriously contemplate how expert political judgement could be tested, compared and improved. From this work came what he calls 'level-playing-field forecasting tournaments'.

The foundation is precision. Forecasters are not asked whether the crisis on the Korean peninsula 'will worsen',

whether the iPhone will continue to 'dominate the market' or whether the president will successfully 'pass his agenda'. This is the language of punditry, and far too much other forecasting, and it is hopelessly vague. If North Korea shells South Korea but then suggests negotiations, has the crisis 'worsened'? Some may say yes, others no, but there is no definitive answer. The same is true of the timeframe of the forecast, which is often left vague or implicit. So Tetlock's tournaments use timeframes that are absolutely clear, for example 'within six months' or 'by the end of the year'. Forecasters, too, must be precise. There is no saying something 'may' or 'could' happen. Instead, forecasts are numeric, from zero to 100%.

Predictions are also made in abundance, with each person asked to make scores or hundreds of forecasts. This is essential for several reasons. First, it enables the scoring of probability-based forecasts. A single prediction of a 75% chance of something happening is not proved right or wrong whether the thing happens or not. But a large number of such forecasts can

“KNOWING WHAT CAN AND CANNOT BE FORESEEN WOULD BE A MAJOR ACCOMPLISHMENT”

be judged: if the forecaster is exactly right, then 75% of the time they say there is a 75% probability something will happen, it will. Large numbers of forecasts allow us to distinguish between luck and skill. Anyone can pick winning lottery ticket numbers once; only those who keep doing so should impress us.

Tetlock's first implementation of these techniques started in the late 1980s, when he recruited some 280 expert forecasters, such as intelligence analysts, political scientists, journalists, economists and others whose job involved geopolitical forecasting to some degree. A huge array of forecasts was elicited, involving various timeframes and subject matters. After two decades of research, in 2005, Tetlock published the results. The one that made headlines said the average expert was not much better than a dart-throwing chimpanzee. But far more intriguing was the observation that there were two statistically distinguishable groups of experts, one that did worse than random guessing and one that did considerably better. Factors such as education and ideological inclination made no difference. The real differentiator was the style of thinking. The bad forecasters tended to analyse problems with the one big idea they were sure was right, while those with real foresight preferred to look at problems from multiple perspectives. They were also separated by confidence. Bad forecasters were far more likely to say something was 'impossible' or 'certain', while good forecasters routinely saw the possibility of events unfolding in unexpected ways and maintained a certain intellectual humility. Perhaps not surprisingly, Tetlock's data also found an inverse correlation between fame and accuracy. The media and the public are not nearly so interested in cautious, complex thinkers as they are in confident blowhards.

Several years after this research was released, the US intelligence community funded a massive research programme inspired by Tetlock's work. The idea was to have five university-based teams compete to see who could most accurately make the sorts of forecasts that intelligence analysts are routinely tasked with; for example, whether Russia will seize Crimea, whether Greece will default on its loans and how the Chinese economy will do in the third quarter. Tetlock led the Good Judgment Project, an enormous effort that relied on a small army of volunteer forecasters, a total of more than 20,000 over the four years of the programme.

From this, we have learnt that a basic explanation of the rudiments of good thinking and forecasting was shown to improve forecasting accuracy by 10% over the course of a year. More dramatically, an 'extremizing' algorithm that aggregated hundreds of forecasts and nudged them further out on the probability scale beat all comers. But perhaps most promising

was the discovery of 'superforecasters', a small percentage of Tetlock's volunteers who consistently beat performance benchmarks, prediction markets and even professional analysts with access to classified information. Close inspection of these superforecasters has delivered insight into the habits of mind and analytical styles that deliver the best forecasts.

PERFECTING PRACTICE

Much more forecasting like this is needed, not least because a steady stream of comparable efforts to foresee events in particular domains will, gradually, produce a clearer sense of how far into the future forecasters in those domains can peer. As in meteorology, knowing what can and cannot be foreseen would be a major accomplishment. Fortunately, some key organisations have taken note. The intelligence community is applying many of the lessons learnt from Tetlock's research and is funding further investigation. Banks and hedge funds are similarly applying Tetlock's insights and creating their own, internal forecasting tournaments.

The potential benefits for organisations are enormous. Forecasts may be aggregated to distil collective wisdom, unrecognised stars may be revealed and good forecasters may get better. Forecasting is a skill that can be improved with practice and clear, prompt feedback that enables the forecaster to think about what went right or wrong, why, and how they can do better next time. A forecasting tournament modelled along Tetlock's lines delivers that feedback. Like a driving range for golfers, or a shooting range for soldiers, or a batting cage for baseball players, it is a facility forecasters need to get better and stay sharp.

But it does not take an organisation and a big, formal effort to get serious about forecasting. By asking precise questions and keeping score, individuals can set forecasting challenges for themselves and learn from their results just as someone in a formal forecasting tournament would. It is just a matter of taking seriously something we all do haphazardly. Prior to the presidential election of 2016, everyone had their own view about Donald Trump's chances. The same was true of the Brexit vote and countless other events. Merely setting yourself a precise question, making a numeric forecast and recording it – ideally with an explanation of the reasoning behind the forecast – forces you to think harder about what you believe and why, and learn from both successes and failures. And like a diary, this sort of forecasting creates a permanent record of what you really thought and felt. That is a vaccine against the uncertainty illusion, ensuring a clearer perception of the past, which is the first step to a clearer perception of the future. ■

THE ROUTES OF POST TRUTH

Matthew d'Ancona speaks to Matthew Taylor about how we can navigate an era when realism has been substituted for rhetoric

🐦 @MatthewdAncona

TAYLOR: If Brexit and Trump hadn't come along, would we be talking about the post-truth issue right now?

D'ANCONA: People with an interest in the behavioural consequences of technological change might be getting to the same sort of conclusions. But it took Trump and Brexit for people to start wondering whether there was a kind of holistic phenomenon here that ran through politics, conspiracy theories, science, philosophy and so on. And it wasn't just one of those periodic downturns in the quality of information, but something a bit more fundamental.

So, I doubt without Trump there would have been so much tension, but he is a symptom rather than the fundamental cause. But the really important thing is to look beyond him, because he has happened now and the whole disaster is unravelling in front of us. What's interesting is to see how the American republic responds to that, and whether he acts as a terrible warning to the rest of the world. I've heard people on the continent say that Emmanuel Macron's success in France and the

MATTHEW D'ANCONA IS AUTHOR OF *POST-TRUTH: THE NEW WAR ON TRUTH AND HOW TO FIGHT BACK*

failure of Dutch nationalist Geert Wilders are an indication that all is well. I'm not sure I share that happy complacency; what matters about Trump is really to ask what comes next.

TAYLOR: Our politics, even though it comes from different traditions, overlaps a lot. We're generally quite optimistic about the world, and want to talk about things that are improving. Is your book about post-truth trends a shift for you in that this is something you very strongly feel is not going in the right direction? If you weren't involved in this, and you were writing a column about it, would your starting point be that this is just a bit of a cycle and let's remember, in the end, we're all becoming better educated?

D'ANCONA: Of course, the columnist's natural inclination is to say: "Here's the perspective, here are the precedents, don't panic, this is what will happen". But equally, if you are an optimist you also have to be a realist, and there are times when you have to acknowledge that there is a crisis. I don't think that there are auto-corrective mechanisms that will even things out. This really is one of those issues >>



#TELLUSTHETRUTH

“CITIZENSHIP HAS BEEN ERODED BY STATISM AND CONSUMERISM”

where people have to take a decision, and there has to be an active citizenship at work.

TAYLOR: Do you have a specific take on where responsibility lies in relation to three parties: those in power, the public and the intermediates between the public and those in power? Is there change in all three of those domains? Because when we talk about post-truth in the context of Trump and Brexit, we tend to talk primarily about what those in authority put on the sides of buses, and say in press conferences. Clearly a big part of this is what is happening in the disintermediated space, and the atomisation and commercialisation of that, and the public's role and its appetite for this kind of stuff.

D'ANCONA: The first question one is always asked is whether there has always been lying. That is correct, and in some ways there is nothing new and lying will continue whatever we do. In one sense, politicians lying is the least of our worries; the post-truth era is about our participation and the degree of our collusion in those lies. The Brexit referendum was very alarming in that respect, and it got to the point with the election of Trump where the emotional resonance was everything, and that is alarming.

There are two things that have happened to citizenship: it has been eroded by statism and it has been eroded by consumerism. If you simply become a beneficiary of the state and a consumer, the space left for civic activism is very limited. I'm very much in favour of political discourse that encourages maturity and high expectation. One of the saddest things about political discourse is that the expectations of the electorate are now so low that Kennedy would now not be allowed to say: "Ask not what your country can do for you, but what you can do for your country". Such a speech, such a call to action, would never be made by a mainstream politician now.

TAYLOR: But as always with these trends, there are glaring counter examples; in Canada there is Justin Trudeau, in the UK there is London Mayor Sadiq Khan.

D'ANCONA: Which is why I remain an optimist. I'm absolutely not a catastrophist about this and there are reasons to be cheerful. But if there is a modernist elite, one of its defining characteristics is its 'there's nothing to see here, move along' tendency, and it is not enough to ask when will

this disembodied state do something about this problem. It is one of those issues, like climate change, that has to involve a collaborationist approach. The difficulty is that it is quite a theoretical issue, and you have to be quite granular in your description of it; talking about the way your societies are organised and the information you are entitled to as someone who wants their children to live in a better world seems to get through. Talking in abstractions is not much use.

TAYLOR: How does one avoid simply sounding like an elitist in this regard? You make recommendations at the end of your book about education, which is very interesting. The British historian David Runciman wrote that the big divide in politics is not about class, but about education, and underlying all of this is our ability to cope with complexity. I'm taken by recent research on deradicalisation, which seems to demonstrate that the best way to deradicalise people is to get them to accept the possibility of complexity; once they've accepted that, you don't really have to deradicalise them, because the very ideas at the heart of fundamentalism disappear the second you accept the idea of complexity. But complexity is not something we're born with, it is something we have to develop and a sign of educational development. So, how does one avoid this argument, without saying the world will only be better when there are more clever people like us?

D'ANCONA: You have to persuade more people to accept the premise. A lot of education doesn't actually head towards complexity. Too much education is unsuited to current needs. It has become a tick-box affair, and it would be much more useful for the next generation to be taught different kinds of literacy, not just digital literacy but literacy in complexity; understanding that their lives are going to be complicated. The education system we went through was based on a series of near-certainties: go to school, get grades, go to university and then you will almost certainly have the means to make a living, to get onto the property ladder, to get credit, and if you want to, start a family. One of the reasons the next generation is distinct from ours, and smart, is that it knows that this is not the case, and that the world it's entering into is one of massive uncertainty and complexity. The question is how can we help young people prepare themselves for that world.

And I agree with you that the slippery slope in this entire debate is that you end up saying that we are incredibly clever,



so just take it from us. Now that won't work, and that's one of the reasons that I caution against thinking that simply hammering away at the facts of the case will not be enough. One of the faults of the political and the media class has been an inability to match the resonance of those who we label as populists. We have to find ways of making resonant points.

TAYLOR: It seems to me that there's a kind of split here, with one group of people who say you should recognise the emotional motives of politics and just become better at it; versus a view that says, actually, we do need to fight for the idea of objectivity.

D'ANCONA: We need both. They are compatible, and oddly enough, I think someone who had both was Blair. He was entirely capable of stretching out a hand to the voter, but also of articulating a policy in a way that they would understand and would realise represented empathy as well as empiricism. That is a spectacularly unfashionable thing to say at the moment, but it's still true.

TAYLOR: One of the things I found interesting in your argument is you say young people need the capacity to cope with complexity, and that in order to do that they need to recognise that what is true today may not have been considered a truth 20 years ago, and may not be considered a truth in 20 years' time, and also that truth generally comes from those people in power who seek to make their assumptions into common sense. That is not a million miles away from the post-modernists' insights; yet, you want to have a big bash at post-modernism. In a way, post-modernism at its strongest is precisely saying to people that they should not assume the things that you're thinking

are common sense today are really common sense, they're actually someone's view of what common sense is.

D'ANCONA: Let's unpack that. Truth, common sense, fact; they are not the same things. Truth is connected facts, articulated in a way that people understand. Common sense is the particular group of ideas that are considered common ground at a particular time in history. But, it is mobile, obviously it is mobile. So you're right, the post-modernists are richly entitled to point out that common sense is a social construct. But a fact is a fact. It's important to distinguish complexity and change from facts. I'd reverse it and say that the irreducible fact of modern life is uncertainty, and that is a hard lesson to teach. It requires a complete rethink of the way we prepare people for modern life.

