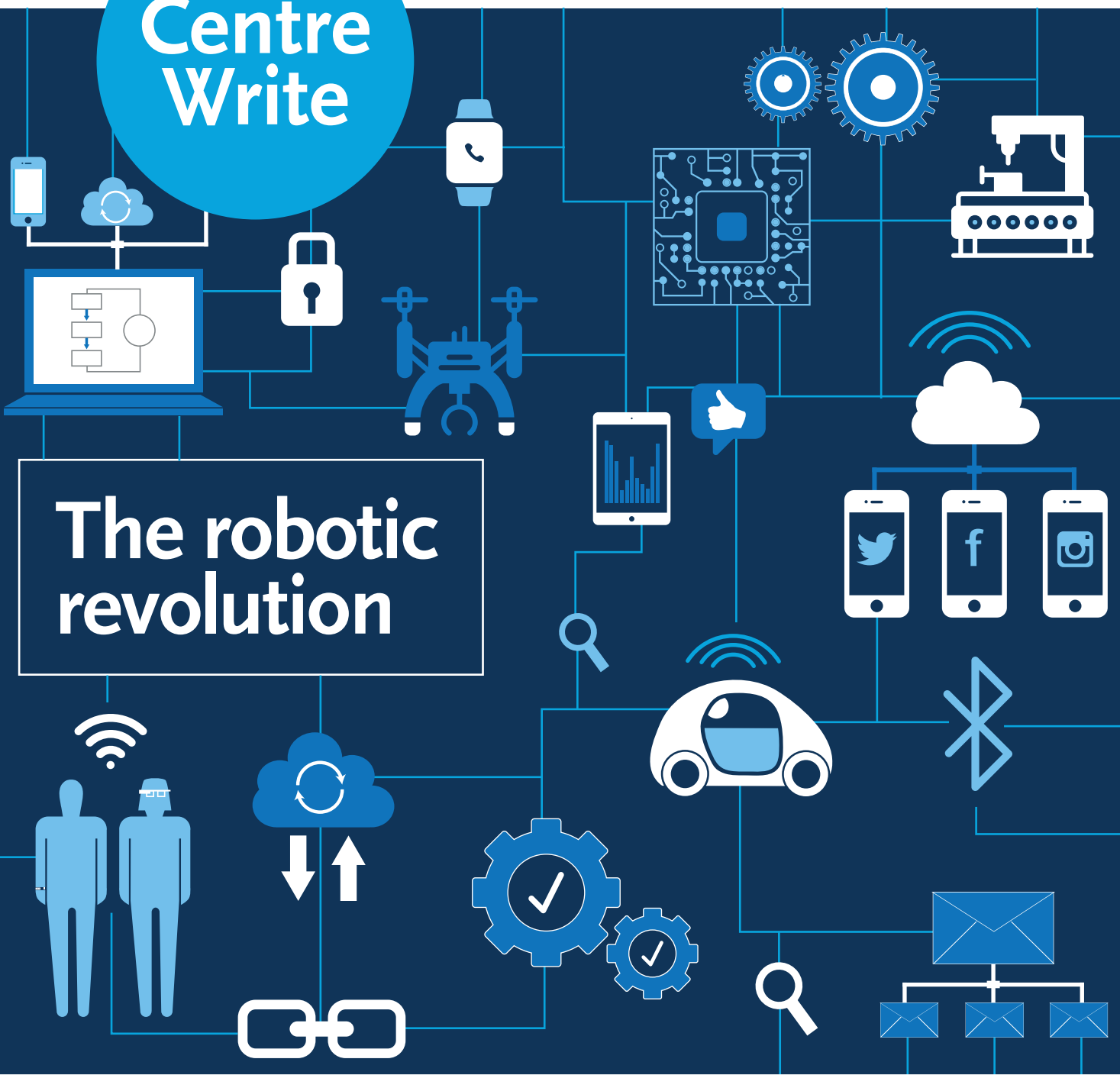


Centre Write

STEVE HILTON
on technology, populism
and Tory modernisation

MATT HANCOCK MP
on preparing Britain for the
rest of the 21st century

The robotic revolution



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Bright Blue is an independent think tank and pressure group for liberal conservatism.

Director: Ryan Shorthouse

Chair: Matthew d'Ancona

Board of Directors: Rachel Johnson, Alexandra Jezeph, Diane Banks & Phil Clarke

Editor: Laura Round

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Editor's letter



LAURA ROUND is the
Editor of *Centre Write*
and Communications
Manager at Bright Blue

From the role of digital in the workplace and our social lives to the invisible threat of cybercrime, technological progress is revolutionising the way we work, communicate and live. Academics warn that automation is likely to cause mass unemployment. In fact, Bill Gates has hinted at the possibility of taxing robots. Former CIA Director John Brennan recently stated that the next spark that leads to war won't occur on the ground or in the air, but in the cyber domain. The technological revolution is creating just as many challenges as benefits.

A tide of technological change is sweeping through public and private life that we all need to navigate. The question is whether politics is keeping up. The Government's new modern industrial strategy recognises the importance of developing the digital infrastructure and skills for the UK to have a thriving digital economy. This is welcome, yet for many politicians technology and digitalisation is clearly not in their comfort zone. In fact, some Members of Parliament still refuse to use email. Technology is always going to be ahead of politics, because of its inherent innovative and fast-moving nature. However, in order to stay competitive globally, it is important for politicians to engage more with the subject and to champion the digital age. So this edition of *Centre Write* explores the technological advancement and the wider implications it has on business, public services, foreign affairs and ethics.

Matthew Taylor (p.6) updates us on the Government's ongoing review of modern employment and touches on the challenges that have arisen from a changing labour market. **Alan Mak MP** (p.7) discusses the Fourth Industrial Revolution and what parliament needs to do to help our economy tackle the challenge of automation. Indeed, there are concerns that automation will lead to mass unemployment. In my Skype chat with American futurist and author **Martin Ford** (p.9), he predicts many jobs, including high-skilled jobs, will be lost due to artificial intelligence and advocates a basic income guarantee. Bright Blue's chair **Matthew d'Ancona** (p.24) writes that it's time for businesses,

politicians and policymakers to acknowledge the sheer scale and urgency of the task that stands before them.

Whilst we try to grapple with the digital age, **Kulveer Ranger** (p.12) points out the opportunities digital change brings for interaction between individuals and services both in the private and public sectors. In the UK, the digital technology sector is emerging as a global force, however **Romilly Dennys** from CoadeC (p.10) says that bold action is required from the Government to ensure that one of the UK's fastest-growing sectors can reach its full potential. The Minister for Digital and Culture, the **Rt Hon Matt Hancock MP** (p.23), says Government recognises the need for a global Britain post-Brexit and stresses the importance of seeking out new markets, new methods, and new technologies that will provide the jobs and incomes of the future.

There are many ethical questions around technological advancements. Is our privacy adequately protected on the internet? Is 'social media' making us less social? Author **Sue Palmer** (p.15) warns us of the negative effects technology is having on children's development. **Lord Hodgson** (p.18) urges the ethical implications of drone warfare to be considered.

Technology is also posing challenges for international relations. There is a growing awareness that cyberattacks are being used to manipulate outcomes of democratic processes. Henry Jackson Society's **Dr Andrew Foxall** and Chatham House's **Emily Taylor** (p.20) debate just how much power Putin has.

I interviewed former director of strategy for David Cameron, **Steve Hilton** (p.28) about the relationship between technology and politics. Steve argues that people want more control over politics, especially now that technology has allowed them to have much more control over other parts of their lives. We also discussed the future of Tory modernisation and the Conservative Party under Theresa May.

This edition of *Centre Write* highlights how technological revolution is leading us to call into question every aspect of our lives. I hope the magazine demonstrates both the challenges and opportunities of the digital age. ●

Director's note

Ryan Shorthouse



RYAN SHORTHOUSE is the
Director of Bright Blue

Oh, to be able to rest, just for a while. But no. The Prime Minister has, surprisingly, called a General Election. Britain faces its third consecutive year of national political scrapping. Liberalism may be under attack in the UK and across the Western world, but democracy is in vogue.

The Prime Minister has framed the election narrowly: about giving her the mandate to get the best possible Brexit deal. Our future relationship with the EU is now a vital and dominant issue in British politics. But Tory modernisers need a new mantra: stop banging on about Europe *all the time*.

There are urgent public policy issues — from the sustainability of our social care system to decarbonising our economy — that require deeper thinking and discussion from conservative decision makers. The Tory election manifesto is unlikely to be expansive, but the Prime Minister should offer some bold and original policies on other areas, especially social reform.

A major issue that policymakers are increasingly discussing is the impact of technology on our politics, society and economy.

Being switched on — responding to emails and WhatsApp messages,

checking Twitter, some quick research on the internet, looking up your location on Google Maps — is now vital to survive and succeed in the modern world.

There is troubling inequity in access to important technologies — medical treatments or high-speed internet, for example. High costs, limited availability or poor skills are all factors that policymakers need to be — and to be fair are — addressing.

But there is a body of thinking that now questions whether technological advance is in fact generally positive, highlighting negative consequences for the labour market and our brains. There are warnings, from respected academics and mainstream politicians, that automation will lead to mass unemployment. Some scientists, albeit a minority, are worried about how screen time changes cognitive functioning, especially in children. As artificial intelligence develops, there are also concerns about human power relative to robots.

There are two problems with this techno-scepticism. First, technological advance has sat alongside — indeed, in many instances, created — vast improvements in most people's health, opportunities, education and their working and living environments over the past few centuries, across the world.

Second, the gloominess about technology tends to be speculative rather than factual. For decades, Luddites have prophesied that machines will make most human labour redundant. But here we are, in 2017, with record levels of

employment. The truth is that we don't know what the net effect of future automation will be on the labour market. Many jobs will be replaced, just like in the past, but it's worth remembering that what evidence we do have from history suggests that technology — in aggregate terms — generates rather destroys jobs.