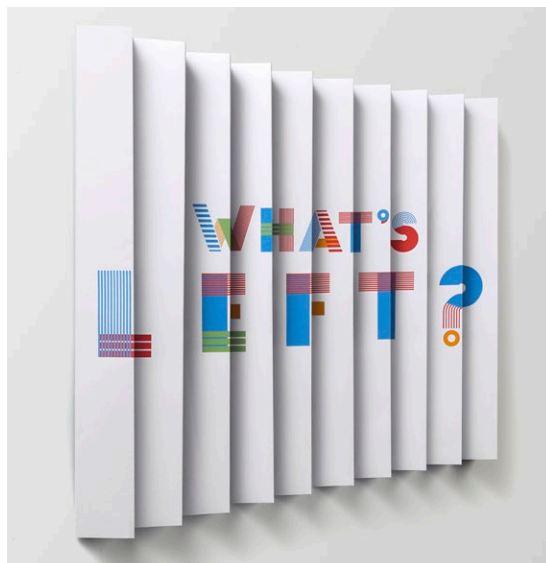
But, the present danger is that, faced with that complexity, there is an obvious opportunity for the worst kind of populism, the kind that says: "All that apparent complexity is a lie that's being peddled to you by an elite, which may well have interests in the propagation of that complexity, here are a bunch of simple solutions". Whether the promise is to dramatically change immigration in this country or build a wall across the US-Mexico border. That kind of populism really is in the ascendant, and you can see why there's a massive appetite for it. It is fed by a sense of generational failure, a sense that the complexity of the modern world is approaching intolerability. People who say that the world is much more straightforward than you think, that there is a group of bad people who are lying to you about all this and we have a way forward. People who ask you to just sign on the dotted line and they will make our lives much easier. That is a clear and present danger, and not just from the right. ■



STATE OF CHANGE

In a climate of uncertainty, we ask new-generation MPs Lisa Nandy and Nus Ghani what sort of politics can provide the antidote

🐦 @lisanandy 🐦 @Nus_Ghani



A SHARED SOCIETY

Only by distributing power will we build a progressive future

From Brexit to Trump, recent political earthquakes may have shocked, but they have deep roots. Power, increasingly held by a privileged few, has had profound implications for people's lives and become politically, socially and economically unsustainable.

Over 150 years since Marx predicted the grip global companies would exert over weaker nation states, capital is the dominant force, and those who have wealth have power, while those who lack purchasing power are invisible, denied agency or control over their lives.

It has handed us an economic system that neither delivers nor protects the things that matter. Across the many divisions – public and private sector, middle and working class – it has left us under the cosh, struggling to make ends meet, with scarce family time and in despair when relatives fall sick or grow old.

The amoral values of the market have pervaded education, the NHS, work, the arts and civil society. The system it creates is inefficient and indifferent, leaving us groaning under the weight of intractable social problems: an ageing population that places greater strain on a dwindling number of working people and entrenched poverty, homelessness and hardship that is not solved by work. Loneliness has spread like cancer, the environment is an afterthought and numerous barriers prevent us from improving our lot.

This has left progressive politics in crisis. As life has grown harder and the state less willing or able to intervene, the pact that bound together a left-wing coalition of social liberals and economic socialists has broken. In anxious, insecure times, social issues have taken on greater salience and cultural change, LGBT rights and social security are contested.

LISA NANDY IS A
LABOUR PARTY
POLITICIAN WHO
IS MP FOR WIGAN

This is fertile ground for the far-right. It has ushered in a wave of protectionism and xenophobia and created the conditions, not just for Brexit and Trump, but for a cheap populism that seeks to turn the clock back to a time before globalisation. As the winds of change blow, we have tried to build walls, when – as the Chinese proverb warns – we need to build windmills.

That is the task of progressives; to forge a path through the chaos of recent times, to build something better from the ruins of neoliberalism and seek progress in the rejection of its inherent injustice. We should learn not to fear the increasingly fluid nature of political identity and see hope in the palpable hunger for change. Our charge is not simply to redistribute wealth but to restore power to those who rightfully own it and, in doing so, offer hope and security in a society that cares more, looks far into the future, is less closed and rigid and, as a consequence, is less afraid and angry.

It can be done by prioritising democracy and the pursuit of a good society, restoring the primacy of government over the market. While a handful of companies control our transport, energy, water, food and access to medicines, we are not free in any meaningful sense. But while we debate renationalisation, of the railways or Royal Mail, the world's most powerful commodity is a servant to profit, not the public good. Five internet companies – the most profitable in the world – control almost all of the world's data but, as some of the biggest advances in medical research have already shown, handing ownership back to people enables us to share information for a greater good. Without action, evolving technologies, such as artificial intelligence and the internet of things, will concentrate power when they should be powerful tools to disperse it. >>

“A DIFFERENT TYPE OF POLITICS CAN TURN WEAKNESS INTO STRENGTH”

In a global world, democratic control is only made possible through international cooperation. Perhaps Barack Obama’s most lasting legacy will be the use of international agreements, such as the Paris Agreement on global warming and trade deals, to advance progress. At federal level, city mayors cooperate to regulate apps like Uber to ensure they are used for collective good, not as tools for exploitation. But this requires the courage to reject an isolationist interpretation of Brexit in favour of the clear commitment expressed on doorsteps across the Leave-Remain divide for continued global cooperation but much more democratic control.

As social reformer William Beveridge said, profit is “a good servant but a bad master, and a society that gives itself up to the dominance of the business motive is a bad society”. The challenges of a good society are clear in the world of energy, where the decline of fossil fuel industries has left deep scars in coalfield communities and the urgency of climate change has placed even greater pressures on families, from Aberdeen to Ashfield, who pay disproportionately high energy bills for the transition to clean energy.

California has responded with state action, such as tax incentives and regulation, to stream private investment into Silicon Valley. Their young people are not just assembling solar panels for low wages but designing the battery technology that will power the next century, just as their grandparents powered the last. How different this is – solving major challenges through work that gives dignity and purpose – from life in many former coalfield communities in Britain.

A good society means rethinking the role of the state, as a partner for people and business, so that it does less but enables more. The government of the future will look more like the coalition pioneering the People’s Plan in Barcelona, which has engaged the citizens of Barcelona in designing and running their own city, than any of the alternatives on offer in Britain. The mayor there has taken control of water and energy, halted evictions and taken action to reclaim the streets for women and the LGBT community. It exposes the limits of the British paternal state that is disempowering and discredited when it inevitably cannot deliver. The future state needs to be built not on handouts, but on pride, dignity and agency.

It seems inevitable that nation states must evolve into federal structures that can offer genuine devolution during this century. Not the model championed by former UK chancellor George Osborne, that transferred power from a group of largely unaccountable men in London to another in Manchester, but governance based on consent, scrutiny and a strong role for civil society.

This is how the polarised, angry divisions of recent times will be healed. By restoring to people the power to shape the future, it becomes one that is built and owned in common. In

communities that are, as the British politics and international relations scholar Will Jennings describes it, “disconnected from the fruits of globalisation”, these warped priorities which prioritise profit over quality of life do not just account for inefficiency and waste. They account for the pain of poverty and homelessness, the catastrophic short-termism that subsidises diesel while the planet heats and the anger, expressed through Brexit, about lives that have got harder and less hopeful in a generation.

That anger dates back to the settlement set out by Tony Blair a decade ago, when he described a changing world “indifferent to tradition, unforgiving of frailty... replete with opportunities” that “will only go to those swift to adapt, slow to complain, open, willing and able to change”. But the price was to abandon the shared life in towns to market forces that have concentrated opportunity and power in cities, and with it the loss of institutions, such as the high streets, working men’s clubs and libraries, that, as Conservative MP Jesse Norman says, “shape us as we shape them”.

In Britain, France and the US, recent events have exposed these divisions and demanded change. The future must restore the power to towns and cities to rebuild municipal assets in energy, transport and building societies and to build new parks, childcare centres, libraries, social clubs and Wi-Fi connectivity; in short, the stuff of a shared society.

This requires the “more exacting” politics post-war prime minister Clement Attlee described, that “does not demand submission and acquiescence but active and constant participation”. It is a politics that is nimbler, fleet of foot and capable of working across old, creaking party lines to negotiate the future.

Our current political system cannot cope with division in any constructive or meaningful way. A different type of politics can turn weakness into strength, rebuilding the left coalition that delivered social and economic progress in the latter half of the 20th century and the courage to defend those achievements. As the clock is turned back on rights for women, the LGBT community, race, class and disability, we should not forget, as the playwright David Edgar reminds us, that millions of working class people fought those battles against misogyny, homophobia and racism, and fight them still, because it is the right thing to do.

With courage and ambition, that fight for progress will continue. We have been reminded in recent years that progress is not inevitable. It cannot endure in a climate of fear but thrives in a confident, empowered society. Though it feels right now that social liberalism and economic socialism are in retreat, that prospect should embolden us to believe that, as the present continues to move at speed, with political vision, the future could look very different.



CONSCIENTIOUS CONSERVATISM

The right amount of government blended with the right type of capitalism can set people free to prosper

Conservatism as a political philosophy has always been, to my mind, a balance between freedoms and responsibilities. I grew up being told that the state had all the answers and that choice was what others decided for me. It was this that drew me to the freedom that the Conservatives had on offer, freedom to make of my life what I wanted, mistakes and all. But conservatism has always recognised that with individual freedom comes responsibility, towards each other, our communities, society and the state. I am sure few modern Conservatives would disagree with that essential premise.

But conservatism as an enticing prospect for voters has to offer more than that. Margaret Thatcher and Ronald Reagan understood that an essential optimism about the future is the key. An optimism that life would be better, wealthier and happier if people had more control over their incomes, their job prospects, their homes. Thatcher's great 'home-owning democracy' embodied this idea.

The challenge today is to recreate that optimistic message while embodying freedom and responsibility. Arguably this was a message lost in the election just gone, where the Conservative Party did not sufficiently offer a post-Brexit vision of a better life and society.

I do not pretend this is an easy task. The global economy is still dealing with the aftershocks from the 2008 recession. More than ever before, intergenerational inequality is a conspicuous feature of the post-crash economy. Here in the UK the young and middle aged are wondering how they are going to be richer than their parents or have a stake in society by owning their own home.

NUS GHANI
BECAME THE
CONSERVATIVE
MP FOR WEALDEN
IN 2015

Society has never been more fluid than it is now. Mass migration to Europe, the refugee crisis, population explosion in Africa, terrorism and conflicts in the Middle East, the rise of China and Russian posturing are all symptoms of an end to Western hegemony. At the same time, we are witnessing the failure to recreate a global political compact to replace what has held sway since the Second World War.

Meanwhile, technology has changed the way people relate to each other. Twitter, Facebook and Instagram allow people to present perfectly curated snapshots of their lives, creating a population who are more connected to one another, but also more isolated from the communities they live in.

But it is so easy for politicians to be pessimistic, particularly if you want to characterise your opponents as not caring about the problems facing society and individuals, as Labour does of the Conservatives. Let's remember that in the UK we have record levels of employment, and job flexibility is a sign of choice and freedom in the labour market, which most people want. We have more working class students in university than ever before and we are investing more money in our essential public services, despite the pressures of the inherited budget deficit.

In pointing out that we have much to be proud of I am not being complacent, but I am challenging the lazy left-wing nostrum that Conservatives are uncaring, have no thought for society or public services and wish to undermine the role of government. These are straightforward lies, which we must call out. Instead, we need to make the case for what it means to be a Conservative in a contemporary United Kingdom. We need to demonstrate how we understand the country's problems, what we think about the role >>

“CONSERVATISM MUST BE BRAVE, BOLD AND AMBITIOUS”

of government in people’s lives and how we will use politics to solve everyday problems, using Parliament to ignite debate and push for policies that prepare both institutions and individuals for the future.

To do this, conservatism must be brave, bold and ambitious. It must respect the realities of people’s concerns about their future and whether they can look forward to a better life than the previous generation, and show that it understands how to enable the opportunities and manage the threats of a changing, interconnected world.

Productivity is the key. Throughout human history, it is productivity that has driven human advancement; from the invention of the wheel through to the industrial revolution and the creation of the internet. Increased productivity has allowed people to be more efficient and effective, creating wealth and generating a feel-good factor, a sense that life is getting better.

Now, however, we are at a watershed moment. Automation and further technological advances have the potential to lead to a further leap in productivity. But for many, this progress has not provided hope and optimism, rather fear and mistrust in organisations, institutions and governments. Modern work patterns have left them behind, and the photoshopped and glittery lives played out by their metropolitan contemporaries on social media bring this point home. People feel they are running faster but standing still at the same time.

Self-driving cars, self-service checkout machines and the ever-increasing power of apps have led to fears about job security and mistrust at the idea that the jobs your children will end up doing do not even exist yet. Of course, fear of automation is nothing new, and there are countless examples throughout history of opposition to change. But modern conservatism must not patronise these fears as unjust or mistaken. It must listen, and take these concerns on board. It is then up to us to sell technological advancements and increased productivity. Make the argument that people will be wealthier if they are more productive, and that, yes, the jobs of tomorrow may be different and unknown, but this should not be something to resist. We must be clear that we believe the future for all will be greater and brighter than today.

Conservatism is uniquely placed to do just that. While the left moralise and preoccupy themselves with the idea that the best way to help the disadvantaged is through state monopoly and redistribution, conservatism recognises that wealth cannot be redistributed before it is created. We are the enablers that support measures and institutions to create wealth, from building business confidence and attracting investment in innovation, to lower, flatter, simpler taxes, secure property rights, effective regulation and having a skilled workforce to hand. Conservatism offers a real world view that there are no

shortcuts to removing the gap between the rich and the poor, as it is only achieved through continued economic freedom, creating jobs and individual empowerment.

Technological advances rarely come from the public sector or a government committee. The iPhone, Tesla and Netflix would not have been invented by government. By emphasising the positive aspects of competition, innovation and, yes, capitalism, conservatism can lift some of the clouds that darken the acceptance of new technology as a method to generate wealth for everyone.

The conservatism of the future must fully embrace conscientious capitalism. It must embrace capitalism because we believe and trust in markets to allocate resources efficiently and to deliver improved outcomes, lifting people out of poverty and providing opportunity. But it must be conscientious, and to that end government will have a role to play.

Conservatism needs to be an enabler for progress. It needs to free up every individual to live to their full potential without barriers or exploitation. In a multicultural Britain with a flow of people and talents, conservatism will have a crucial role to play, because creating one prosperous nation from many cultures requires good, pragmatic and conscientious government that does not get in the way of the individual.

Conservatives must make sure that government is there to ensure that every individual has access to every opportunity. For example, it is a Conservative government carrying out an audit of racial disparities in public services, requiring larger companies to be transparent with their gender pay gap, and asking independent schools to do more to help the disadvantaged.

This must be added to, expanded and sold to the public. Government can be a force for good, when used effectively and appropriately. Too much government holds businesses and individuals back, too little will not create the infrastructure, services and safety net that they need to thrive. By striking the right balance, people can be free to dream, create and prosper. This is the message that conservatism must present.

In pushing for policies that prepare individuals for the future, conservatism starts with education and training. By ensuring that every child gets the best education and that the skills people have match the jobs that are available, we can extend opportunity to everyone, no matter their background. Academies have demonstrated that this can be delivered. As thousands of schools across the country have converted to self-governing academies, we are seeing record numbers of pupils in good or outstanding schools, while the government has committed to delivering three million apprenticeships in the private sector.

As we leave the EU, conservatism must seize its moment and with Brexit we have an open door. Throughout the

“THE CONSERVATISM OF THE FUTURE MUST FULLY EMBRACE CONSCIENTIOUS CAPITALISM”

1980s, foreign policy was led by the Conservatives and it was an electorally charged issue. Our place in the world was at stake, and throughout the 20th century it was Conservatives who had a vision for that, through world wars, the Cold War and the end of empire. We now have an opportunity to pursue foreign policy that is distinct from the EU and builds on the diverse and multicultural communities we have here at home. Conservatism must exert British soft power back onto the world stage and continue to build alliances with English-speaking, common-law countries. Take India, for example; 70 years on from partition and the question is which way India will go. Will it become an Asia-oriented superpower or, with our encouragement, continue as an English-speaking, western-friendly, common-law democracy?

Finally, we Conservative politicians need to rethink our relationship with the people we seek to serve. Technology means that people expect both a personal relationship with politicians and participation in something bigger than themselves, an emotional experience that mass movements offer. With a positive, outward-looking vision, we should further embrace new technology to sell our ideas to the British public. To great effect in the Indian elections in 2014, Narendra Modi used holograms to appear at multiple rallies all across the country. As a result, Indian voters felt they were part of something bigger, part of a movement.

Through the use of innovative technology and social media, we can sell our idea of conservatism to the public. By demonstrating that we have a clear understanding of what we believe the role of government should be, as well as effective and relatable policies both at home and abroad, we can ensure that the new brand of conservatism answers the concerns and worries that exist up and down the country, allowing us to respond to the ever-changing and increasingly volatile 21st century. ■

FELLOWSHIP IN ACTION

OFFICE OF CIVIC IMAGINATION

Is a more collaborative approach to running cities possible? This is a question that Engage Liverpool is seeking to answer by exploring new forms of governance that include a variety of people in making key neighbourhood decisions.

With less money to go around, local stakeholders are increasingly competing over the use of common resources, such as green spaces, urban infrastructure, unused and abandoned buildings. Engage Liverpool, working with the Heseltine Institute at the University of Liverpool, wonders if a solution could be to create an Office of Civic Imagination, an idea that is already a reality in Bologna. “We are looking at the things we hold in common and understanding that instead of only elected officials and council officers being responsible for all decisions and priorities, we could be involving a much broader group of collaborators,” explains Gerry Proctor, chair of Engage Liverpool.

In Bologna, where they already have an Office of Civic Imagination, the city council works with private enterprises, academics, people from the residential community and other interested groups such as NGOs.

The project was recently awarded a £2,000 RSA grant, which will be used to survey community members in a Liverpool neighbourhood with the aim of understanding the barriers to a more collaborative form of governance of publicly owned assets and services.

■ *For more information, contact proctorgerry@hotmail.com*

STAND BY ME

Politicians and pop stars make fast, if fleeting, friends, but what makes these opposites attract?

by John Harris
 @johnharris1969

On 19 February 1996, the usual crowd of musicians, media people and employees of the music business made their way to the Brit Awards. These were the industry's last days of decadence before the internet shook it to the core, and no end of antics ensued. Jarvis Cocker, of newly successful band Pulp, rushed the stage during Michael Jackson's performance and instantly became a folk hero; Oasis, who were then at their peak of notoriety, accepted their three awards in an ever-increasing state of intoxicated disarray.

That year's recipient of the annual Outstanding Contribution To Music award was David Bowie, who was given his trophy by the then-leader of the opposition. Tony Blair honoured Bowie that night with a brief speech, which also took in the commercial wonders of Britpop, the hugely popular – and, it has to be said, very white – strain of music that was then at its absolute height. “It's been a great year for British music,” he said. “A year of creativity, vitality, energy. British bands storming the charts. British music back once again in its right place, at the top of the world.” As well as Bowie, Blair made reference to The Beatles, the Rolling Stones, The Kinks, The Clash, The Smiths and The Stone Roses.

But this was not the evening's most remarkable oration. That came from Oasis's Noel Gallagher, who accepted his band's Best British Group award

JOHN HARRIS IS
 A JOURNALIST
 AND AUTHOR OF
*THE LAST PARTY:
 BRITPOP, BLAIR AND
 THE DEMISE OF
 ENGLISH ROCK*

from The Who's Pete Townshend. “There are seven people in this room who are giving a little bit of hope to young people in this country,” said Gallagher, before listing the five members of his band, along with the founder of Oasis's record label and Blair. “If you've got anything about you, you'll go up there and you'll shake Tony Blair's hand, man,” he said. “He's the man. Power to the people!”

“We were off our heads that night – were talking some right bullshit,” Gallagher later explained, though it was not his last public endorsement of Blair. Nineteen months later, in September 1997, the pair met again at a quickly infamous Downing Street reception, where scores of people from the so-called creative industries came to celebrate the Labour Party's arrival in power.

Flashbulbs popped, and the following morning's front pages featured the image of Gallagher and Blair in conversation. It later transpired that the two had shared a joke about that year's election night, and how each of them had made it through to dawn the following day. How, Gallagher wondered, had Blair stayed awake? “Probably not by the same means you did,” said Blair; and at that point, Gallagher later reflected, “I knew he was a geezer.”

Two years before, Blair had met Blur's Damon Albarn at the House of Commons, where the two had chatted over a gin and tonic. He had also spent time with senior figures in the music industry and attended not just the Brit Awards, but two of the annual ceremonies put on by the music magazine *Q*. Inevitably, however, Blair's acquisition



of power meant that his time as an honorary Britpopper did not last long. Labour's policies on student tuition fees and its tightening of access to benefits were enough to trigger a somewhat petulant revolt. In March 1998, the music weekly NME ran a front cover featuring Blair's face, and the words (taken from the Sex Pistols' John Lydon) "Ever had the feeling you've been cheated?" The end of the affair had been made plain a month earlier when John Prescott followed Blair to the Brit Awards and was rewarded not with warm words from the stage, but a bucket of iced water thrown over his head by a member of the self-styled anarchist band Chumbawamba.

From then on, British politics and popular music remained estranged. As Labour ceded power to the Conservatives, the dependable rule whereby 99% of musicians at least affect to have vague liberal-left beliefs meant that David Cameron was endorsed by one high-profile pop star alone: Take That's

Gary Barlow, who restricted his efforts to a single photo-op. Neither Gordon Brown nor Ed Miliband managed to attract any appreciable musical support, nor seemed to want to.

Until, 20 years after Blair's fleeting Britpop phase, something quite remarkable happened, when another Labour leader went way beyond awards ceremonies and official receptions, and addressed tens of thousands of people at Glastonbury Festival. They listened to Jeremy Corbyn deliver a speech that referenced the Chartist rather than The Beatles, and frantically chanted his name to the tune of The White Stripes' *Seven Nation Army*. But more of that in a moment.

RIGHT ON

Popular music – by which I mean everything from US country to London-born grime – regularly deals with themes that are political, at least with a small 'p'. Lists of >>



classic records are smattered with political discontent, from Bob Dylan's early protest songs, through such state-of-the-nation albums as Marvin Gaye's *What's Going On* and Gil Scott-Heron's *Winter In America*, on to such works of angry social realism as the The Clash's eponymous first album. Ordinarily, when music expresses political thoughts, it reflects its anti-establishment tilt by leaning to the left, though there are exceptions: Lynyrd Skynyrd's cry of Deep-Southern pride in *Sweet Home Alabama*, or an Iraq-related single by a now-defunct American band called The Right Brothers, elegantly titled *Bush Was Right*.

In the US, the ballyhoo of presidential election campaigns and a natural affinity between the Democratic Party and liberal-inclined musicians has led scores of the latter – REM, Bruce Springsteen, Jon Bon Jovi, Katy Perry – to take to the campaign trail. But in the UK, musicians have tended to believe that hanging around with people who aspire to power might not do wonders for their credibility, while politicians have usually surmised that pop stars are usually too mercurial and easily distracted to risk any close association. Yes, The Beatles were photographed with Harold Wilson at a 1964 awards ceremony, but they spent most their career refusing to talk about their political allegiances, if they had any; and though Mick Jagger was once encouraged to become a Labour MP by the gay parliamentarian Tom Driberg, the approach probably had more to do with lust than politics, and went nowhere.

In a long history of distance and mutual suspicion, Blair's dalliance with Britpop has been one of only a few exceptions: a relatively brief affair, which, in keeping with the hedonistic tenor of the 1990s, was really more about photo opportunities than any substantial political engagement. By contrast, an

earlier relationship joined politics and pop together in a much more substantial fashion, such that musicians were encouraged to offer their thoughts on policy and attend meetings that were officially minuted, as well as play gigs that were defiant, celebratory affairs where a creditably multi-racial array of acts entertained thousands of people.

Musical collective Red Wedge was founded in late 1985, when Margaret Thatcher was in her prime, and the Labour Party was six years into the long period of opposition that would end in 1997. Its two-person de facto leadership was provided by the solo singer Billy Bragg and former Jam frontman Paul Weller. Red Wedge focused efforts on influencing voters ahead of the 1987 election. After a media launch at the Houses of Parliament addressed by the then-Labour leader Neil Kinnock, its most notable phase came in early 1986, when the first Red Wedge national tour featured Bragg, Weller's band The Style Council, R&B singer Junior, reggae artist Lorna Gee, and, when it reached Newcastle, a legendary four-song performance by The Smiths. The fact that Labour lost the subsequent election was enough to couch Red Wedge in terms of failure. But there was a 7% swing to Labour among 18-24 year-olds, which some party insiders attributed to its efforts. Among Labour high-ups an embrace of the arts was spawned that eventually fed into the creation of the Department for Culture, Media and Sport. Weller quickly expressed deep regret about ever having got involved: "I'm not really one for joining clubs," he said. Bragg talked in glowing terms about an attempt to "really try and make a difference on a big scale and change a government".

A year after the 1987 election, pop culture took a sudden turn into the chemically assisted wonderment of Acid House. In as much as the authorities did their best to stamp it out,



it had a deeply political aspect, but it also heralded the end of the kind of explicitly topical music that Red Wedge had brought to the foreground. “That was the next generation coming through, rejecting what the previous generation had done,” said Bragg. “That’s what pop is like with ideas: ‘What’s next?’”

A STORM COMING

A quarter of a century later, that question received a belated answer. In April 2016, *Novelist*, a politicised 19-year-old musician from London steeped in the urban music known as grime, tweeted the text message that he had received when he joined the Labour Party, and offered some advice to Jeremy Corbyn, who was less than a year into his unexpected leadership of the Labour Party, and facing calls to quit. “Do not resign,” *Novelist* wrote. “The mandem need you.”