As for negative psychological effects of technology — from lengthy screen time to constant checking of social media — the evidence around this is, I'm afraid, nascent and inconclusive. And what about menacing robots usurping power from humans? I'll leave that to sci-fi films.

Best not to be complacent, of course. Admittedly, technology has enabled new problems and exacerbated existing ones: cyberattacks; terrorism; child abuse; the pornification of sexual relations; the polarisation and vitriol of political discourse.

The challenges policymakers must grapple with constantly change, sometimes because of their success, but often because of shifts and surprises. Politics — the priorities, the personnel and, most of all, the public — change too. In the past few years, rather quite a lot.

The response to flux should not be to resist — or, as David Cameron put it, to want to “stop the world and get off”. Conservative politicians and policymakers should deal with the world — recognises its successes and deal with its challenges — as it is, not how we think it was, should or will be. ●

Raising expectations for employment

Matthew Taylor discusses his government-commissioned Modern Employment Review and the changes that are needed in the labour market



MATTHEW TAYLOR is
Chief Executive of the
RSA and chairs the
independent Review of
Employment Practices in
the Modern Economy

Most policy fails. The more complex the challenge the more likely the failure. At the Royal Society of Arts, we think hard about how to improve the success rate. We have concluded that policy suffers from different, but often reinforcing problems; on the one hand it's too scatter gun, and on the other it's too path-dependent. Our response is captured in the injunction to policymakers to 'think like a system and act like an entrepreneur'.

So when the Prime Minister asked me to chair a review of modern employment it was an exciting opportunity to apply that approach. Although we are only around half way through the review's life, I am hoping that the structure of our final report will speak to a different way of thinking about change.

We will, of course, make specific recommendations for concrete immediate reform of the kind people expect from a government review. These will inter alia cover employment status, employee engagement and the enforcement of rights. We will try to bring greater fairness and clarity to a system which can seem arbitrary,

exploitative and opaque.

But perhaps more importantly, addressing aspects of the labour market systemically, will be a set of strategic shifts that we will urge the Government to pursue over the next five to ten years. These shifts will be complicated and emergent so our aim is to describe destinations not to define the precise route. They include the case for a fairer, more coherent and sustainable way of taxing work along with the need for government to enhance the entitlements and services available to the self-employed, both directly and by working with commercial and third-sector partners. But the shifts we are likely to advocate also range from a commonly agreed spine of generic employability skills, which can then be overlaid on apprenticeships, university courses, in-work training and lifelong learning, to expanding the focus of government intervention from simply getting people into work to keeping them in work (when, for example, workers' care or health needs changing) and helping them progress.

The case becomes overwhelming for adding quality to quantity of work as a core policy goal

But there will also be a third vital aspect to the review, an example of a more opportunistic, tactical

way of pursuing change. As many studies, including a recent report by the Centre for Public Impact, have suggested, legitimacy is a key ingredient of success. In essence my review is about how to improve the quality of work in our economy. But is this yet a goal to which government, let alone the wider public subscribe?

One good aspect of the recent bruising NICs row is that the Employment Review has high profile. The wise thing now would probably be to dampen expectations. Instead I'm planning to raise them

When I was a Downing Street adviser in the mid-noughties the principle of 'work first' was firmly entrenched in Whitehall. Any attempt to question an unerring focus on employment (of any kind) as the priority was treated with disdain. But things have changed. The rise of in-work poverty shows that having a job is not enough to ensure economic security. As countless media exposés attest, the prevalence of 'wage slavery' – workers denied voice or control – sits uneasily with our modern expectations of respect, recognition and autonomy. Add in the evidence that bad work is deleterious to other key goals such as improving public health and productivity, then top it off with

>> concerns about the impact on jobs of automation, and the case becomes overwhelming for adding quality to quantity of work as a core policy goal.

For the review to have momentum that case needs to turn into a settled consensus. Which is why I will be using my RSA annual lecture in May to launch a national aspiration; namely, ‘all work should be fair and decent with scope for development and fulfilment’. Such an aspiration

may be treated with equal disdain by those on the left who assume it to be impossible in a capitalist economy and those on the right who will see it as dangerous license to interfere with the natural workings of the market. But I am hoping just about everyone between will see good work for all as a policy goal built on strong economic, social and ethical grounds.

Government reviews are too often

set up to respond to a political challenge and then largely forgotten as the world moves on. One good aspect of the recent bruising National Insurance contributions (NICs) row is that the employment Review has high profile. The wise thing now would probably be to dampen expectations. Instead I’m planning to raise them. I’d love your help. ●

Article written before purdah.

Skills for the future

Alan Mak MP says we need a new skills review at the start of each parliament to help our economy tackle the challenge of automation



ALAN MAK MP is the Chair of the Fourth Industrial Revolution APPG

Around 250 years ago, Britain launched the world’s first Industrial Revolution, powered by steam and innovations like the spinning jenny. This dramatically improved the efficiency of the textiles sector, and started the process of mechanisation and automation that soon attracted opposition from the Luddites, a group of English weavers and textile workers who destroyed machinery in protest at the creeping obsolescence of their skillset.

Historically, the impact of automation was most keenly felt in ‘blue collar’ industries, such as manufacturing and mining, that involved repetitive tasks. As we enter a new, ‘Fourth Industrial Revolution’,

characterised by increasingly capable artificial intelligence (AI) and sophisticated robotics, jobs in a vast array of service sectors are also at risk, including retail, journalism, accountancy, and even law.

Bart Selman, Professor of Computer Science at Cornell University, rightly says: “AI is moving rapidly from academic research into the real world...Computers are starting to ‘hear’ and ‘see’ as humans do... Systems can start to move and operate among us autonomously.”

But we mustn’t be Luddite and downbeat. The emerging technologies driving this Fourth Industrial Revolution can be harnessed to catalyse economic growth and generate long-term prosperity. In Britain, we must be the first to seize this opportunity. That means taking a pro-active approach to

the challenge of automation. The Bank of England has estimated that up to 15 million British jobs may be at risk of automation, suggesting profound structural changes to our labour market will accompany this new industrial age.

We mustn’t be Luddite and downbeat

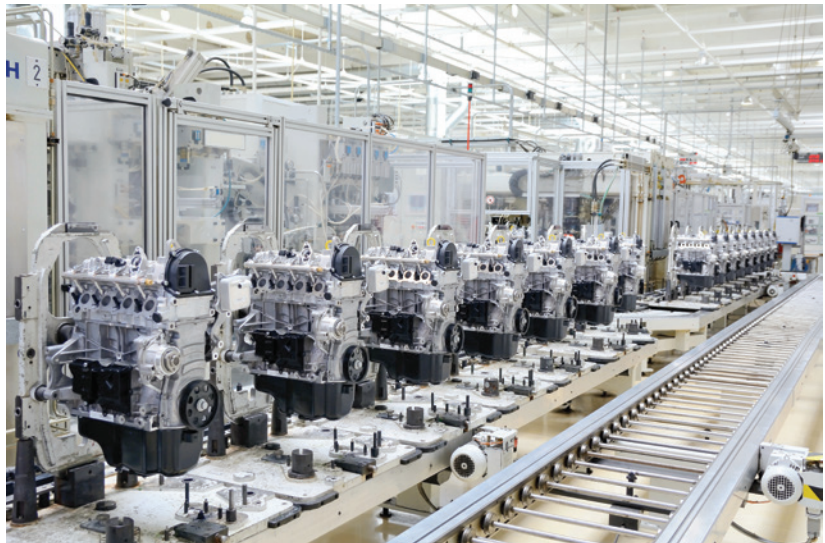
These potential job losses will be in roles where any pattern of work can be replicated by a clever algorithm with a ready supply of data. Paradoxically, “the more certainty your job entails the more likely it is to be automated out,” says Professor Mary Cummings, Director of Duke University’s Humans and Autonomy Lab.

From the printing press to the personal computer, the arc of history

>> has seen technology substituting human labour across our economy, as increasingly sophisticated machines displace workers at a fraction of the cost. That technological progress also led to rising economy-wide productivity gains, as new jobs are created in new industries. The answer to what John Maynard Keynes called “technological unemployment” has always been the same: embrace the efficiencies brought by innovation, and learn new skills to fill the jobs created by economic growth. So, programming, controlling and marketing robots will be new jobs created to replace roles previously done by people.

The supply of workers with science, technology, engineering and maths (STEM) skills will, therefore, be critical to Britain’s ability to harness the Fourth Industrial Revolution. The Government clearly recognises this challenge, and the recent industrial strategy Green Paper acknowledges the UK’s shortage of skills in technical fields.

As we leave the EU, develop a new industrial strategy, and adopt an outward-looking global trade policy, we must also continue to reform our education system to ensure our workforce has the right skills to succeed. The Government has already taken important steps in this direction, with record levels of apprenticeships, new University Technical Colleges reflecting a strong commitment to technical education, and a renewed focus on lifelong learning. We build on a position of strength, with world-class universities, a strong base of scientific research, and an additional 1.8 million children in good



or outstanding schools since 2010. However, to equip Britain to lead the Fourth Industrial Revolution, we need to fully understand its implications for our labour force and skills base. Our approach must be strategic and long-term: a detailed review of the nation’s skills needs to be conducted at the start of each Parliament.

This Fourth Industrial Revolution can be harnessed to catalyse economic growth and generate long-term prosperity

Just as the Strategic Defence and Security Review (SDSR) examines the country’s defence requirements, and the Comprehensive Spending Review (CSR) sets out our spending priorities, a new national Future Skills Review (FSR) will help us future-proof our economy. The FSR would look above the horizon and examine our long-term skills needs, identifying the sectors and skillsets vulnerable to automation, and the opportunities for new technology to drive economic growth. This Review would give us

valuable data to identify skills gaps and help educational institutions plan to meet the needs of employers.

This new FSR should include both regional analysis - to identify skills needs and shortages across Britain so policy is tailored to meet local needs - and an international perspective - examining our competitors’ strategies, so we can apply best practice to the UK.