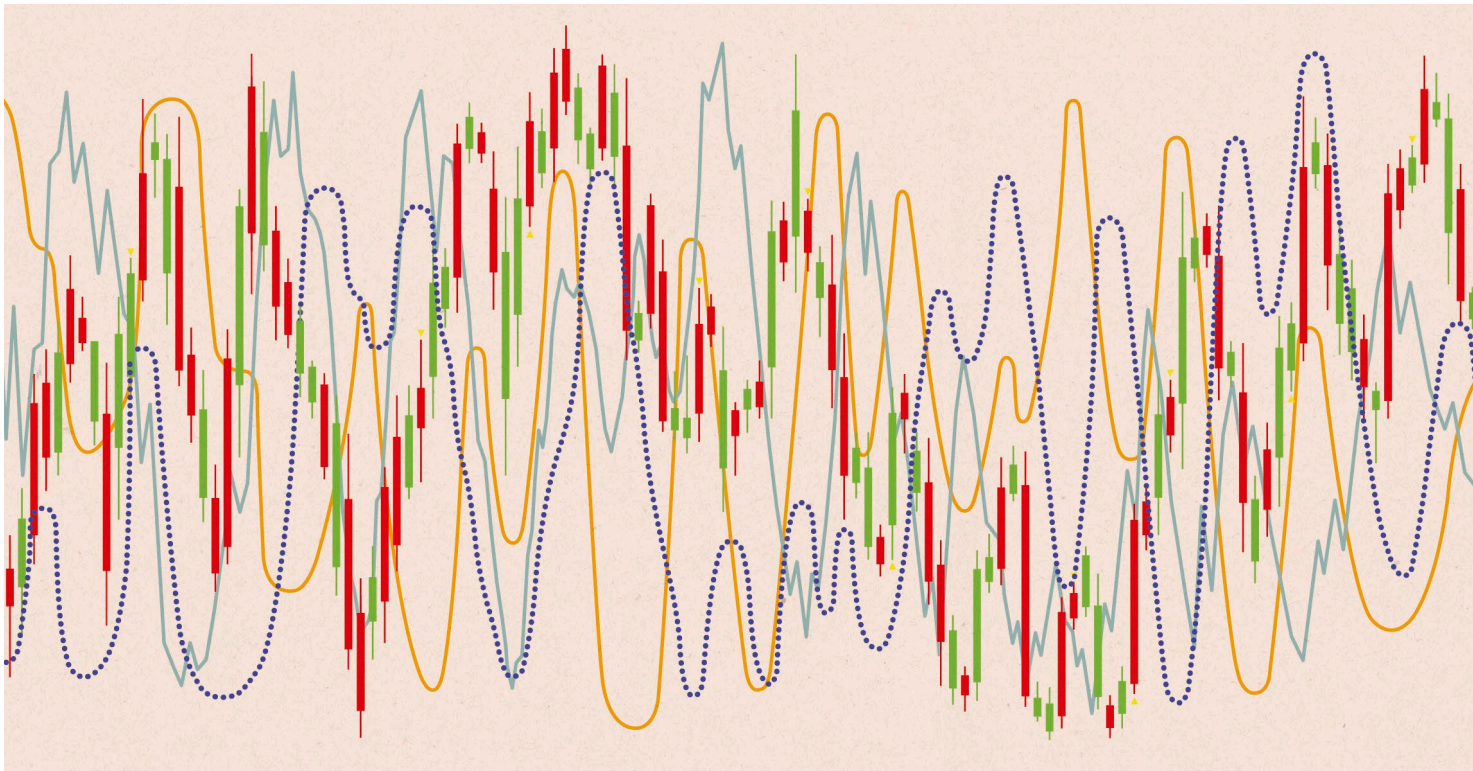
Soon after, the grime MC Stormzy paid heartfelt tribute to Corbyn in *The Guardian*: “I feel like he gets what the ethnic minorities are going through, and the homeless and the working class,” he said. And by the time the election campaign of 2017 came to life, ‘grime4corbyn’ was an omnipresent hashtag, the name of a website that encouraged young people to register to vote, and the focus of a growing mountain of press coverage.

Corbyn had already been the focus of a one-off gig in Brighton at which Weller had appeared, seemingly freshly convinced that music and politics were a worthwhile combination. But this was something else again. The combination of Corbyn’s underdog status and his savaging by the right-wing press evidently chimed with grime artists, as did the sense that he was interested in the issues that often sat at the heart

of the music they created. In that sense, grime4corbyn had more content than the Blair/Britpop interface, as well including the kind of voices that the 1990s’ fixation on white guitar rock had rather missed out. This was not about gin and tonic at the Palace of Westminster, but much more nitty-gritty stuff.

When the West London rapper AJ Tracey appeared in a Labour campaign video, he talked about the NHS, tuition fees and housing. The MC Jme interviewed Corbyn for *i-D* magazine, discussing social cleansing in London and offering yet another tribute to a man “so genuine it feels like I’m about to meet one of my mum’s friends”. The basic idea quickly spread beyond grime: among the other musicians who endorsed the Labour leader were the soul singer Rag And Bone Man and Lily Allen. For slightly older observers, the parallels were clear. “For all those who keep asking where’s the new Red Wedge, grime MCs just answered that question,” tweeted Billy Bragg, three weeks before the election. “More power to ’em.”

All of this undoubtedly played a big role in Labour’s huge success among 18-24-year-olds and Corbyn’s euphorically received Glastonbury appearance, but where it might go next remains unclear. In late July, *New Statesman* ran an article about grime4corbyn whose writer had approached all the right MCs, only to find that most “didn’t feel like talking about politics for a while”. Such is an obvious difference between politics and pop: the fact that whereas one is all about dogged consistency and the long haul, the other emphasises living in the moment and the quick hit. More often than not, they keep well apart, but very occasionally their paths cross, if only for the political equivalent of three and a half minutes. ■



SPIRITED ECONOMICS

The actions of the pack are famously difficult to predict, but an old theory combined with new technology could bring the future into focus

by Paul Ormerod
 @OrmerodPaul

It seems like the world was more settled and secure for almost the whole of recorded history than it is now. What Marx described as the “idiocy of rural life” was in one sense quite predictable. Day followed day in the unremitting tedium and drudgery of subsistence agricultural society. But people were faced with truly major uncertainties.

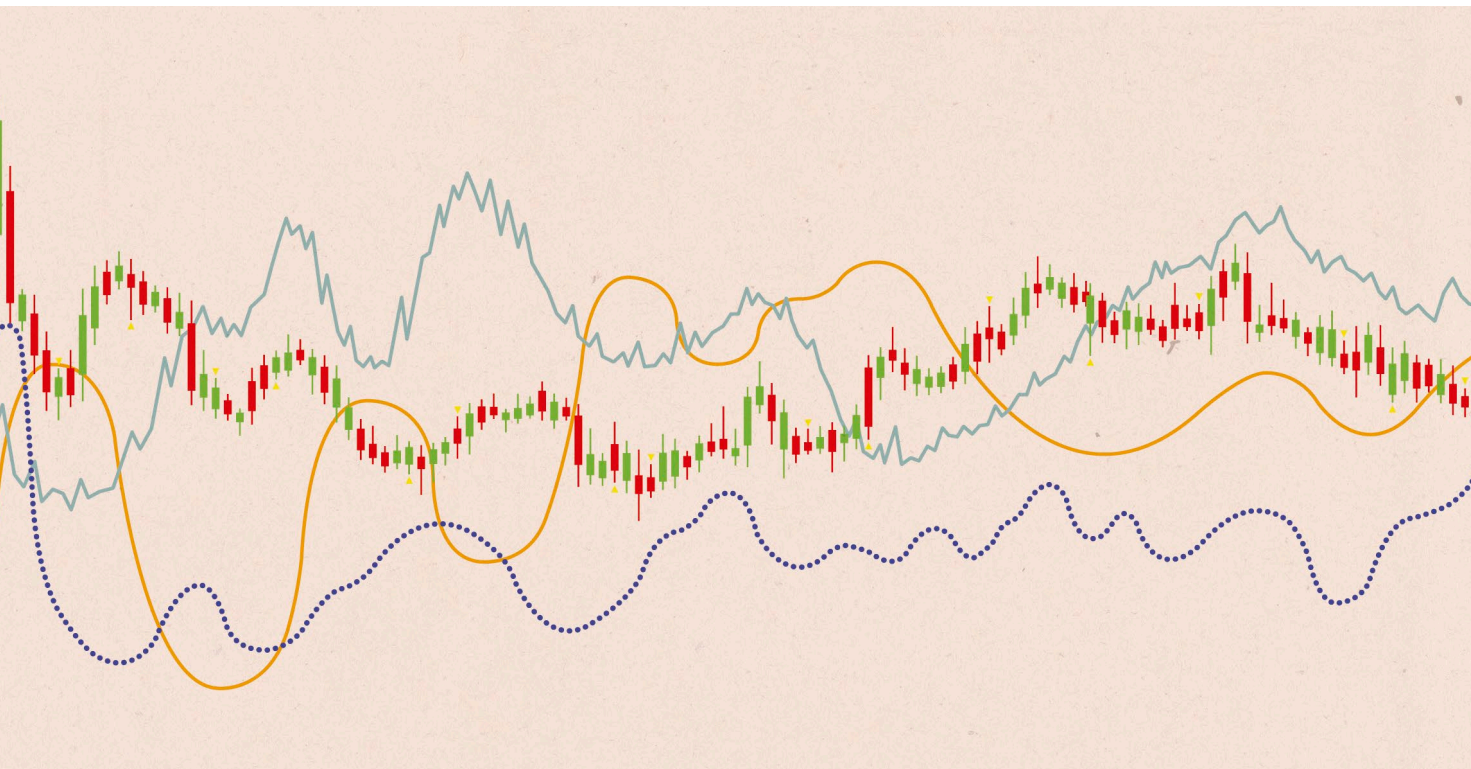
A fundamental uncertainty was simply whether they would get enough to eat, or whether they would face starvation. While England was relatively prosperous even 1,000 years ago, and the last general famine here was in the early 14th century, in much of the rest of the world, famines have continued until virtually the present day.

Plague and pestilence could also strike at any time, often with devastating effects. Even relatively minor ailments could prove fatal. The great English economist David Ricardo had the world at his feet in 1823. A wealthy self-made man, he had purchased a seat in the House of Commons, where he was listened to with respect; he was the Keynes of his day. Yet he died from an initially minor ear infection, which could now be cured in a matter of days.

So life is more predictable today. Or is it? From the decades around the middle of the 20th century, there have been qualitative changes in the speed with which information spreads, and the degree to which we are connected, creating a new source of instability in society. Here is the culture and media thinker Marshall

PAUL ORMEROD IS AN ECONOMIST, AUTHOR AND VISITING PROFESSOR AT UCL'S CENTRE FOR THE STUDY OF DECISION-MAKING UNCERTAINTY

ILLUSTRATION: ALEX ROBBINS



McLuhan writing with great prescience over 50 years ago in *Understanding Media*: “After 3,000 years of explosion...the Western world is imploding...after more than a century of electronic technology, we have extended our central nervous system itself in a global embrace, abolishing both space and time as far as our planet is concerned.” He might as well have been describing the internet!

Cyber society is simply an intensification, albeit a major one, of the trends already in place and identified by McLuhan. He goes on, for example, to say: “This is the Age of Anxiety, for the reason of the electric implosion that compels commitment and participation.”

So in the 21st century we are still faced with the challenges of making policy in an uncertain, anxious world. The challenges have in some ways become harder, precisely because of the further massive increase in connectivity that has taken place. This development is particularly challenging for the field of economics, which essentially looks at individual units, be they people, firms or governments, and treats their behaviour as independent. So banking regulation is based on the capital requirements of individual banks instead of focusing on the interconnected system. But we know that shocks in one localised part of any such system can cascade across the network as a whole. Power grids are a good example, where even small shocks, which are easily contained most of the time, have such potential.

Economics could have evolved differently and focused on such issues much earlier. Until the mid-20th century, for example, the general concept of uncertainty was an important

theme within the discipline. Both Keynes and Hayek, for instance, emphasised the central role of uncertainty in economic systems. These two great economists are often seen as being at diametrically opposite ends of the policy spectrum, but they were united in their belief in the pervasive nature of uncertainty. Keynes, for example, argued that booms and recessions were essentially driven not by objective economic factors, but by what he described as “waves of irrational psychology”. He coined his famous phrase “animal spirits” to describe them. We might usefully think of them as ‘narratives’.

Although Keynes was originally trained as a mathematician, he believed that conventional probability theory – the basis of ‘rational’ calculations about the future – was fundamentally wrong in many practical situations. These are characterised by profound uncertainty rather than precisely quantifiable probability. To illustrate the difference between the two concepts, you may be offered odds of four to one, say, on a horse in a particular race. But Keynes believed that, quite often, we do not even know for sure which horses will be running, so odds of four to one on a given horse have little or no meaning. Keynes wrestled with the problem for years in the opening decades of the 20th century. In 1921, he published what he hoped would be a revolutionary work, *Treatise on Probability*. Although it is full of dense maths, he did not succeed in resolving the problem of uncertainty in probability with the tools available to him at the time and the book now languishes in almost complete >> obscurity. But the themes are picked up in what did

become a revolutionary book, his *General Theory* of 1936. He writes, for example, that: “the outstanding fact is the extreme precariousness of the basis of knowledge on which our estimates of prospective yield [of a new investment] have to be made... If we speak frankly, we have to admit that our basis of knowledge for estimating the yield 10 years hence of a railway, a copper mine, a textile factory, the goodwill of a patent medicine, an Atlantic liner, a building in the City of London amounts to little and sometimes to nothing.”