In the long term, a wave of new jobs will be created by businesses harnessing the power of emerging technologies to expand and provide new products and services, from British-designed 3D printers to UK-manufactured driverless cars. However, mastering the Fourth Industrial Revolution must begin with closing the skills gap, so Britain’s workers are equipped to take up those new jobs. A first step is fully understanding the challenge of automation to our labour market, and responding decisively and strategically through a Skills Review that gets Britain to the future first. ●

Skype session with... Martin Ford

Laura Round speaks to **Martin Ford** about the impact automation will have on employment



MARTIN FORD is an American futurist and author of *Rise of the Robots*

LR

You were one of the first to argue that the rise of robots and artificial intelligence would make large fractions of the human workforce irrelevant, including high skilled, well-paid jobs. Why?

Artificial Intelligence (AI) brings more baggage to jobs at certain levels. Routine jobs done in the past can now be more effectively performed through automation. This is true for a broad range of jobs including blue-collar jobs in factories and warehouses and also lots of college-based work. These roles are all now highly susceptible to automation. Previous jobs which may have had two people working together have now been swallowed up by automation. It is having a broad impact on the jobs market.

MF

LR

Some argue that it is likely that we are going to see more jobs emerge that rely on human interaction skills and that we shouldn't be too worried. What is your response to that?

I think the question is whether workers can make the transition, and some people clearly will. However, I do think that it is going to be a different transition to what we have seen in the past. We have had technological disruptions before. A classic example is agriculture. Most people that work in agriculture have had agricultural machinery come in. When it was discovered that machines were more effective than humans it did not just impact one sector, but many sectors making it harder for the economy to create new jobs for all these people who had been replaced by machinery. Now we have purpose-built technology which will eventually replace most types of work. It's not just about a farm or a field or things that have been done in the past but is going to be about transitioning to something that is a novelty. People will make that transition but I doubt that everyone will. I question whether there will be enough jobs.

MF

LR

So what are the challenges posed to the current political and economic structures?

The main challenge will be disruption. Wages have been stagnant for a while and it was as much about technology as it was about trade and immigration. I believe Brexit and the election of Trump reflected this. There is going to be disruption to workers and the way that our economy is structured and the cutting-off of a lot of jobs in sectors like energy and steel.

MF

LR

I read that you advocate a basic income guarantee. You are also a cheerleader for capitalism. I am curious how you see the two going hand in hand.

Actually a guaranteed income has been an idea advocated by people who are capitalists, including libertarians. It is not a socialist idea. For example, Friedrich Carter who was an icon for conservatives and libertarians was not an opponent of a guaranteed income. The idea is to make sure people have a minimum amount of money and then you let them go into the market and spend it. It is actually preserving capitalism.

MF

LR

Politically what needs to be done to combat the challenges with automation and what should governments across the world be doing?

Well, I think the first step is knowledge and awareness and I believe that is starting to happen. I have done a lot of interviews where I have talked to bureaucrats in some countries in Austria, Netherlands, and even in New York, where high level officials and administrations are aware of it. In the short-term, there needs to be a safety net as more and more people are going to be affected by this and resources for training and education need to be maximised, so that people can re-train and adapt. In the longer run, I think it's inevitable that we need to think seriously about a solution such as a basic income. There are experiments going in different types of the world. I think that some time in the future when it becomes critical we can be confident that it will work. People still need an incentive to work and not stay at home and play video games.

MF

Starting up Britain

Bold action is required to ensure the digital technology sector continues to grow, argues Romily Dennys



ROMILLY DENNYS is
*Executive Director of
CoadeC, the Coalition
for a Digital Economy*

The UK digital technology sector is emerging as a global force and a major element of the UK economy. A record £6.7 billion was invested in UK tech firms in 2016, more than any other European country. In contrast, the automotive sector received £1.7 billion investment. This record boom means the sector already accounts for 16% of domestic output compared with 10% for manufacturing and 6% for construction. At its simplest, tech is our future.

The Government's new digital strategy, as part of their new modern industrial strategy, is a promising start in supporting the digital technology sector. But bold action is required across all Government departments to ensure one of the UK's fastest-growing sectors can enter a golden age.

The past five years have seen a plethora of Government tinkering. But after speaking to hundreds of tech start-up founders across the country, it's clear that significant barriers still exist, and that the opportunities of London's tech scene are not felt in other parts of the country.

It's no surprise that London dominates the equity landscape for tech investments with 52% of the

national share. Global competition is fast rising, but London is still second only to the US for global private equity and venture attractiveness and this should be applauded.

But at the domestic level, it's alarming that Westminster City Council alone performs better than 60% of local authorities combined, receiving as many tech investments in 2016 as the 207 worst performing local authorities combined. At the same time, investments in London dropped 16% in 2016, with no corresponding increase elsewhere in the UK.

This investment picture cannot be seen in isolation from the chronic low pipeline of science, technology, engineering and maths (STEM) skills. The tech sector relies heavily on a foreign workforce because we do not have enough high-skilled people in this country. The industries the Government has identified as potentially high-growth are also reliant on skills in short supply: artificial intelligence (AI), data science and robotics are good examples. It's estimated that Britain will need 2.8 million digitally skilled workers by 2020 to satisfy the UK's digital potential. Yet England still performs poorly in international comparisons for both basic numeracy and STEM skills, with a heavy concentration of the worst performing local authorities in the North West and the Midlands.

The Government has set out its intention to create a "digital economy that works for everyone", but it's clear that this will require cross-departmental reform if we are to be a 'Global Britain' and not just a Global London.

The first reform should be to move to a system where all 16-19 year olds are expected to study mathematics, usually to a level above GCSE, as is the norm in many other countries, with basic levels of literacy and numeracy (GCSE level) a requirement for all further and higher education. England is in the bottom division of the international league tables when it comes to the numbers of young people studying maths.

It's clear that this will require cross-departmental reform if we are to be a 'Global Britain' and not just a Global London

This should be supported by a large-scale expansion in apprenticeships in software development. Such a change will dramatically boost the talent pipeline in the UK. This will not happen overnight, however. Access to talent is the top concern for company founders in the country and we must remain open to high-skilled talent after we leave the EU. The best way to do this is for the Home Office to create a new minimum



>> six-month visa for high-skilled tech talent, to allow those who studied at particular top institutions, or passed a standardised high-level exam in specific programming languages, to enter the UK and seek work. Coadec's own data shows that of those who hired outside of the EU, 75% were already in the UK – often as students or working for another company.

The tech sector relies heavily on a foreign workforce because we do not have enough high-skilled people in this country

The Government must also see the decision to leave the EU as an opportunity to deregulate the cumbersome and bureaucratic

restrictions of current funding models and commit to slashing red tape. It cannot be right that an official in the EU can dictate how UK taxpayers' money is spent on talented young founders in Liverpool or Brighton. This is what currently happens with the European Regional Development Fund (ERDF) – a £2.9 billion fund directed through Local Enterprise Partnerships (LEPs). For many founders, the ERDF has failed due to the excessive State Aid rules, including the rule that funding can only be offered as a 'funding of last resort' option. Yet until we take measures to attract more private investment to the regions, government funding is often the only option. Either

people move to London to access private capital, taking their ideas and talent with them. Or worse, they give up completely.

The Government can also use the pooled Local Government Pension Scheme (six wealth funds, each containing at least £25 billion of assets) to help channel more finance into high-growth tech firms through smaller 'funds of funds.' The percentage of start-ups reaching the growth stage has declined year on year since 2011 and we are seeing our brightest start-ups snapped up by US acquirers.

None of these actions are small. But this is the scale of change required to make a post-Brexit Britain a world leader in this industry of tomorrow. ●

A click closer

Kulveer Ranger explores how digital change is developing closer relationships between individuals and services



KULVEER RANGER is Vice President of Strategy and Communications at Atos UK&I

Almost every day, we hear a new technological soundbite – connected Britain, smarter cities, the internet of things, cybercrimes, hacktivism, internet 4.0. The list goes on. There is an array of labels for things which are in many cases ephemeral.

Meanwhile, digital change is happening before our eyes and in our hands. We have gone from thinking about our phone as a way of talking to each other to the device through which we run our lives. We're still trying to grapple with this change. In the 'digital age', what do we need to prepare for? I believe we need to understand and plan for the digitalisation of our national infrastructure, examine how we as individuals can drive this change, and ensure that the necessary political knowledge and capital is in place to support and switch on UK citizens to the opportunities of the digital age.

It has become a no-brainer that any modern economy and nation-state must take responsibility for its own technological infrastructure, just as we did when we created the National Grid. But this is not about just creating a patchwork-quilt of connectivity such as wi-fi, 5G, broadband and so on. It is about how these digital enablers

mesh into more traditional infrastructures and services.

Our railways are managed by moving block signal technology, our roads have become 'smart' and the metering of energy supplies is not only digitally monitored but has enabled us to reverse the process and feed back into the grid. Such technologies have been around for a while, yet there is a sense that they are not delivering their full potential. I believe this is because they have been 'bolted on' to existing services and infrastructure.

We now have the opportunity to create a national infrastructure that has a digital DNA. So when we are regenerating city sectors, building new transport links or developing new power stations, we can utilise and even build in digital capabilities such as supercomputing, cloud and advanced analytics. And there will be many other examples. By thinking digital from conception, we can embed digital enablers in a way that is truly transformational. This kind of future-proofing is starting to happen. Crossrail, for example, is 'Digital first' by design, namely a smart metro from its birth rather than one that has been retrofitted.

There is obviously already acknowledgement of the importance of embedding digital technologies into services. However, it is important that our leaders and policymakers are cognisant of what is happening

in technology as they make these investment decisions in energy, transport and other key sectors – and yes, even when it comes to the largest of public sector beasts: our National Health Service. There is huge opportunity for re-modelling the relationships and responsibilities between patients, doctors and hospitals. With digital at the heart, healthcare can be transformed into a connected, seamless continuum of care with prevention and proactive health and wellbeing built in – all informed by data and systems that can change how services are delivered.

We now have the opportunity to create a national infrastructure that has a digital DNA

I am pleased to say that we know this process of change has begun as healthcare organisations across the UK look to embark on their own journey of digital transformation.