The approach to probability attacked by Keynes is at the heart of a great deal of modern economics. It pervades, for example, many models of financial risk assessment. It purports to give, by analysing past data, the probability of any given event taking place in the future. We have only to recall the financial crisis to appreciate the limitations of this theory. To go back to the simple illustration above, new horses, whose existence was unsuspected, entered the race. Things happened during the crisis that had not happened before, or at least not during the time periods used by banks and their regulators to form their risk assessments.

But in the immediate post-war period, shortly after Keynes developed his ideas, the capture of economics by conventional mathematical models took hold. Hayek and Keynes both expressed their economic ideas in words rather than numbers because the mathematics they needed to formalise them had not been developed. But as a result, their thoughts on uncertainty and the limits to knowledge were squeezed out of economics. Instead, the whole culture of economics has become permeated by the idea that, given sufficient cleverness, an optimal solution can be found. Whether by incentives or by rules and regulations, structures can be designed that facilitate the best possible outcome. In particular, there has been an explosion of regulation. Think, for example, of the vast numbers of boxes that must be ticked in order to satisfy the Financial Conduct Authority.

There are signs within economics itself of a realisation that this approach might not always be desirable. Influential economists are suggesting that solutions which are either explicitly market based, or which by regulation and design try to mimic the workings of a rational market, might not be a good idea. For example, Bengt Holmström’s recent Nobel Prize lecture in the *American Economic Review* concludes: “One of the main lessons of working on incentive problems over 25 years is that, within firms, high-powered financial incentives can be very dysfunctional and attempts to bring the market inside the firm are generally misguided.”

Emotion, too, is starting to be seen as an important driver of behaviour in many contexts. A 2015 issue of the prestigious *Journal of Economic Perspectives*, for example, contained a study on systematic overconfidence in decision-making. Impressive evidence was cited on the behaviour not just of consumers, but also of CEOs of large companies and of investment managers. On strictly rational grounds,

overconfidence is a mistake and so should simply not persist. But it does.

However, these new ideas are at the frontiers of economics. In its practical applications, economics continues to reflect the key theoretical features of the discipline, namely equilibrium and optimisation. Economics has relatively little to say about dynamic processes, about change, about disruption, evolution, innovation, about behaviour out of equilibrium.

OPTIMUM ILLUSION

During the past half-century, economics has come to occupy a completely dominant position in the process of policymaking. In 1964, the newly elected Labour government increased the number of professional economists in the civil service to around a dozen. Now, there are 1,400 working across government, not counting those in the central bank and the various massive regulatory bodies. A great deal of policy is filtered through the lens of so-called rational economics before it can be deemed acceptable. At precisely the time when new approaches are needed, the grip of old thinking on the policy process has tightened. The illusion that the optimal solution can be found with the right sorts of incentives and regulations is stronger than ever.

But there is now potential for the ideas of Keynes and Hayek to be applied in economics. And part of the solution is to be found in the problem. In cyber society, we are all far more interconnected than ever before. This intensifies the problems of coping with an uncertain world. Rumours, fads, bubbles, fake news and behaviours can all be copied and spread much faster than ever. The concept of ‘animal spirits’ – or narratives, to use a more normal English phrase – as the driving force of the economy, is an insight that is both very profound and correct. But until very recently, it has not really been possible to make it operational. Indeed, its rather imprecise nature meant that it could not be captured in the formal mathematical models to which economists, for reasons both good and bad, became addicted during the second half of the 20th century. However, there have been two scientific developments, one of them very recent, which create the opportunity to measure the “waves of irrational psychology” in ways that could be useful to policymakers.

The first of these relates to the mathematical theory of networks, and in particular how concepts or behaviour either spread across them or are contained at the outset of their appearance. Over the past couple of decades, there has been a huge increase in our knowledge of this topic. The findings have been usefully applied in a wide range of contexts, and have increased our understanding of, for example, smoking, obesity, crime and individual financial decision-making.

A great deal has been learnt. By way of example, what has become known as the alt-right, despite its protestations of lack of trust in experts, has shown truly advanced

“TWO DEVELOPMENTS CREATE THE OPPORTUNITY TO MEASURE ‘WAVES OF IRRATIONAL PSYCHOLOGY’”

mathematical skills. The alt-right community has learnt how to manipulate Google’s page rank algorithm, which is in essence based on analysing networks created in social media by search activity, and ensure that their material appears very high, and even first, in searches for certain phrases. It is even more impressive when we appreciate that Google employs teams of high-powered mathematicians whose job is precisely to prevent its algorithms from being manipulated.

The second scientific development is even more recent. The tools for analysing information on social media and the internet in general have become far more powerful, literally within the last few years. A simple way of measuring sentiment in a body of text, such as copies of the *Financial Times* or *Wall Street Journal*, is based upon word counts. Several ‘word lists’ are available that provide a set of emotional ratings for a large number of words in English. But advanced algorithms are taking the analysis to new scientific levels. First, they take account not just of individual words, but of the context in which they appear. The algorithms do not require predetermined ratings of emotion, but learn the overall sentiment of any given piece of text. Second, they are able to identify the topics – the narratives – that are being discussed at any point in time.

The potential now exists to not only measure ‘animal spirits’ in a meaningful way, but to intervene in the relevant network to try to ensure that a desirable narrative, from a policy perspective, gains dominance. Some, perhaps many, may regard this as scientific utopianism. But advances in network science, combined with major developments in the analysis of big data, do create at least the possibility of making operational Keynes’s concept of animal spirits for policymakers. ■

FELLOWSHIP IN ACTION

MICRO POWER

“The workforce is changing, and a huge numbers of self-employed people and microbusinesses aren’t sufficiently represented,” says Krissie Nicolson, director of the East End Trades Guild, a union of 218 small businesses. “Our aim is to create better local conditions for small businesses and their communities.”

When the Guild sets up in a new area, its first task is to build relationships and then find out what the common interests are among small businesses. “In East London, the most important issues to our members are business rents, business rates and planning issues,” explains Nicolson. “There is a lot of great work being done on resisting the displacement of communities due to a lack of affordable housing, but not enough is happening for locally based small businesses.”

Before any collective action starts, the Guild builds a network. “The maxim we applied before we started the Guild was ‘power before programme’. So before you take strategic action you have to organise your people power.” One example comes from Tower Hamlets, where they persuaded the mayor to fund research into the definition of affordable small business rents. Similar work in the rental sector resulted in the London Living Rent.

With plans to roll out its successful model across the country, the organisation is putting together a Trades Guild Toolkit, which recently received £10,000 in RSA Catalyst funding. “It will help us make short films and run training sessions for people who are interested in building trades guilds in other areas,” says Nicolson, who is working to scale up the organisation.

■ To get involved, email krissie@eastendtradesguild.org.uk

GRENFELL: TAKING STOCK

The Grenfell Tower fire has exposed several injustices, and compels our society to guarantee safe housing for everyone

by Jonathan Schifferes
 @JSchifferes

The best way to honour the dead and those displaced by the fire at Grenfell Tower is to improve the quality of housing for the rest of society from this point onwards. That does not just mean banning certain materials and strengthening regulations specific to fire safety. It means creating a climate where it is both morally unacceptable and legally impossible to maintain a home where certain risks are present and proven. It means building a system that hunts down and acts to minimise risks, and that is blind to the wealth of the adults and children who sleep under a particular roof on a particular night.

This cannot be left to the market to organise. Every person needs adequate housing to live, but children, many elderly people and many adults cannot earn an income for themselves, or live off salaries that mean they rely on accommodation that is subsidised in some way. The government therefore needs to be the ultimate guarantor of decent housing.

Since post-war global institutions defined universal human rights almost 70 years ago, we have done more to address hunger and disease than to improve access to good housing. The number living in ‘slums’ globally rose from about 700 million to 900 million between 1990 and 2015. Today, one in eight of us lives in a home that is unsound: lacking clean drinking water or sanitation facilities, adequate space, or adequate materials to shelter us from our climate. Even in wealthy global cities the most disadvantaged sometimes live without any of these things. City growth has meant economic growth, but many of the people fuelling that growth do not have safe, healthy, secure or sustainable homes.

In 1942, William Beveridge identified squalor as one of the five ‘giant evils’ facing the UK. The post-war government organised the rebuilding of British cities

JONATHAN SCHIFFERES IS THE RSA'S ASSOCIATE DIRECTOR, PUBLIC SERVICES AND COMMUNITIES

and created whole new towns to house a growing population, completing 3,000 new homes every week during the 1950s. At the dawn of the 1980s, a third of UK households rented homes from the government. Among the richest 20% of households, over a quarter rented a home from the government.

Since the 1980s, the UK housing market has become a vast engine of inequality. Social housing is no longer as inclusive. About 1.8 million homes were effectively privatised, sold by the government to their residents at a subsidy worth £40bn. Of those homes, 40% are now rented privately and very few rich people live in social housing today. As the TV cameras panned out from Grenfell Tower, we saw a borough with about £40bn of residential property concentrated in five square miles. The preventable tragedy of the Grenfell fire happened within one of the most affluent urban districts the human race has ever built.

While the housing market has made millions of people very rich, ironically, the wealth generated through property has only served to make the elimination of squalor more difficult to achieve. To subsidise housing in this climate costs the government more, while new affordable housing is primarily funded by developers of private housing, who rely on profits (and rising prices) to cross-subsidise.

Figures for England show that the number of households in overcrowded rented accommodation has risen by 68% in the past 20 years. At the same time, ‘under-occupation’ (households with at least two spare bedrooms) rose substantially over the same period, and now applies to 52% of owner-occupiers. For some, buying additional bedrooms is driven more by the promise of a return on investment than just practical convenience. The government’s own strategy for future housing policy describes the housing market as ‘broken’.

The American philosopher John Rawls made popular a powerful concept – the ‘veil of ignorance’ – that





“A GOOD MEASURE OF SOCIETY SHOULD BE HOW IT REBUILDS AFTER A DISASTER”

proposed that in thinking about what is fair we should ask: if we had no idea about which family, household and community we would join when we were born, what kind of conditions would we want to live in? A good measure of a society should be how well the poorest and most disadvantaged people live, and whether the rest of us would be prepared to live that way.

Grenfell has unveiled ignorance in many forms: ignorance about the purpose of regulation and ignorance about the suffocating frustration of renting a property from an authority that is compelled to cut costs. It should serve to remind us of how a dysfunctional housing market can compound deeper injustices as wealth cascades over generations. The total value of the annual transfer of private property wealth down the generations in the UK is roughly equal to the government’s annual budget for paying state pensions through taxation.

A further good measure of society should be how it rebuilds after a disaster and rehabilitates those who have faced injustice. The law serves to protect a society from abuses by others, and to a large extent to protect people from harm, including through enforced regulation. Our public services also do this, and provide a safety net so that extreme suffering is avoided. Both failed at Grenfell Tower. In a building owned and managed by a branch of the government, recent refurbishment created extreme risk for residents. And the government’s response to the human emergency faced by those displaced by the fire was clearly inadequate. With Grenfell Tower still smouldering, the victims and those close to them quickly articulated that their concerns on the specific issues of fire safety had been neglected by relevant authorities. Barely 48 hours after the fire, local residents stormed the town hall demanding action and answers, and pursuing justice.

Grenfell is the worst UK public safety disaster since 96 football supporters died at Hillsborough in 1989. It took several inquiries and individual court cases before six suspects were formally charged with crimes, 28 years after Hillsborough, and, as it happened, two weeks after Grenfell burned. The difficulty ordinary people face in achieving justice when those at fault are in positions of real power shames us as a nation. To support those pursuing justice for Grenfell, we are all implicated in a wider quest: to improve the protection afforded by our laws and to assure that all people can sleep safely in decent housing.