So what does all this mean for citizens as we witness these changes happening around us? As individuals, we are already at the forefront of the change. We have been through our own digital evolution. We live in the centre of our personal digital ecosystems. Our devices, enabled by our personal connectivity, mean we engage with social media, other networks and a plethora of channels to connect, transact and access people

>> and data in wonderful new ways.

However, this phase of digital evolution is almost in the past. The question now is how our ‘citizen digital ecosystems’ will map into the next generation of local and national ‘smart’ digital infrastructure to herald the dawning of this next phase of the digital age. And as those ecosystems and infrastructures become integrated, we will have created the seamless ability for citizens and services to work together and interact in real time, day to day.

This is no utopian view. There are real challenges along the journey to achieving these kinds of symbiotic relationships between individuals and public or private services. There will be new markets, new competition, new dynamics, and yes, need for new regulation. But these changes, and even disruptions, will drive increased innovation. As a nation, we should be prepared to embrace these challenges while ensuring we create a digital

society that is inclusive for all citizens.

We will have created the seamless ability for citizens and services to work together and interact in real time, day to day

If recent political outcomes have told us anything, it is that we cannot create an environment in which one segment of society advances and prospers while others feel over-looked, ambivalent or even disenfranchised. Modern politics has created marginalisation. We all need to be careful that digital progression doesn’t leave equally marginalised groups. Our politicians must play their part by both understanding the opportunities of the digital age and ensuring that through education, jobs, transformation of public services and a growing economy, everyone can feel the benefits of those opportunities. Success in the digital age will not

be based purely on technology working, but on people feeling involved, supported and confident that this is the right way to go.

Politically – from local councillors, to city administrations and national government – we need champions for this digital age.

We need political leadership that is not only alert to the opportunities but can provide the vision, policies, governance and frameworks to make sure they are grasped. We can already see this emerging through the recently launched Government Transformation Strategy from the Cabinet Office, the work being done to develop the new national industrial strategy, particularly the industrial digitisation Review that is embedded within it, and the digital strategy. All of these point towards the huge potential for our country. A country which has digital at its core and delivers digital opportunity for all. ●



Snooper's Charter or democratic surveillance?

The Investigatory Powers Act needs to be watched closely. By **Dr Paul Bernal**

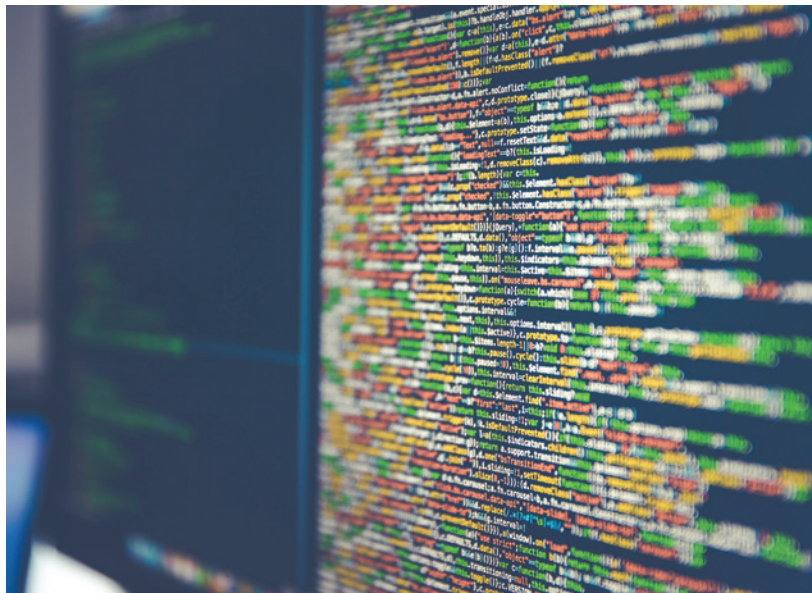


DR PAUL BERNAL is a Lecturer in Information Technology at the University of East Anglia School of Law

Depending on who you listen to, the Investigatory Powers Act (IPA) 2016 is a welcome modernisation of our surveillance law, or the most intrusive piece of legislation ever passed in a democracy. Is it a model for surveillance law in a democratic society, or a 'snooper's charter'? Which is right? The real problem, particularly for those of a liberal (with a small 'l') bent, is that both may be.

The IPA replaces an old regime characterised by complexity and confusion, built up in a somewhat piecemeal fashion and subject to significant challenge. When Edward Snowden revealed at least some of the real extent of the UK authorities' surveillance in 2013, it became clear that the old laws had been 'stretched' to say the least, to be used in ways that many said they had never been intended.

The areas specifically covered by the IPA are interception of communications, acquisition of 'communications data' (also referred to as 'traffic data' and 'meta-data' at times, though definitions are a bit confused), 'equipment interference' (more commonly known as hacking), and 'bulk personal datasets' – a new concept, which even the proponents of the act seem a little unclear



about. It is ambitious in its reach (potentially covering the whole world), and has been bold in its conception – though what will really matter is how it works out in reality.

The IPA is not the first attempt that has been made to 'modernise' our surveillance laws. In 2012, the then Home Secretary Theresa May put forward the Communications Data Bill – the first law to be labelled the 'snooper's charter'. But a combination of very bad public relations and the resistance of the Liberal Democrats put paid to that.

After Snowden's revelations, surveillance was given an even worse name. The European Court of Justice cast down the centre-piece of European surveillance law, the Data Retention Directive,

as a disproportionate intrusion into fundamental rights.

The then Prime Minister, David Cameron, and his Home Secretary Theresa May put forward a stop-gap measure, the Data Retention and Investigatory Powers Act, rushing it through Parliament in a matter of a couple of days. That act, too, was savaged by the European Court just before last Christmas – and the potential remains for the IPA to suffer a similar fate.

The reasons for this are fairly straightforward. The IPA's predecessors gave the potential for oppression – without, it seems, sufficient limitations or protections. Whether the IPA itself provides those protections is a matter of considerable debate. If the current Home Secretary,

>> Amber Rudd, uses warrants carefully and selectively it could be the kind of appropriately modernised surveillance system its advocates have suggested - but the law could also allow her to monitor everyone's web browsing without any judicial oversight (using 'internet connection records'), hack millions of computers across the country (using 'bulk equipment interference warrants') and suck up any database of personal information (using 'bulk personal datasets'). These are immensely powerful tools - with significant potential to be used for oppression rather than protection, for control rather than to watch for danger. Which way they will, in practice, be used, has yet to be seen,

and whether the systems in place meet human rights requirements - either of the European Court of Justice, until Brexit, or the European Court of Human Rights - is a matter of considerable doubt.

Admittedly, the IPA includes an unprecedented (for the UK) level of oversight and set of safeguards against misuse of these powers. These include making misuse of these powers criminal offences, a set of different oversight bodies, and for the first time a role for judges in some parts of the warranting system. The big test will be whether these safeguards amount to anything more than fig leaves. Will there be many - or any - convictions of police officers or intelligence agents for misusing investigatory

powers? Will the much-vaunted 'judicial double lock' - whereby the judicial commissioners have to approve warrants for interceptions of communications, for example - amount to anything more than a rubber stamp?

This is where it is critical that those of a liberal perspective need to pay close attention. How this kind of law works in practice is the key. A government consultation on the codes of practice that accompany the bill is being undertaken. The process through which the judicial commissioners are to be appointed was initiated in February 2017 - it needs to be watched closely. What is decided over the next few months may decide which direction this law goes: oppression or protection. ●

A changing childhood

Sue Palmer writes about the effect technology has on children and the dangers of becoming hooked on screen-based entertainment



SUE PALMER *is the author of 'Toxic Childhood'*

Born in the same year and the same street as the first modern computer - 1948, Oxford Road, Manchester - I have personally enjoyed the digital revolution. All those shortcuts to information, communication and entertainment are great. However, having spent the last twenty years researching child development in the modern world, I am glad my daughter was born before 1990 when these

shortcuts gathered speed, because what is great for grown-ups is not necessarily good for children, whose bodies and brains are still developing.

Over recent decades, we have seen a steady deterioration in children's physical and mental health. During 2016, researchers reported that UK kids are among the least active, least healthy and most stressed in the western world. Obesity is back on the rise, as are other health conditions linked to lack of physical activity. There's also a spiraling mental health crisis among children and young

people, affecting younger age groups every year. While the reasons behind these developments are complex, the influence of technology on children's lifestyles is clearly involved. There are no short-cuts to healthy physical and psychological development and no quick fixes if things go wrong.

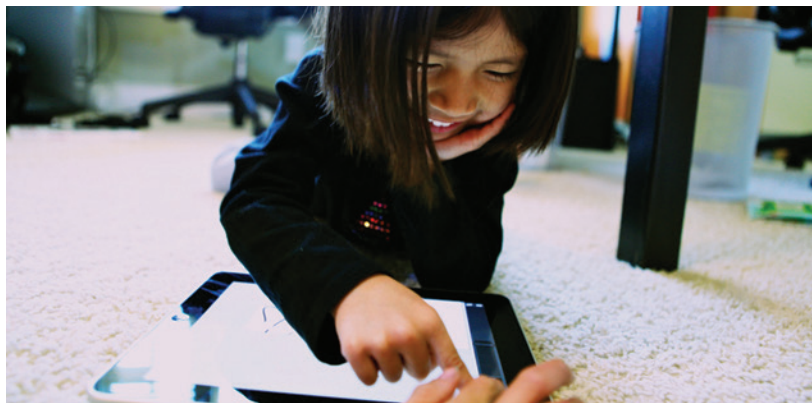
During the first two years of one's life, for instance, children have to develop bodily coordination and control, a rough understanding of how the world works and basic social skills. For this they need to move freely, exploring their environment

>> with all their senses. They also need the constant assistance of adult carers who, as well as keeping them alive, are an essential source of emotional security and a model for social behaviour, including language. Unsurprisingly, the proliferation of visual media, including baby TV channels, and the increasing use of smartphones and tablets as infant pacifiers have coincided with a steady increase in developmental disorders.