It is in this challenging context that we need a national plan to improve the 3.5 million homes in England that have been estimated to have a serious health or safety risk. The moral argument for this aligns with cold-hearted, rational public sector economics. Since the NHS foots the bill for most of those

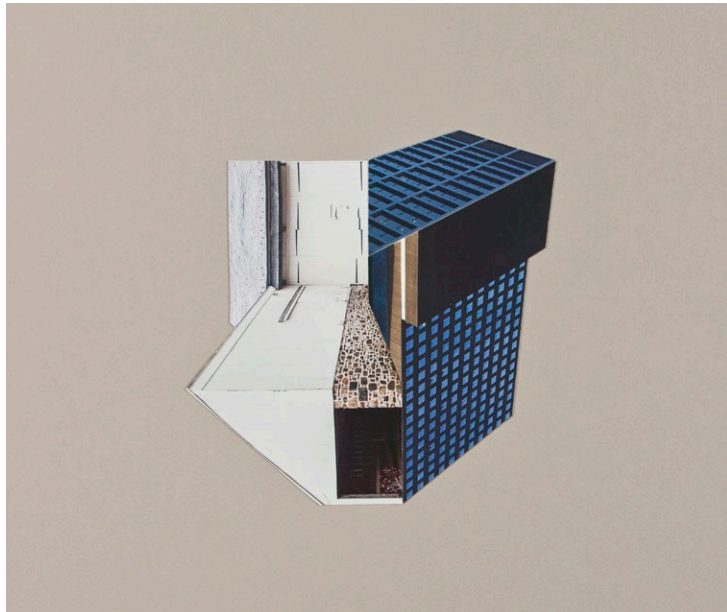
who suffer illness or injury from their homes, an investment of £10bn in resolving the majority of hazards would be worth about £1.4bn annually to the NHS in avoided costs. This represents a ‘payback period’ of just seven years, according to calculations by the Building Research Establishment in 2014. The same analysis shows serious fire risks in 130,000 English homes. Fires are less common in recent years, thanks to both education and prevention, as well as safer appliances and mandatory fire-resistant materials in furnishings. But one in six private rented homes still do not have a smoke alarm.

The fundamental question is therefore what kind of standard is acceptable for a home and how we should enforce it. Most homebuyers commission a property survey that covers fire risk and other hazards; indeed, most mortgage lenders require this too. But once a mortgage lender is satisfied, there is nothing else to compel anyone to act on the observations of the surveyor. The mortgage lender is focused on the value of the property versus the value of the loan, and it is the risk of the property failing that is the concern, not the risk to life for its inhabitants. As for renters, most enter properties with almost no information about the state of the property or the risks of living there beyond what they can assess with their own eyes.

Homes are owned by millions of different people and organisations, making an investment programme to comprehensively remove risk difficult to organise. In pockets of the country, communities are self-organising cooperative models for housing, making management and safety a shared responsibility. On a more systemic level, raising awareness and providing penalties and incentives could go a long way without significant government expenditure. Licensing private landlords has reduced unsafe living conditions in several local authorities in England where it has been introduced. Prosecutions can be made for poor maintenance, and inspections can be proactive. This goes far beyond the planning enforcement regime, which sees the state inspecting property for safety as part of authorising planning applications that seek either to make alterations or to construct new buildings.

Think about what we have achieved in the past in responding to disaster. Within two years of the Titanic sinking – infamously, only one third of its passengers were evacuated on lifeboats – the world’s maritime regulators created a global convention: everyone aboard a ship should be guaranteed in law a space on a lifeboat. Thousands of lives have been saved since.

As a car or bus passenger in the UK, you are more than 10 times safer today, per mile travelled, than in the 1960s. The car industry today has a culture of safety innovation.



We expect an airbag as standard, and almost all cars come with them, despite the law not strictly requiring them. Many car manufacturers promote their vehicles on the basis of safety features and their safety record, and the press report on these. As a society, we do not yet have the same relationship with housing.

We should take inspiration from one of humanity's most impressive achievements: we have created widespread, affordable and incredibly safe passenger air travel. Accidents still occur, but with less relative frequency and loss of life. The culture of aviation safety improvement employs systematic techniques to analyse and define procedures, acknowledging 'near misses' in practice and amending training programmes.

But perhaps the most remarkable aspect of aviation's success has been the rise of low-cost, 'no-frills' travel. Under conditions of intense cost-cutting, the poorest in society have been increasingly able to travel by air. Safety has not been compromised. Ryanair and EasyJet are among the largest airlines in Europe, as well as being ranked among the safest and the cheapest. Quite rightly, we treat the safety of the poorest airline customers exactly the same as those who fly first class. I cannot imagine our society tolerating anything different.

A renewed conversation about how we improve our housing stock is needed, reconsidering the existing financial models that force millions to live in conditions that can prove deadly, even in the world's wealthiest cities. Just as we would not tolerate our airlines making an emergency oxygen mask an optional extra to be paid for, citizens must demand that government and business work as partners to improve and assure health and safety in the homes of rich and poor alike. Achieving this would be relatively straightforward with existing technologies, but would involve a complex infrastructure of accountability that would test the strength of our democracy. Dodgy housing will strive to exist outside state enforcement; indeed, lots of building work already happens without planning permission. But this same challenge does not discourage us from licensing

taxis, alcohol or fishing. Notably, shipping, automotive and aviation brands have provided a form of accountability that extends globally. Housing is still local.

Pinned to a fence near Grenfell Tower, part of the informal memorial, is a printout of the UN's Declaration of Human Rights: "All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood." In communities across the world, we have not organised ourselves successfully to ensure that our fellow citizens can sleep safely and soundly every night. Until we restructure our relationship to housing, our conscience should not rest. ■

FELLOWSHIP IN ACTION

DIS/ORDINARY ARCHITECTURE

"We need to move away from the way disability is thought of as a technical problem within architectural design," says Jos Boys, co-founder of Dis/Ordinary Architecture, a network of disabled artists seeking a paradigm shift in how inclusion is thought about. "We are saying that you can start in a different place and see disability as a range of different ways of being in the world; realising that disabled people are actually experts in negotiating the built environment," explains Jos. To change mindsets, Dis/Ordinary has put on events at the Tate Modern and is working with 10 universities, where the artists are visiting tutors. "Overall, the aim is to become a long-term platform that can do the training that enables this different way of thinking about disability," explains Jos.

Dis/Ordinary Architecture is next aiming to scale up and a £2,000 RSA Catalyst grant is allowing it to plan that process.

■ To get involved, email disordinaryarchitecture@gmail.com

STREET VALUES

An empirical understanding of place value could lead to urban developments that truly prioritise wellbeing

by Nicholas Boys Smith
 @createstreets

House prices may be the talking point of a million dinner parties, but what we mean by the value of a neighbourhood and what drives this has, until relatively recently, not received so much attention, despite being incredibly important. We need to do more empirically to understand why people want to be in some places in order to run a planning policy that enhances wellbeing.

When Adam Smith left his discussion of rental values to the last chapter of *The Wealth of Nations* he was setting the tone. Too many economists have subsequently largely ascribed value to accessibility to work, raw materials or employees, without analysing enough data on the subject. And too many designers and planners have not used any data at all.

In the past 30 years, there has been a revolution in the analysis of property values and this has permitted a more nuanced understanding of what actually drives value. By using price data from thousands of transactions, researchers can statistically tease out what buyers are willing to pay for the individual features that make up the total price of a property. This form of analysis has started to reveal the sophisticated ways in which the attributes of housing are priced. We now have the ability to layer on top of this the 'big data' tsunami (and mobile-sourced data) that is currently expanding the amount of neighbourhood-level

NICHOLAS BOYS
SMITH IS DIRECTOR
OF CREATE
STREETS

information available to researchers; together, this gives us the ingredients for an empirical revolution in urban studies.

For example, the organisation that I lead, Create Streets, has conducted a major study into what we mean by the economics of place, assessing nearly 250 existing studies and conducting a wide analysis of market value, social value and urban form in six cities: London, Birmingham, Manchester, Leeds, Liverpool and Newcastle. We used the widest accessible dataset of urban characteristics from street network connectivity to the presence of historic buildings, and from the amount of green space to overall accessibility.

PRIDE OF PLACE

No single answer emerged to tell us what people value in a place. Everywhere is different. And every city is at different points on the parabola of birth, decline and regeneration. However, we can now argue confidently that, in contrast to most conventional economic models and many urbanists' assumptions, beauty, the unique qualities of a place and the memory those generate, and the shape of a block can matter as much, and sometimes more, than space and proximity to a place of work. Where people want to live, where they are happy and what they will pay for is not purely associated with connectivity. There is a clear link between urban developments with high long-term value and areas with good levels of wellbeing. It seems people are far wiser than most



urbanists give them credit for. One good example comes from Islington in north London, where the 1960s construction of the Packington Estate proved an unpopular regeneration of Victorian terraces and squares.

Contemporary objections were that the ‘old English flavour’ of the area was lost, with slab-blocks and overhead walkways replacing streets, and that residents were systematically ignored. Improvements made in the 1990s eliminated some poor elements of the design, but still left it feeling imposing, according to some residents.

A 2004 residents’ survey found that 86% wanted to reinstate the traditional street pattern. They reported feeling isolated from their neighbours because the estate did not fit in with surrounding streets. Residents did not want pre-fabricated buildings, but houses. Since then, the estate has been completely regenerated. Although imperfect, the regeneration (unlike many) has been successful. The chair of local residents’ group Jan Durbridge commented: “Consultation from the early stages of the regeneration process, not just with residents but with community members from the surrounding area, was vital.”

Another key finding from our study was that the heritage premium is more important than the new-build premium. In every city studied, proximity to a listed building was associated with more additional value than the premium associated with a newly built home. A home closer than average to a listed

building in London is worth 10% (nearly £50,000) more than one that is not, holding everything else equal. The equivalent ‘new-build’ premium is only £8,795.

We also found that successful cities are defined by their diversity in form, use and transport and this diversity has value. Areas with a greater variety of house types suffer from less deprivation and areas with greater transport and amenity access are normally worth more. Nor, despite many predictions, are the suburbs quite dead yet. The merits of the suburban life are clearly still visible and valuable to very many millions. This is related to insulation from traffic and personal green space in a form that brings clear personal wellbeing benefits.

But more greenery is not always a good thing. The immediate presence of attractive greenery can add huge value. However, at the city-wide level, its presence can be associated with lower value as well as higher value. What it is and how it is managed is what really matters.

The lesson for planners is that a proper understanding of place value can help them create places where more people lead happier lives. They should use data more and be very careful of imposing their own value judgements on the wider community. To get to that point, we need better to understand and measure how cities need a range of uses, forms and scales in order to function and maintain their value for the humans who must live, love and work in them. ■

SYSTEM REBOOT

The technological disruption tearing through industries today can be navigated if we learn to forget what we know

by Andrew McAfee and Erik Brynjolfsson
 @amcafee @erikbryn

From startups rapidly becoming billion-dollar companies to the demise or transformation of Fortune 500 stalwarts, the turbulence and transformation wrought by technology on economies can seem chaotic and random. But chaos gives way to order when we view these changes through the lenses of three great trends that are reshaping the business world: machine, platform and crowd.

The first trend, the rapidly increasing and expanding capabilities of machines, is exemplified by AlphaGo's unexpected emergence as the world's best Go player. Go is a pure strategy game with no luck involved that was developed at least 2,500 years ago in China. Learning to play Go well has always been difficult for humans, but programming computers to play it well has seemed nearly impossible. It is estimated that there are more possible positions in Go than there are atoms in the observable universe. Go players learn a group of heuristics, or short cuts, and tend to follow them. Beyond these rules of thumb, however, no one, including top players, has been able to explain winning strategies. So how do you write a program that includes the best strategies for playing the game?

A team at Google DeepMind, a London-based company specialising in machine learning, answered the question with AlphaGo, a system that could learn strategies and heuristics itself. Two years after work began on the Go-playing application, it had decisively beaten Lee Sedol, regarded by many as the best human Go player in living memory. The rapid success of AlphaGo was completely unanticipated and shook the artificial intelligence community.

The second great trend is the appearance of large and influential young companies that are deeply disrupting the established incumbents. These upstarts

ANDREW MCAFEE IS AN MIT RESEARCH SCIENTIST AND ERIK BRYNJOLFSSON IS AN MIT PROFESSOR. THEY ARE CO-AUTHORS OF *MACHINE, PLATFORM, CROWD: HARNESSING THE DIGITAL REVOLUTION*

are platforms, and they are fearsome competitors. This trend was observed by strategist Tom Goodwin in 2015 when he wrote: "Uber, the world's largest taxi company, owns no vehicles. Facebook, the world's most popular media owner, creates no content. Alibaba, the most valuable retailer, has no inventory. And Airbnb, the world's largest accommodation provider, owns no real estate." These companies have upended the status quo in taxi services, publishing, retail and hotels, quickly rewriting industry norms and capturing huge shares of those markets. They were able to make such giant leaps because they own mainly applications and code rather than expensive physical assets and infrastructure.

The third trend, epitomised by General Electric's (GE) unconventional development process for its Opal icemaker, is the emergence of the crowd; our term for the startlingly large amount of human knowledge, expertise and enthusiasm distributed all over the world and now available, and able to be focused, online.

In 2015, GE, a company that had an annual research and development budget of \$5.2bn, opted to work with a group of strangers across the internet to help the company think up and design a new consumer product. It then asked potential customers to commit to a several-hundred-dollar preorder well in advance of the product's availability. GE had talented staff capable of creating the Opal, but the design competition it launched attracted an online community invested in the development of the product, and engaged in cosmetic questions throughout the prototyping phase. Although GE did not need the \$2.7m it raised in crowdfunded preorders, it wanted to test that there was appetite for the product and to drum up business. GE had found a new way to tap into many minds that were not on its payroll, as well as a market for its ice machine.