The earlier children become hooked on screen-based entertainment, the more likely it is to become their default activity, so they are less inclined to engage in real-life interactions and activities as time goes on. But, once they are walking, talking and relatively in control of their behaviour, lifelong health and well-being depends on plenty of opportunities to be outdoors, active and social.

Outdoor play, usually with other kids, and with minimal interference from adults, has been a consistent feature of childhood in every time and culture until our own. The wide variety of physical activity it involves is obviously linked to long-term physical health, but psychologists also stress its contribution to children's emotional well-being and social development. Self-directed play is where children learn to take responsibility for their own behaviour and discover their own strengths, thus developing powers of self-regulation and feelings of self-efficacy, essential components of long-term emotional resilience.

Some screen-play is obviously a useful addition to a twenty-first century child's repertoire,



but UK children now spend on average around five hours a day on 'recreational screen-based activity', leaving little time for running, jumping, climbing, making dens, splashing about in streams or puddles, inventing games, exploring, experimenting and generally finding out about the world by being in it. Yet these are the experiences through which children throughout history have practised real-life problem-solving, risk-taking, dealing with set-backs, collaboration with peers – including emotional strategies for coping with fall-outs – and developed the common-sense understanding that comes from embodied engagement with the real world, in real time and real space.

Some screen-play is obviously a useful addition to a twenty-first century child's repertoire, but UK children now spend on average around five hours a day on 'recreational screen-based activity'

As well as ensuring plenty of time for learning through play during children's formative years, this kindergarten tradition affects

adult attitudes to early childhood, so that parents are more aware of their offspring's' developmental needs. Contrast this with early years policy in the UK – cobbled together on a shoestring as the digital revolution raged around us – and focused on getting parents back to work and children ready for school. It's not surprising if UK parents assume that – in a technological age – there's no danger in substituting technological alternatives.

I believe that we need the development of a coherent, well-funded approach to care and education from birth to the age of seven, with the emphasis on social and emotional development and outdoor play and national guidelines for on-screen based technology for children under the age of twelve.

Childhood isn't merely a cultural construct; it's a biological stage in human development. Digital technology may have transformed our cultural landscape but it hasn't changed our biological heritage. If we want the next generation to be an asset to the economy rather than a drain on the health service, we must help parents 'keep it real' during their children's early years. ●

A health-care revolution?

Dr Tania Mathias MP argues that automation can lead to an increase in person-to-person care in the NHS



DR TANIA MATHIAS MP is a member of the Commons Science and Technology Select Committee

The ‘Fourth Industrial Revolution’ has been described as being of far greater importance to our society today than Brexit or Donald Trump. The risks and opportunities of this revolution can already be seen in the field of health care.

The Fourth Revolution has been described as a blurring of the real world with the technological world or the fusion of physical, digital and biological fields. In health care this means that not only do we have machines that can measure heart function and analyse it at the time of the measurement but also computer programmes which can replace clinicians for some disease diagnoses. These programmes can give diagnostic help to patients and help them become experts in their own right. Information gathering and its interpretation is being done at a faster rate than ever before and is accessible for the health professional and the patient.

At the start of the NHS, in 1948, the family doctor had the doctor’s bag with a prescription pad, some instruments such as a thermometer, blood pressure cuff and stethoscope. Today the general practitioner will have automated machines for these tests and their computer

linking to diagnostic programmes. The future for health practitioners will include robots doing manual work such as operations, and even more consultations by Skype.

The obvious advantage of automation and artificial intelligence (AI) is that the person-to-person part of health care should increase. Today nurses complain about work that takes them away from the patient’s bed. With robots doing the blood pressure monitoring and drug dispensing, the nurses’ station might even disappear and staff could have more ‘high touch’ time with patients. Of course the danger of robotics and AI is that if we do not prepare for these rapid changes we will let the machines dominate our workplace – a Frankenstein effect - and we will not protect the ‘high touch’ part of the jobs.

The future for health practitioners will include robots doing manual work such as operations, and even more consultations by Skype

All revolutions are exciting and this one is happening at a faster pace than the previous revolutions – McKinsey’s Global Institute’s estimate is that the pace is ten times greater than that of the First Industrial Revolution and three thousand times the impact. In the excitement of this roller coaster ride,

the health professions must give higher value to the person-to-person and creative parts of every job.

If we do not prepare for these rapid changes we will let the machines dominate our workplace

Economically, the challenge will be how to reward the parts of our work that have not been financially well rewarded in the past. In this century, it may well prove to be that the robot doing the neurosurgery on a microscopic lesion in the middle of the brain, that takes half an hour of robot time, will be far cheaper to hire than the person sitting by the bedside listening to the patients’ fears about their operation for the same amount of time. The NHS has never rewarded the health professions – neither the health auxiliary, nor the hospital porter, nor the doctor – adequately for their time spent on patient engagement and empathy.

In fact, the focus of all workplaces – just as in the health care workplace – must move towards rewarding person-to-person work and also towards re-skilling the workforce to match needs such as engineering and software development. Industrial revolutions are born from creativity in ideas. Who knows: with artificial intelligence and robotics we may see non-human creativity giving rise to the Fifth Revolution. ●

Don't look up!

Lord Hodgson urges the ethical implications of drone warfare to be considered



LORD HODGSON is a Conservative Peer and a member of the Secondary Legislation Scrutiny Committee

The concept of waging war remotely is not a new one. Early examples such as the V1 and V2 rockets in the Second World War with their primitive guidance systems gave way to increasingly sophisticated nuclear weapons which formed, and still form, Britain's nuclear deterrent.

But recent years have seen the increasing development and use of drones – hence the acronym used by our armed forces 'RPAS', standing for Remotely Piloted Aircraft Systems. Drone warfare is at an early stage but it is clear all three armed services will wish to take advantage of this new technology.

This exposes that the legal framework that covers military operations was not designed with remote operations in mind. The balance to be struck is between, on the one hand, safeguarding our armed forces and maintaining their efficiency, while on the other ensuring proper respect for the rule of law. Today British 'Reaper' drones are flying over Iraq and Syria, as part of the struggle to contain militants fighting with Islamic State.

Two particular points about the 24/7 nature of this modern warfare need highlighting. First, drone technology

enables one to 'loiter' over the target to get proper reassurance as to its appropriateness. By contrast it is not easy to 'loiter' in a Tornado both because it is travelling at hundreds of miles an hour and also because every pilot will have in the back of his mind the possibility of an anti-aircraft missile – being shot down and landing in Isis held territory is unlikely to lead to a happy outcome for the pilot.

It may be tempting to try and rewrite the rulebook. But the rule of law exists to prevent miscarriages of justice

Second, operating these drones carries its own personal stresses. An individual pilot will move in a few short minutes from the familiar comfort of a married quarter to the intensity of making life or death decisions – not just about causing the death of an individual but because failure to take one life may put the lives of other members of coalition forces at risk. And at the end of a shift to move equally quickly from this intensity back to domestic life. There is no time for 'decompression'.

But away from the practical implications, there are wider public policy implications of the increasing use of drones. The ethical implications of drone warfare depend on how drones are used. In fact, the biggest ethical question relates not to the technology

itself – not its precision, nor its remoteness – but to the conditions and constraints applied to its deployment to carry out what's known as 'targeted killings' in areas where the UK may not be at war.

There is at least one instance of a UK targeted killing carried out by drone strike – that which killed British national Reyaad Khan in Syria in August 2015. Khan, who was fighting with Isis, was killed by an RAF Reaper drone in what the then-Prime Minister, David Cameron, called a "new departure ... the first time in modern times that a British asset has been used to conduct a strike in a country where we're not involved in a war." The Attorney General has since made it clear, in a speech in January of this year, that the UK considers these strikes a legitimate form of self-defence provided there is an imminent threat.

With the UK locked into a conflict with Isis, there may well be more strikes of this kind in future. And there are some serious legal and ethical problems involved. For example, how do we define an 'imminent threat'? In his recent speech, the current Attorney General told us: "we will not always know where and when an attack will take place, or the precise nature of the attack...our enemies will not always have fixed plans". This definition is drawn broadly so it could cover all manner of vague threats – if you

>> don't need to have a specific plan for a specific attack, there are plenty of people out there that wish the UK harm, and who might be judged capable of inflicting damage. But how and where do we draw the line?

It may be tempting to try and rewrite the rulebook, claiming that the threats that we face as a nation mean that the frontlines have irretrievably shifted, and that the gloves must come off in order to strike our enemies decisively. But the rule of law exists to prevent miscarriages of justice, abuses of power, and mob rule. The UK has

a proud history of developing the rule of law as an essential pillar of our liberal, democratic society. This is an important element of our national 'soft power' and our reputation around the world.

As more countries get their hands on drone technology, Britain must set a precedent for responsible, transparent, ethical use

So we need to make sure that as we use new forms of warfare an appropriate legal framework is

being developed and implemented. Otherwise we may find ourselves on a slippery slope to a society where the rules governing decisions about life and death are subject to dangerous levels of interpretation.

As more countries get their hands on drone technology, Britain must set a precedent for responsible, transparent, ethical use. Then we shall be in a better position to encourage others to do the same. Whether drones end up providing a cleaner form of war, or whether they end up helping undermine the rule of law, is yet to be seen. ●



The Russian Bear?

Dr Andrew Foxall and Emily Taylor assess Putin's power



DR ANDREW FOXALL is *Director of the Russia Studies Centre at The Henry Jackson Society*



EMILY TAYLOR is an *Associate Fellow at Chatham House and Editor of the Journal of Cyber Policy*

Beware of Putin, argues Dr Andrew Foxall

A quarter of a century ago, the idea that disinformation might pose a threat to the stability of the West seemed fanciful. Western ethics and values, some dating from the Enlightenment, looked as triumphant as free markets; the Cold War had ended, in part, because the Soviet Union lied while the West told the truth.

But truth is not what it once was; post-modernism and relativism have seen to that. The proliferation of information over the past decade has made it harder for people to judge the accuracy of what they see and read. And the development of new technologies has made it easier than ever before to spread disinformation.