These three examples illustrate the great trends that are reshaping the business world, but in all companies and industries, machine, platform and crowd have >>





counterparts. For machine intelligence, the counterpart is the human mind. Accountants with spreadsheets and assembly line staff working next to robots are examples of mind-and-machine combinations. The counterparts of platforms are products; in other words, goods and services. A ride across town is a product, while Uber is the platform people use to access it. For the crowd, the counterpart is the core: the knowledge, processes, expertise and capabilities that companies have built up internally and across their supply chains. The core of GE Appliances designs, manufactures and markets refrigerators and ovens.

Minds, products and the core are not obsolete. Human abilities, excellent goods and services and strong organisational capabilities remain essential to business success, but because of recent technological changes, companies need to rethink the balance between minds and machines, between products and platforms, and between the core and the crowd. Understanding when, where, how and why these machines, platforms and crowds can be effective is essential to success in the economy.

So when did this important new era – the second machine age – begin? We have arrived at a two-phase answer to this question. Phase one describes a time when digital technologies first had a big impact on the business world by augmenting and automating mental tasks. By codifying the knowledge of humans and scaling it up digitally, they have taken over large amounts of routine work, such as processing payroll, welding car body parts together and sending invoices to customers. By the mid-1990s, productivity started to grow much faster as a result of these applications of computers and other digital technologies.

We are now in phase two of the second machine age, a time when machine learning systems have started to become truly successful. As a result, machines are beginning to solve problems

even when humans cannot codify the necessary knowledge themselves, as was the case with AlphaGo. In 2010, Google unexpectedly announced that a fleet of completely autonomous cars had been driving on US roads without mishap. By the third quarter of 2012, there were more than a billion users of smartphones; devices that combined the communication and sensor capabilities of countless sci-fi films. And of course, the three advances described earlier happened in the past few years, as did many other breakthroughs. They are not flukes or random blips in technological progress. Instead, they are harbingers of a more fundamental transformation in the economy; one rooted in both significant technological advances and sound economic principles.

Phase two differs markedly from phase one. First, it is a time when technologies are demonstrating that they can do work that we have never thought of as preprogrammed or routine. They are diagnosing disease accurately and engaging in creative work like composing music. Machines are learning how to solve problems on their own. This development vastly enlarges the scope of applications and tasks that machines can now address.

Second, hundreds of millions of people started to have powerful, flexible and connected computers with them at all times. For the first time in human history a near-majority of the world's adults are now connected with each other digitally, and with a large chunk of the world's accumulated knowledge, which they can contribute to themselves. They can also engage in many kinds of exchanges and transactions, bringing billions more participants into the modern global economy.

Computers that can excel at non-routine work and the digital interconnection of humanity are both phenomena of the past few years. So we think a decent starting point for the second phase of the second machine age is the second decade of the new millennium. It is when minds and machines, products

“FOR THE FIRST TIME IN HUMAN HISTORY A NEAR-MAJORITY OF THE WORLD’S ADULTS ARE CONNECTED”

and platforms, and the core and the crowd came together quickly, and started throwing off sparks. As a result, many long-standing assumptions have been overturned and well-established practices made obsolete. Understanding that we are at the beginning of such a phase is important because it allows us to apply the lessons of history.

Around the start of the 20th century, electricity appeared as a viable alternative to steam power in American factories. Early adopters used the technology because of the cost savings, but they eventually came to realise that electrification created another major efficiency; power sources could be spread throughout a building. As a result, most manufacturers eventually adopted some form of ‘group drive’, a configuration in which a factory had several large electric motors, each providing power to a group of machines. Some wanted to push this decentralisation of power much farther and began talking about ‘unit drive’, or giving every individual machine in the building its own electric motor. Today, of course, it is completely ridiculous to imagine doing anything other than this, but the concept of unit drive was met with deep scepticism when it first arose, and for a surprisingly long time afterwards.

THE CURSE OF KNOWLEDGE

To navigate technological change today, we need to understand why technology progressions that are so obvious in retrospect are so hard to see accurately while they are unfolding. And why so many of the smartest and most experienced people and companies are the least able to see it. Research in many different fields points to the same conclusion: it is exactly because incumbents are so proficient, knowledgeable and caught up in the status quo that they are unable to see what is coming and the unrealised potential and likely evolution of the new technology. This phenomenon has been described as the ‘curse of knowledge’ and ‘status quo bias’, and it can affect even successful and well-managed companies. Existing processes, customers and suppliers, pools of expertise, and more general mind-sets can all blind incumbents to things that should be obvious, such as the possibilities of new technologies that depart greatly from the status quo.

This certainly appears to have been the case with factory electrification. As economists Andrew Atkeson and Patrick J Kehoe summarise: “At the beginning of the transition [to electric power], manufacturers [were] reluctant to abandon [their] large stock of knowledge to adopt what, initially, [was] only a marginally superior technology.” Another duo of economic historians, Paul David and Gavin Wright, found that a big reason it took so long to fully realise electricity’s transformation potential was “the need for organisational and

above all for conceptual changes in the ways tasks and products are defined and structured”. Assembly lines, conveyor belts and overhead cranes were examples of such conceptual changes. They were essential to unlocking electricity’s full potential, yet unimaginable to many incumbents that had become large and successful during the steam era.

Electrification was one of the most disruptive technologies ever; in the first decades of the 20th century, it caused something close to a mass extinction of ‘industrial trusts’ in the US. These were large companies born of mergers; their owners aimed to take advantage of economies of scale in production, purchasing, distribution, marketing and so on. At the time, industrial trusts seemed positioned to reign for a long time. They were well capitalised, staffed by the first generation of professional managers and far from hostile to new technologies. They had easily learnt to communicate by telegraph and ship goods via railroad, and they were willing to switch from steam to electric power in their factories. But all their resources and capabilities were not enough to save them as electrification spread. A survey conducted by the economist Shaw Livermore and published in 1935 found that over 40% of the industrial trusts formed between 1888 and 1905 had failed by the early 1930s. Another 11% were ‘limping’ units.

We believe this was in part at least due to electrification. The big advantages of electrification came not from simple substitution of electric motors for steam engines, but from the redesign of the production process itself. Intelligently electrified factories – those with motors attached to every machine, with assembly lines and conveyor belts, with overhead cranes, and so on – were formidable weapons in any competitive battle. It seems likely that early adopting factories contributed directly to the deaths of many of the old industrial trusts.

The great shake-up in early-20th-century American manufacturing had multiple causes, including the upheavals of World War I and President Teddy Roosevelt’s trust-busting crusade, but the many shocks of electrification were one of the fundamental reasons why so many top companies failed or floundered. Factory owners who considered electrification simply a better power source missed the point entirely, and over time they fell behind their electrified rivals.

Today we are in the early stages of another industrial shake-up, but an even bigger and broader one. We struggle to think of any significant company in any market anywhere in the world that will not be affected by the technology surge under way now. The successful companies of the second machine age will be those that bring together minds and machines, products and platforms, and the core and crowd very differently than most do today. ■

LESSONS FROM PRESTON

Community wealth and economic democracy are working, as the case of Preston demonstrates

by Neil McInroy, Matthew Jackson and Matthew Brown

Around the world, progressive local economic movements are emerging. They aim to build economic and social justice by transforming the connections between the economy, wealth creation and the people. The trend has sprung from the recognition that economic growth, and the economy more generally, is failing to deliver social justice.

In the UK, local, city and national economic policy has followed a longstanding ‘trickle down’ and a ‘trickle outward’ path. Policymakers have assumed that once investment capital is enticed (often to our large metropolitan cores), wealth creation will flourish, the business supply chain will benefit and long-lasting local jobs will be created. However, this assumed pathway has been found badly wanting. The promise of economic growth is often just that, with many people not enjoying the wealth that has been generated. Indeed, poverty, low wages, inequality and underemployment are now entrenched features of many local economies. Something is going wrong.

Within this problem, two broad issues need attention. First, global financialisation (the act of making money from money) provides an inadequate support for our everyday local economies. Investment often prefers the relatively safe property and land markets (often in our urban centres or our core cities), which skews investment away from the real economy of manufactured goods and services. >>

NEIL MCINROY IS CHIEF EXECUTIVE OF THE CENTRE FOR LOCAL ECONOMIC STRATEGIES (CLES)

MATTHEW JACKSON IS THE DEPUTY CHIEF EXECUTIVE OF CLES

CLLR MATTHEW BROWN IS CABINET MEMBER FOR SOCIAL JUSTICE, INCLUSION AND POLICY, PRESTON CITY COUNCIL



Investors are also often international, with little or no attachment to local places, which means that the returns on investments do not recirculate back into local economies. The reversal of this would be ‘sticky’ and ‘patient’ investment in real local economies and a new understanding of economic success that focuses on the human and social outcomes. Key to this approach are local investment vehicles, where local government, potentially in partnership, set up municipally owned vehicles for investment and return, such as Be First in Barking and Dagenham.

Second, there has been and will continue to be profound shifts in the economy, technology and the pattern of work. Automation is speeding up a longstanding process by which wealth is less the product of employment, but more of capital return. As it continues, automation will increasingly drive down wages and reduce the share of income through labour. The immediate impact will be more and more people trapped in inferior, robotic, low productivity and low wage jobs. The long-term solution is therefore to redirect wealth and economic activity to employees and communities. This can be achieved through ownership models such as cooperatives and community shares that harness local wealth for social good.

ANCHORING THE ECONOMY

A key part of this recalibration rests with anchor institutions as ‘community wealth builders’. The term ‘anchor institution’ is used to refer to organisations that have an important presence in a place. They are typically large-scale employers, the largest purchaser of goods and services in the locality, controllers of large areas of land or have relatively fixed assets. Examples include local authorities, NHS trusts, universities, trade unions, large local businesses and housing associations.

Anchor institutions have attracted interest recently because of their potential to stimulate local economic growth and bring social improvements to the community and environment. While the primary objective of anchors may not always be social justice, the scale of these institutions, their fixed assets and their links to the local community mean that they are ‘sticky capital’ on which new local economic approaches and social improvements can be based.

There are a range of ways in which anchor institutions can leverage their assets and revenue to benefit the local area and people. They can target deprived demographics, for example, by employing more people from poorer areas. Local land and property assets, pension funds and other investments can also yield dividends for the local community.

But one particularly effective action is to keep spending within local supply chains. The work of the Centre for Local Economics (CLES) across Europe and the UK (including work over 10 years with Manchester City Council) has proven the benefit of a local authority anchor purchasing goods and services from the community.

Progressive use of commissioning and procurement can help to develop a dense local supply chain of enterprises, including SMEs, employee-owned businesses, social enterprises,

cooperatives and other forms of community ownership. This is locally enriching because these types of enterprise are more likely to support local employment, and have a greater propensity to retain wealth and surplus value locally.

CREATIVE ACTION

Preston City Council, in collaboration with CLES, has been at the vanguard of community wealth building activities for a number of years. The prompt for action stretches back to 2011, when a new Labour administration took control of Preston City Council. The incoming politicians had a long list of pressing issues to address, but in the wake of austerity were faced with an ever-reducing resource base. With little funding and not enough capacity to prioritise traditional regeneration, Preston City Council needed to think and act creatively.

At the top of the list of issues was the squeeze on real wage levels and the increasing cost of living experienced by many residents. To make matters worse, banks were re-locating away from the high street and alternative sources of finance were reducing. As a result, doorstep lending and some of the unscrupulous associated practice was spreading. As it prioritised tackling financial issues, Preston City Council helped families with their financial planning and to identify alternative ways of accessing personal and business finance. It also extended the Blackpool & Fylde Credit Union to cover Preston; delivered collective energy purchasing schemes to reduce household costs; and partnered with Lancashire County Council and the Lancashire Pension Fund to secure an investment of £100m in the City Deal scheme.

However, Preston also recognised that there was a need for a more systemic transformation of the economy and began working, with the expertise of CLES, to explore the role of the ‘public economy’ and how re-purposing existing spending by anchor institutions could create a social and local economic dividend. Initial analysis by CLES of the top 300 suppliers for each of the main Preston anchors identified over £1bn of annual procurement spend, of which only a small proportion was being spent in Preston (5%) or wider Lancashire (39%). CLES and Preston then identified where there was scope to ‘repatriate’ spend by using the local supply base. As a result, between 2012/13 and 2014/15, the City Council alone was able to double the proportion of its local procurement spend from 14% to 28%.

As well as retaining money in the area, the work has supported other forms of economic democracy and community wealth building. By creating the Preston Co-operative Network (which was inspired by the Mondragon network of cooperatives in Spain) the council hopes to shift decision-making power from corporate shareholders to public stakeholders, by increasing the range of people who have a genuine stake in production and financial return. Hoping to see some of these benefits in Preston, the council is working not only to turn existing social networks into cooperatives, but also to identify the scope for ‘gap’ cooperatives. These would be purposefully set up



“THIS NEW-FOUND EMPATHY WITH PLACE AND PEOPLE OFFERS A RENEWAL OF SOCIAL HOPE”

to supply some goods and services where there are discernible gaps in local provision.

In further efforts to democratise the local economy, Preston is establishing an energy supply partnership, seeking to establish a community bank and actively looking for further opportunities for local investments by Lancashire’s Pension Fund.

Another promising idea for supporting local ownership involves the ‘foundational economy’. The foundational economy comprises goods and services that are essential to all sections of society, such as food production, general retail, care and utilities. These are typically sheltered from international competition and demand is fairly consistent and shock resistant. Building up local shareholding in the foundational economy will advance local multipliers and lock in wealth for communities.

The methods adopted by Preston are part of a growing global movement in which community wealth building is contributing to a new democratisation of the economy. Community wealth building continues in the UK and Europe, and CLES is now working in Birmingham, Oldham and with 10 European local

authorities. Local government is stepping forward to encourage and inspire economic self-determination and new forms of supply and economic ownership. The local state, as purchasers of goods and services, employers, owners of land and buildings, pension scheme providers, investors and as partners of the local private and social sectors, is taking control of economic growth. And, with others, they are ‘locking in’ and stimulating local economic benefit, building a local economy in which everyone has a stake.

This new-found empathy with place and people offers a renewal of economic and social hope. And emerging ideas, such as inclusive growth, offer the opportunity for this movement to grow. Furthermore, devolution of powers and resources to local government and cities, if used progressively, could herald a new era of experimentation and epiphanies in economic ownership.

Lessons so far tell us that while some of these concepts have been complicated to implement, none have been so complex as to be unfeasible. In our experience, the response to the challenge of social and economic justice is increasingly “why wouldn’t we” rather than “why should we”. ■



CITY DRIVERS

The US may be withdrawing from leadership on international issues, but its towns and cities continue to set an example

by Adanna Shallowe and Alexa Clay

In 1755, when William Shipley invited Benjamin Franklin to be a member of his newly formed ‘Premium Society’, neither of them could have predicted the scale of the projects each was working on, nor the enduring impact they would have on the world. For Shipley, this was creating what would become the RSA, while Benjamin Franklin was working on the formation of the United States of America.

In their different ways, the RSA and the idea of the US were inspired and shaped by the Enlightenment; and both have weathered over 200 years. The world today – a very different one from the 18th century – is characterised by economic and political shocks that reverberate via a hyper-connected web of commerce, influence and networks. Over the past year, we have witnessed US democracy buckle under the challenges facing all modern democracies. How can we expand opportunity and enhance economic security and dignity for all? How can we keep up with the velocity of technological changes and their impact on the way we work and live? How can we be true to our ideals while responding to the complex world around us?

The dynamism of the US has inspired awe from its very inception; its grand marketplace of ideas and opportunity has been duplicated throughout the world. However, under the weight of 21st century challenges, the internal systems of governance in place since the country was founded are experiencing a ‘stress test’ of sorts, televised globally for all to witness in real time. The American vision of democracy appears fatigued by media conglomerates, corporate interests and technological tidal waves. Norms and values such as ethics and the rule of law, long deemed sacrosanct, appear disposable.

When the US withdrew from the Trans-Pacific Partnership Agreement and the monumental Paris Climate Agreement, it felt like the pendulum swung dramatically away from

global consensus-building and the promotion of democratic values, to isolation and the adoption of a transactional form of foreign policy.

But amidst US withdrawal from international leadership, pathways are opening up for more distributed forms of agency. Cities across the country are flexing their muscles on issues of climate change, inclusive growth and immigration. Chicago, San Francisco, New York and Pittsburgh, for example, are becoming a renewed locus for moral leadership and place-based social change. While many Americans are experiencing a crisis of faith in institutions, we are also entering a time of growing citizen activation.

Through its global network of creative change-makers, including those based in the US, the RSA empowers individuals to engage in social action, make ideas reality and inspire change in Fellows’ local communities and countries. Our affiliate organisation in the US is keen to be the conduit to convene new and old actors, and to collaborate with diverse stakeholders interested in entrepreneurial problem-solving to address intractable problems both at the local and national level. In doing so, we hope to spark not just a network of systemic problem-solvers across the US, but to more broadly steward the knitting together of a new social fabric – beyond elite cosmopolitanism – that can help us navigate a deeply transitional world.

The legacy of Franklin and Shipley is inhabited by the groups of social innovators in cities and towns across the US and the world, from sea to shining sea. Join us in creating a virtual coffeehouse and a movement for social change globally. ■

For more information on the RSA US please contact director Alexa.Clay@thersa.org.

NEW FELLOWS

CATHERINE SCHENK



Catherine left her native Canada to study for a PhD in Economic History at the London School of Economics. In 2005, she was appointed

professor of International Economic History at the University of Glasgow, and subsequently visiting researcher at public institutions such as the International Monetary Fund and the Hong Kong Monetary Authority.

This September, Catherine takes up the professorship in Economic and Social History at University of Oxford, where she will research international economic relations since the 1960s, focusing on international banking and financial regulation, sovereign debt crises and her specially funded project, *Uses of the Past in International Economic Relations*.

Catherine has joined the RSA because of its record for bringing together “a range of people from many walks of life to address some of the world’s challenges”. She adds: “I hope to contribute to this agenda using my experience in communicating how the international economy works and how we can use the past to better make decisions that will affect our futures.

“Over the past 10 years, the ruptures in the global economy have had profound effects on the daily lives of people; there is an urgent need for better understanding of these developments in a longer term context.”

KEVIN VUONG



Trained as a banker, Kevin worked in the finance sector before turning his attention to social enterprise and is now the CEO of

the Agency for Public & Social Innovation (APSI). He explains: “We work with large companies and government to innovate in the procurement process for social impact.”

One example was a bicycle infrastructure project in a Toronto neighbourhood that APSI oversaw. Kevin says: “Traditionally, the procurement process would be to source bike racks externally and install. We created a public/private partnership to hire and train at-risk youth from the community to build them themselves.” Kevin continues: “APSI also helps social ventures to scale and grow by acting as a bridge to bring in capital and expertise from the private sector.”

Kevin was this summer presented with a Queen’s Young Leader Award at Buckingham Palace. The son of parents who settled in Canada after the Vietnam War, Kevin says the award, in recognition for his work as a community leader in Toronto, “really meant a lot – for both me and my family”.

He joined the RSA because “other parts of the world, particularly the UK, are more advanced in policy and their thinking around social enterprise. The RSA provides me with the opportunity to learn from the other Fellows and bring the best ideas back to Canada”.

IN BRIEF

Here are a few more Fellows who are working to drive social progress:

Shefali Enaker is lead economist with Future Cities Catapult, a UK government-supported centre for the advancement of ‘smart cities’. Previously, she worked as a researcher and political adviser at the House of Commons, at a consultancy specialising in macroeconomics and trade and at the Greater London Authority.

Billy Matheson lives and works in New Zealand. He has degrees in Design and Adult Education, and has worked across academic, not-for-profit and local government. He is currently part of the Enspirial network of social entrepreneurs.

Dr Ashley Pagnotta is an observational astrophysicist at the College of Charleston in the US interested in a wide variety of stellar explosions. She uses a variety of observational tools, from the latest space telescopes to archival glass plates, to carry out her research.

Sumit Paul-Choudhury has been the editor-in-chief of international science magazine *New Scientist* since 2011. He previously spent 15 years writing about finance and technology and has worked in London and New York. He is interested in how we can collectively devise positive visions of the future and work to make them reality.

YOUR FELLOWSHIP: ENGAGE WITH THE RSA IN FOUR MAIN WAYS

1 Connect online:

Search for Fellows online at our new website. Visit www.thersa.org/new-website for details of how to log in. You can also follow us on Twitter @theRSAorg, join the Fellows’ LinkedIn group and follow our blog at www.thersa.org/blogs.

2 Meet other Fellows:

Fellowship events and network meetings take place across the UK and are an excellent way to meet other Fellows. Visit our website to find an event in your area.

3 Share your skills:

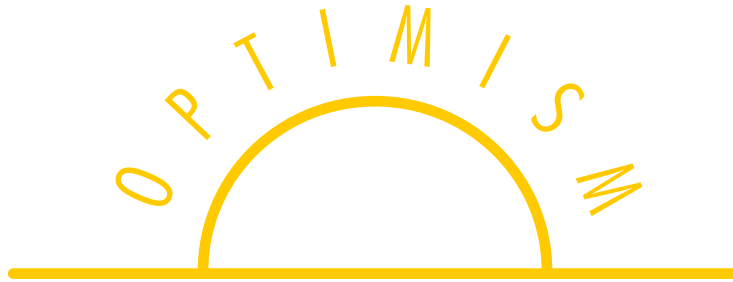
Log in to the website to update your Fellowship profile and let other Fellows know about your skills, interests, expertise and availability.

4 Grow your idea:

RSA Catalyst offers grants and crowdfunding support for Fellow-led new and early-stage projects that aim to tackle a social challenge. Visit the Project Support page on our website.

Explore these and further ways to get involved at www.thersa.org

LAST WORD



Should we embrace our tendency to see the glass half full, or take a dose of realism?

by *Lisa Bortolotti*
🐦 *@lisabortolotti*

Psychology tells us we are very optimistic when we consider how we compare with others in terms of attractiveness, intelligence, talent and even moral conduct. We are also very optimistic about how our lives will go. If you are like most people, you believe that you are better than average at just about anything. When you think about the future, you believe that your marriage won't end up in divorce and that you won't have cancer when you get older. Such an optimistic outlook in the face of uncertainty can be blind to the evidence, but it can also turn out to be a real blessing. Optimistic beliefs about ourselves and our future are said to contribute to physical and mental health, productivity and resilience.

For instance, women in remission from breast cancer are more likely to make relevant lifestyle changes to keep healthy if they harbour the overly optimistic belief that they can control their state of health from then onwards ('the cancer won't return', 'my immune system is better than average'). When people in romantic relationships idealise themselves and their life partners, they enjoy longer lasting and more satisfying relationships. These examples suggest that optimism can enhance our capacity to cope, particularly when a crisis strikes. When a problem emerges in our lives, it pays off to find a solution rather than despair. We can help prevent cancer from returning if we eat well and exercise. We can reinterpret our partner's tediousness as conscientiousness if we still believe that they are the perfect match for us.

So, should we just renounce rationality and self-knowledge and inflate our egos instead, conjuring up

future scenarios of lottery wins, endless passion and fame? That would be unwise. If we are too optimistic about what we can achieve, we may fail to react constructively to negative feedback and unwelcome evidence, underestimating threats as a result. Even worse, when things do not go our way, the disappointment we feel may cause us to disengage from our goals and stop valuing them. Smokers' overly optimistic belief that they will not get lung cancer plays a role in delaying their decision to give up smoking. Their sense of invulnerability does not translate into health-promoting behaviour. Students who have illusory beliefs about their academic ability experience in the short term higher levels of wellbeing than students with more realistic expectations. But when they realise they cannot achieve the good grades they expected, their levels of wellbeing drop and they start considering academic achievement as less important.

If optimism does not always lead to success, how do we know when we should be optimistic? My guess is that the benefits of a glass-half-full mentality are related to our sense of agency. At times we exercise very little control over random events that affect our success, but at other times we have the opportunity to make choices and shape the way our lives are going. It is not the rosy prediction that makes a difference, but what we do once the prediction (of a good grade, good health or a good relationship) goes unfulfilled. If we lack the motivation to do something about it, we forego our chances of success. If we address the problem somehow, success is still on the cards. The key to success is our capacity to take setbacks and negative feedback as opportunities to learn and grow. The sense that we are competent and in control, and that our goals are worth attaining and within reach, is merely of assistance in keeping us chasing those goals. ■

LISA BORTOLOTTI IS A PROFESSOR OF PHILOSOPHY AT THE UNIVERSITY OF BIRMINGHAM AND PRINCIPAL INVESTIGATOR OF THE ERC-FUNDED PROJECT PERFECT

Do you know someone who would make a great Fellow?

Your nominations are a great way to add the expertise and enthusiasm of friends and colleagues to the Fellowship community. You can nominate them online at www.theRSA.org/nominate. We will send a personalised invitation on your behalf and notify you if your nominee becomes a Fellow.

Fellows have access to the brightest new ideas, innovative projects, a diverse network of like-minded people and a platform for social change.



Creating a 21st century enlightenment coffeehouse

Founded in an Enlightenment coffeehouse by a group of people with a vision for a better tomorrow, the RSA is now a global Fellowship dedicated to enriching society through ideas and action. In 2018 we will be undertaking an ambitious project to redevelop levels -1 and -2 of RSA House into a 21st century enlightenment coffeehouse. Find out more about the project at www.thersa.org/coffeehouse.

Help shape the coffeehouse by submitting an idea about how we can connect like-minded people with creative ideas, or vote for your favourite, at www.thersa.org/coffeehouse.