One person who understands this better than most is the Russian President, Vladimir Putin. Russia, long ago, perfected the art of deception. It is now marrying this knowledge with new technology and directing it at target populations in order to influence and shape the political landscape in the West. While many in the West recognise that Russia is aggressively pursuing a revisionist foreign policy, few realise that the spread of disinformation is an integral and indispensable part of its strategy.

In early 2016, Russia's television station Channel One reported that a 13-year-old girl, 'Lisa', from a Russian-immigrant family in Germany had been abducted on her way to school and gang-raped by asylum-seekers. The story broke shortly after the large-scale sex attacks on New Year's Eve in Cologne and elsewhere, fuelling anti-migrant protests across Germany. Lisa's 'disappearance' was so prominent that even Sergei Lavrov, Russia's foreign minister, spoke publicly about it. The story was a lie.

Created by Russian media, it spread primarily on social networks thanks to a concerted Russian online effort. It was liked, shared, and favoured by millions of people.

Over the past decade or so, Russia has invested heavily in the production of disinformation. It has ploughed significant funding into Russia Today, its English-language propaganda television channel, and Sputnik, its radio offshoot. It uses social media as well as a huge range of online vehicles – 'news', websites, forums, and information portals – with significant impact. It maintains 'troll factories', in which hundreds of bloggers are paid to flood the internet with Kremlin-friendly messages.

In the early days of this year, a little-known outlet linked to the self-proclaimed Donetsk People's Republic published a story claiming that the US was dispatching 3,600 tanks to Eastern Europe as part of NATO's "war preparation against Russia". The story was a lie. The US had, in fact, announced that it would deploy 87 tanks to the region. But the facts were irrelevant. The story caught the imagination online and within days had been republished, tweeted and retweeted by dozens of outlets in the West and especially the Russian-speaking world.

"There is no such thing as objective reporting", claim the heads of Putin's propaganda networks Dmitry Kiselev and Margarita Simonyan, when asked to explain the editorial principles that allow for conspiracy theories to be presented as being equally valid to evidence-based research. A lie, in the Kremlin's eyes, can be as worthy as a fact. The disinformation Moscow creates and circulates has little in common with Cold War propaganda.

A lie, in the Kremlin's eyes, can be as worthy as a fact

Its news channels pump out scare stories about climate change and immigration while portraying the West as racist and xenophobic. Its websites promote conspiracy theories, while its trolls deride Western investigative journalism. The aim is not to present the idea that Russia is as good

>> as the West, but instead that the West is as bad as Russia.

Some countries are waking up to this. In Ukraine, organisations such as ‘StopFake’ are exposing and ridiculing Russian lies. In the Baltic states, armies of cyber-warriors are taking on pro-Russian trolls online. There have been broader attempts to tackle the problem, too. The European External Action Service, the European Union’s foreign-policy arm, compiles weekly disinformation bulletins, tracking the activities of the Kremlin’s myth-makers.

But dealing with Russia’s disinformation is a much bigger issue. By the time a story has been ‘de-bunked’, it has likely been shared hundreds of times and thousands more lies have already been created.

Its news channels pump out scare stories about climate change and immigration while portraying the West as racist and xenophobic

All that matters is that the story is clickable, likable or sharable. Social media is creating echo chambers of similar-minded people; whether these people lie or tell the truth is largely irrelevant to the algorithms underpinning the platforms.

Almost three years since General Philip Breedlove, NATO’s supreme commander, warned that Vladimir Putin was “waging the most amazing information warfare blitzkrieg we have ever seen”, there is little understanding of how Russia’s disinformation campaigns actually work. Which aspects of the disinformation are effective? What are the key technologies in spreading them? Who believes them? Why? It is time this changed, not least because other countries, including China, are beginning to use some of the same techniques and technologies.

Putin isn’t really the problem, says Emily Taylor

Russian cyberattacks and fake news will not be defeated through panic and paranoia. Multiple approaches are required: greater care about attribution, increased transparency and accountability for social media platforms, and an evolution in the funding of public service journalism.

Fake news, allegations of interference in democratic processes. Every day brings new claims that the Russians are using information warfare to sow mischief, disruption and doubt into the political sphere inside and amongst

NATO powers. How do we separate fact from fiction?

When something bad happens, it’s not always because of Russia. Early reportage of the TalkTalk hacks in 2015 suggested that it was the work of Russians, Islamic fundamentalists, and even Islamic fundamentalists based in Russia. It turned out to be a 17 year old in Norwich. Attribution is a known problem when it comes to cyberattacks. When a breach occurs, it can take months of forensic investigation before a conclusion can be reached about the source of an attack. Twitter’s commentariat pokes fun at the current trend of evidence-free Russian-blaming. Sloppy reporting or assuming that Russia is responsible for anything scary serves Russia’s cause - amplifying the terrifying sense of its powers, beyond its actual capability.

Although the term ‘cyberwar’ is bandied about, actual incidents are relatively rare. The Ukrainian president has claimed that Russia is waging a cyberwar alongside its conflict against Ukraine. However, these are the exception, not the norm. More frequent are allegations that Russia is involved in what used to be called propaganda campaigns: involvement in spreading fake news, politically motivated hacking, and skewing elections on both sides of the Atlantic. How can we sift the truth from allegation and counter-allegation?

The CIA has stated with “high confidence” that Russia was responsible for hacks on the Democratic National Committee in 2016, claims that Russia denies. “Much of the information supporting the CIA’s conclusions is classified, for obvious reasons. This makes it impossible to assess the quality of evidence”, explains Keir Giles, Associate Fellow at Chatham House’s Russia and Eurasia programme. However, Thomas Rid’s careful analysis provides a compelling case that the hackers were Russian state-actors. Giles’ Handbook of Russian Information Warfare explains that Russia has long engaged in campaigns of disinformation, disruption, and subversion outside the formal theatre of war. Russia’s Defence Minister, Sergei Shoigu recently confirmed that the Russian armed forces include “information troops”, a Russian Cyber Command.

What are we to make of the furore surrounding fake news stories, and their alleged impact on the 2016 elections? Apart from President Trump engaging caps-lock on Twitter to yell “FAKE NEWS” at every critic, is there anything behind the phenomenon? According to one report, fake news outperformed mainstream news in

>> the month before the US Presidential elections. But that does not prove that fake news influenced the election result, according to an academic study from Stanford University. Propaganda, lying and rumour are not new. Writing in the first century BCE, Virgil called rumour “the swiftest of all evils...clinging to the false and the wrong, yet heralding truth”. If you’re in politics, you don’t need the internet to spread a lie - you can even use a bus.

Something that is new, and has been poorly understood by regulators and lawmakers, is the creepy power of big data and big technology companies. Allegations are surfacing that one or more data analytics companies helped swing the Brexit vote and US Elections. Sir Tim Berners-Lee, in his open letter to the internet community, suggests that political campaigns are now building individual adverts, targeted directly at users. He cites one source claiming that in the US elections, “50,000 variations of an advert were being served every single day on Facebook.”

Our Twitter feeds, search results and Facebook walls may seem like neutral spaces. They are not. The companies behind them heavily curate what we see, drawing on what they know about our location, and our preferences. This pinpoint personalisation was foreseen more than 20 years ago by Nicholas Negroponte: the Daily Me. Small scale democratic experiments in 2005 indicate that “a high degree of self-sorting leads to more confidence, extremism and increased contempt for those with contrary views.”

Our Twitter feeds, search results and Facebook walls may seem like neutral spaces. They are not

This is a democracy problem, not just a technical problem. If society pushes the solution onto technologists, we’ll get a technical solution and things will get worse. Mark Zuckerberg’s recent manifesto suggests that if only Facebook can get the tech right, humans will behave in a rational, predictable and well-intentioned way (although a fact-checker on news articles would be useful).

Zuckerberg misses the point that it’s the heavy curation which is the problem, and more curation is not going to solve it. What is needed is a flatter view, something more general, more messy. Another feature of the ‘Daily Me’ phenomenon is that journalists and other commentators are also exposed to the same, highly personalised echo chamber - which may help to explain



why so few managed to predict the outcome of elections in 2016. Silicon Valley’s information oligarchs are facing a painful transition from being platforms to publishers. Zuckerberg’s manifesto recognises that with Facebook’s immense power comes responsibility, but he’s looking in the wrong direction. It is up to others to help the platforms evolve and protect public service journalism.

It’s clear from the Kremlin’s own materials that information warfare is an important aspect of its strategy. But not everything bad online is Russia’s fault. Attribution for cyberattacks is challenging and if we’re not careful we can unwittingly serve the information war by assuming that Russia is more cyber-capable than it actually is.

Sir Tim Berners-Lee has called for the Big Tech platforms to provide “more algorithmic transparency”. Whether they like it or not, those platforms are taking on an increasing public service role, and the heavily personalised environments tend to polarise views, diminish diversity and tolerance. Independent, fact-checked journalism has an important role in all democracies, and is struggling for finance. New funding models urgently need to be explored, including levies from social media and online platforms. It is the algorithms, not Putin, that are amplifying fake news around online echo-chambers. ●

Preparing Britain for the rest of the twenty-first century

The Rt Hon Matt Hancock MP on how Britain can play to its historic strengths whilst looking to the future



THE RT HON MATT HANCOCK
MP is the Minister of State
for Digital and Culture

A core task of any forward thinking Government worth its salt is constantly to ask: what must we do to secure the prosperity of the nation over the generation ahead? The task is not to defend industries and economies in their present form, frozen in aspic, but to seek out the new markets, new methods, and new technologies that will provide the jobs and incomes our children and grandchildren will rely on.

The basis of our future prosperity is always changing. From the wool of the fifteenth century, to the coal and cotton of the nineteenth, it is impossible to predict with certainty, but we must prepare for what we can see through the fog of the future.

Expectations are rising and this presents an opportunity

Through that fog it is increasingly clear that our prosperity in the twenty-first century will be built, or rather designed, at the intersection of inspired creativity and technological brilliance. No longer is it about widgets or quantity of stuff. It's about things - goods and services - that people really want because they solve a problem and do so

in a way that is a joy to use.

Who buys a clunky phone? Or puts up with a second rate service anymore? Expectations are rising and this presents an opportunity.

Why is the Range Rover so spectacularly successful? What underpins Apple's success? What drives success in music, fashion, or home goods? All of these require the combination of creative flair and technological perfection to be the successes they are.

And guess what? Britain is brilliant at all of them. Jaguar Land Rover (JLR) is one of the fastest growing car companies in the world. The iPhone was designed by an Englishman.

But we must not rest on our laurels. With our exit from the EU we must be a global Britain. JLR may be British born but it's owned by an Indian company that turned it around. Jony Ive may have invented the iPhone, but he went to America to do it.

So we must redouble our efforts to have global reach. And we must redouble our efforts at home.

But we must not rest on our laurels. With our exit from the EU we must be a global Britain

The good news is, we can work to hone this connection between our amazing tech businesses and our extraordinary, world

beating cultural assets. Take just one example. Productions by the Royal Opera House, for example, are now screened in real time from its Covent Garden home to more than 500 cinemas across the UK - allowing audiences to enjoy its shows on their doorstep.

This is just the start. Our Digital Strategy set out how we will make sure businesses have access to the skills and infrastructure they need to make the most out of the opportunities offered by digital.

We can help prepare Britain for the rest of the twenty-first century, maintain our outward looking, global approach, and play to our historic strengths

Our Culture White Paper sets out how we'll develop our nation's amazing creativity. Our Culture is Digital project, launched earlier this month, is all about bringing the two together and mining this rich seam.

It's an exciting area. So much is already happening. We can help prepare Britain for the rest of the twenty-first century, maintain our outward looking, global approach, and play to our historic strengths. That's one way, in Government, we can keep looking forward in the service of the whole country. ●

Article written before purdah.

Anxious about automation?

Matthew d'Ancona looks at the best evidence and writing on automation and urges politicians and policymakers to take note



MATTHEW D'ANCONA is chair of Bright Blue and a columnist for the *Guardian* and *London Evening Standard*

If you have a taste for prophecy, try this prescient warning by Samuel Butler in his essay 'Darwin among the machines' (1863):

"There are few things of which the present generation is more justly proud than of the wonderful improvements which are daily taking place in all sorts of mechanical appliances... Day by day, however, the machines are gaining ground upon us; day by day we are becoming more subservient to them; more men are daily bound down to them as slaves to tend them, more men are daily devoting the energies of their whole lives to the development of mechanical life. The upshot is simply a question of time, but that the time will come when the machines will hold the real supremacy over the world and its inhabitants is what no person of a truly philosophic mind can for a moment question."

More than 120 years before James Cameron imagined a world dominated by Skynet and its killing machines in *The Terminator*, Butler had foreseen the awesome potential of technology to make mankind redundant. Today, that fear has migrated from science-fiction movies to mainstream political discourse – and with good reason.

As much as I revel in the digital

revolution, I have long believed that the greatest threat to social stability is not immigration but automation. Though the wave of populist nationalism and nativism sweeping the world is deeply alarming, it is by no means destined to triumph. The opposing forces – globalisation, well-established pluralism, commercial interdependence, unprecedented population mobility – are formidable and undiminished. The fact that they are now under political attack (in different ways, in different countries) is no reason to assume that they will be defeated.

In contrast, no clear answer has yet emerged to the challenge of automation. What roles will be left for the majority of human beings in a world of driverless cars, unstaffed supermarkets, robotic baristas, computerised medical diagnosis, legal software, accountancy apps, and artificial intelligence of a sophistication that could only have been dreamt of a few years ago?

In his classic guide to the twenty-first century world, *A Whole New Mind* (2005), the business guru Daniel Pink predicted that automation would release humankind from drudgery, heralding a new era in which the right hemisphere of the brain – responsible for creativity, design and empathy – would assume exponentially greater significance. Pink's thesis is correct, in as far as it goes. The nature of labour will indeed

change – is already changing – in ways that favour the imagination rather than manual and technocratic skills.

All the same, no society, however enlightened, can employ its entire workforce as writers, designers, actors, therapists, painters, poets and sculptors. The liberation of humanity from most forms of work presents opportunities, but also a crisis of social trajectory. What will become of us all when most of what we do now can be done at marginal cost by machines?

In *The rise of the robots*, Martin Ford describes a world in which education will remain a force for decency but one incapable of keeping up with the galloping pace of automation. The state, he concludes, will be compelled to pay all citizens a basic income to compensate for this transformation of working culture.

The liberation of humanity from most forms of work presents opportunities, but also a crisis of social trajectory

Glasgow city council has announced a pilot scheme offering such a subsidy, and Finland has launched its own experiment, paying 2,000 unemployed people a monthly income of around £500 (conditional upon them finding a job – which rather defeats its relevance in the age of automation). So far, these proposals are designed

>> to simplify existing benefit systems and incentivise work. But what if there is no work to be done?

Yuval Noah Harari offers a bleak answer in his recent book, *Homo Deus*, predicting the comprehensive replacement of professional as well as semi-skilled labour by “highly intelligent algorithms”. In this dystopian vision, he foresees humanity splitting into “an algorithmic upper class owning most of our planet” and “a new massive class: people devoid of any economic, political or even artistic value”.

As an optimist, I prefer the analysis of Thomas H. Davenport and Julia Kirby in *Only humans need apply*, which champions an “augmentation agenda”. The authors urge employers and governments to acknowledge the scale of the challenge and to focus as much upon preparing humans to work with machines as upon the mechanization

of existing labour functions. Their argument – persuasive in its appeal to human nature – is that, in a great many settings, consumers will still want to interact with people as well as machines.

There are limits to the degree of automation we would accept – limits that have less to do with grumpy Luddism than our deepest, most primal instincts to collaborate and communicate with one another

So, for example, financial advisers will spend more time engaging in behavioural analysis of their clients, working face-to-face, while algorithms look for the best deals available. Marketers will be less preoccupied by routine data-crunching and able to concentrate

on “higher-level processes”.

Software may be able to diagnose disease and propose treatment. But patients, especially those in need of acute care, would still want to deal with doctors and nurses. Human beings are genetically programmed to be social animals, acting tribally rather than in isolation. There are limits to the degree of automation we would accept – limits that have less to do with grumpy Luddism than our deepest, most primal instincts to collaborate and communicate with one another.

There is no glib answer to this extraordinary challenge, no ready solution to be grabbed off the shelf. But the first and most important step is for businesses, politicians and policymakers to acknowledge the sheer scale and urgency of the task that stands before them. To do otherwise would be the most dangerous sort of delusion. ●

Bringing broadband to all

Nigel Huddleston MP on unleashing the economic potential of rural Britain



NIGEL HUDDLESTON MP
is a member of the
Culture, Media and
Sport Select Committee

The Culture, Media and Sport Select Committee, of which I am a member, commented last July that “the UK is a laggard by international standards in providing fibre connectivity. This could result in a widening, not a narrowing, of the digital divide”.

Indeed, the isolation of rural and semi-rural communities from our increasingly high speed digital economy is something that must be urgently addressed if we are serious about creating a more equitable and less London-centric economy.

BT and its local access network subsidiary Openreach are at the centre of nationwide rollouts of fibre broadband, having won all of the contracts for phase one of the national

initiative. Their figures released in March this year indicate that 92.5% of people across the country now have access to broadband speeds of 24Mbps or higher (i.e. superfast broadband). Even if this were true, we would have to consider how this situation affects the final 7.5%.

But current advertising regulations allow BT to claim that consumers receiving their broadband connections from a particular cabinet all receive

>> superfast connections if they can show that just 10% actually do so. Cabinets across the country are fitted with fibre technology, but households are still using copper connections that slow their internet down to a snail's pace and we must accept that this 92.5% figure grossly misrepresents the scale of this problem in the UK.

In a parliamentary debate, the Minister for Culture and Communications, Matthew Hancock, made the point that if we assume that all fibre cabinets provide their consumers with superfast connections, we have the best developed broadband infrastructure of Europe's five largest economies. Account for the fact that the majority of connections are, at best, half fibre connections, however, and we have in fact the least developed broadband infrastructure of these five European economies. The effect of this misrepresentation on the ground is that people across the country – but particularly in rural areas – are being told that they have superfast internet connections yet are unable to carry out even basic online tasks.

People across the country – particularly in rural areas – are being told that they have superfast internet connections yet are unable to carry out even basic online tasks

Clearly, it is essential that Openreach is properly scrutinised as it carries out its contracted duty to provide the people of the UK with broadband. This is where the work of my Committee and the passage of the Digital Economy Bill,



for which I sat on the Public Bill Committee, play crucial roles. We can scrutinise and bring concerns to light and legislate for greater investment in digital infrastructure. Ultimately, however, we also rely on Ofcom as the independent communications regulator and the Advertising Standards Authority to ensure that BT and Openreach carry out the rollout to the best possible benefit to the consumer.

I am encouraged that the Committee for Advertising Practices is currently undertaking a serious review of BT's use of a 10% sample to claim 100% superfast connectivity and was also happy to see Matt Wharman MP lead a debate on this issue in Parliament. On the same day the Chancellor announced that £200 million additional investment would be given to broadband infrastructural improvements. The severity of the digital divide is demonstrably not lost on senior members of the Government. The Digital Economy Bill is also set to introduce a Universal Service Obligation so that all premises in the country can access broadband at a speed of 10Mbps as an absolute minimum by

the end of this Parliament, which I believe is a crucial first action for immediately connecting isolated rural communities to the wider economy.

The economic potential of rural Britain is immense

There has been seen some visible progress with broadband infrastructure in my own constituency of Mid Worcestershire that shows that these legislative promises are having a substantive effect on the ground. Driving across the county in my constituency, I am encouraged to see further cabinets with the "Superfast Broadband coming soon" message plastered across their doors. If the issues I have highlighted with advertising and investment are addressed, these cabinets could genuinely change the lives of my constituents.

The economic potential of rural Britain is immense. This potential can be even more fully realised once it is connected to the rest of the country's digital economy and is able to function within a fair and competitive commercial playing field. ●

Tweeting with Trump

John Higginson writes on the importance of truth in the President Trump era



JOHN HIGGINSON is a member of Bright Blue and a director of Higginson PR

On February 17, 2017 US President Donald Trump tweeted: “Thank you for all of the nice statements on the Press Conference yesterday. [US Radio DJ] Rush Limbaugh said one of greatest ever. Fake media not happy!”

During that press conference President Trump claimed the roll out of his administration has been “like a fine-tuned machine” despite people turning down jobs and the courts blocking his ‘anti-terror’ Executive Orders. He claimed his November victory was “the biggest Electoral College win since Ronald Reagan” despite three presidents since Reagan having captured a larger share of electoral votes than him.

When asked by a black reporter if he had consulted with the Congressional Black Caucus, he asked the reporter to set up the meeting asking her if they were her friends. And he accused an Orthodox Jewish reporter who asked him about an upsurge in anti-Semitic incidents of asking him a “a very insulting question”. Using social media the 45th US President is able to do what his predecessors were unable to do: speak directly to his 25 million followers, most of whom would not have seen the press conference. “Greatest” is subjective but the above facts suggest President Trump’s press

conference was not “the greatest ever”.

Of the 16 tweets sent in the six days after President Trump’s press conference, five attacked the ‘fake media’. The press has been criticised throughout its history for taking words out of context, pursuing stories that fit with the beliefs of proprietors and concentrating on the inane over the important. All these points, are at times, fair criticisms but the mainstream media on the most part carries out a diligent and important job in checking fact from fiction before publishing. It also, in general, gives both sides of the story even if one side is more prominent than the other. Technology is changing this.

As every journalist fights to get stories onto websites as quickly as possible the most obvious victim has been the verification process

Ten years ago when I joined Westminster’s Lobby, journalist membership was a prerequisite to writing about UK political news. Today, a number of talented writers are doing so from outside of this group. We also didn’t tweet. At least not when I started. We would witness political events and the public would learn about them the next day. How the world has changed. But as every journalist fights to get stories onto websites and onto TV programmes as quickly

as possible the most obvious victim has been the verification process.

President Trump has found the media’s Achilles heel and is using it to undermine the entire journalism profession. Through Facebook, Twitter, Instagram and WhatsApp people can block out the views of those they don’t agree with. It has had the effect of people at times living in communications bubbles where they wrongly think that their own view is that of the vast majority when it is not: a phenomenon known as confirmation bias.

There is evidence of a building resistance, however. The Times Online now updates its website only twice in the day rather than whenever a new story or line comes in. A publishing model taken from the printing press. In his 2016 book *The Great Acceleration: How the world is getting faster faster*, Robert Colvile points out that in news terms people are now eating “fast food or a three-course meal”. There has been a growth in the number of people consuming news nuggets but so to has there been growth in people reading the 10,000-word long read. It is the in-between pieces that have gone by the wayside.

Today the truth matters more than ever. It is our job to seek to get our news from organisations that emphasise accuracy over speed and to keep our minds open by seeking out the views of those we do not necessarily agree with. ●



The *Centre Write* interview: Steve Hilton, former director of strategy for David Cameron

Laura Round discussed technology, populism, Tory modernisation and Trump

When you were working in Government you were one of the main forces behind TechCityUK and you're now living in Silicon Valley. Yet, rumour has it that you don't carry a mobile phone. I'm curious what your attitude is towards technology and whether you think it is changing politics for the better?

I think that it has the potential to do that, but I don't think it's quite realised that potential yet. You need to take a couple of steps back from the immediate question about technology and look at what's driving a lot of the underlying frustration or even anger that people have with the political system and with government. I believe technology has something to

do with two major developments. The first is the collapse in economic security and opportunity that so many people have experienced over the last few decades. And the second is the parallel collapse in people's control over the things that matter to them.

Is this where a concern about automation comes in?

The collapse in economic security and opportunity that so many people have experienced is not only to do with technology, but it does play a huge part in it. Automation is destroying jobs without creating new ones at the same rate. The two things that have been, I think, rightly blamed for the collapse in economic

>> opportunity have been globalisation and technology. This - combined with centralisation of the economy, government and politics - means people don't feel they have control over the things that matter. This is what is making people frustrated and angry. Except those people who are leading and benefiting from those changes.

Hasn't technology provided people with more control in many areas?

I think the sense of a loss of control over the things that matter is exacerbated by the fact that in some areas of people's lives technology has given them more control. Technology has enabled people to be much more in control over many aspects of their commercial life, whether that's your retail habits, where you get your information, what you watch, when you watch, and so on. This control heightens the sense of frustration that you can't control things that frankly are much more important, such as your kid's education or how your government works or what happens in your local area. All those things in the political arena and the social arena that haven't been transformed by technology - the fact that you don't have control over those whilst you are getting more and more control in areas that you might describe as more trivial, I think, drives more anger and resentment. That's my overall philosophy of how technology fits into what's going on in the world.

This philosophy inspired you to set up Crowdpc. What is the purpose of the company?

What I'm trying to do is use technology to give people more control in one particular aspect of politics, by making it much easier for citizens to participate in politics effectively, whether that's standing for office yourself or organising political campaigns and getting back a sense of that power that I think has been lost through the centralisation we've seen over many decades.

Do you think that these initiatives are making politicians more representative and responsive than they might have been before?

Not yet because it's early days, but that's our aim. I believe that centralisation of power makes insiders less

resistant to participation. Although politicians claim they want more people to participate, I actually think that they quite like that they can run the show their own way. The aim of Crowdpc is to put power in people's hands so that those who currently have it, the insiders who have it feel a threat, but a good, positive democratic threat. It's putting power directly in people's hands, so they can be in control over the things that matter to them. Within the UK, I hope Crowdpc can loosen the grip of party insiders on candidate selection and make it easier for anyone to stand for parliament. If you don't owe your position to the party hierarchy, you are enabled to act independently and can represent your constituents interests broadly with the values that you brought to your election rather than just slavishly adopting the line of the party.

Do you think this is one of the causes of politicians being unpopular?

Absolutely. I think a lot of the cynicism around politics comes from that you get all these politicians who are elected and then end up doing all the things everyone hates about politicians and politics. Such as parroting the party line. The tight grip of the party machine is one of the main reasons for the dissatisfaction with politics. If you think about it, you're only elected because you're chosen by a group of people, a very narrow group of people. Whatever party you're looking at, in the end it's the insiders who pick you as the candidate. Why should that be the case? Why should the party choose the candidate? The whole point of Crowdpc is to end the stranglehold of the party machines on politics generally and candidate selection specifically.

In your book *More Human* you've been vocal about your frustrations of the civil service. Do you think the civil service is one of the main hindrances to allow 'the people' to come first?

Do you remember that the title of the 2010 Conservative Manifesto was 'Invitation to Join the Government of Britain'? This was an expression of the idea that ran throughout the manifesto, which was this notion of people power. Decentralising power over the things that matter to you. That was the idea. That was the theory. Very

>> little of that was actually delivered, but I don't blame the civil servants for that. It's absolutely true that I clashed frequently with people working in the civil service but I don't blame them, because what they were doing was simply expressing the will of their political masters and that is completely appropriate in the system that we have. There was insufficient aggression in that fight from the politicians. All politicians get elected on a platform of saying we want to decentralise power and then the minute that they get there actually end up quite liking the power that they have. Conservative politicians in 2010 said "We won't be like that, we'll be different." Of course, they weren't different, they were the same. In the end I would say very little decentralisation was actually achieved, but the fight goes on. If you really want to change things, if you really want to decentralise power, then you need to change the politicians in Westminster. You've got to elect different people. You've got to elect people who are not creatures of the centralised system. You've got to elect people who are truly committed to local empowerment.

Many people assume you can't be a liberal conservative and a Brexiteer. What do you say to that?

It's obviously ridiculous. You only have to look at the people making the argument for Brexit on the Conservative side. The leading voices there: Michael Gove, Boris Johnson, Dan Hannan and myself. We're all at the same political disposition in terms of being committed to an open, dynamic, globally-engaged UK. And I think that's where Theresa May – after some missteps – has ended up.

Do you think Theresa May is a Tory moderniser?

In some ways, yeah. She and I were allies on a number of issues, including a vital need to try and get more women elected to represent the Conservatives. So, basically, yeah, I think she is. Actually, I think there is more to say than that. For example, I'm very pleased to see some of the arguments Theresa May has been making around working people and how they've been left behind. I think she's echoing a lot of the arguments that I made at the beginning, in terms of the way that so many people have been left behind by globalisation,

by technology, having a sense of frustration about not being able to control things that matter to them, really understanding that group. Being for working people, not the rich, not the elite. That, I think, is a very modernising argument and I think she makes it very well.

Do you think that post-Cameron there's still need for modernisation within the party?

I think that Theresa May has a particularly restricted view on immigration. That was a source of contention when we were working together - when I was in Number 10 and she was in the Home Office. She had a view which I think was, if we're being fair, very much determined by an almost impossible task given to her by David Cameron, which was to get net immigration down below 100,000. That put her in a mindset which was highly restricted on immigration because, as I said at the time, we were told that the only way you could actually get immigration below that level was to leave the EU. Basically, we were told it was impossible. That's why she was always looking for ways to restrict immigration, however beneficial the immigration might have actually been in the long-term, for example in relation to entrepreneurs. This is one of the particular arguments that she and I had; over what we wanted Number 10 to do on entrepreneurs. I had this view which was let's pursue a strategy on immigration which was based on a notion of quality not quantity. That we shouldn't just be universally restrictive, but that we should actually choose the people we want to welcome here, who could make a contribution to our economy and our society in a positive way that was globally engaged and actually stop importing cheap, unskilled labour, which was not helping our economy and our society, and that mainly was from the EU. That's the area where I would say I don't agree with the strategies she's pursuing but in many, many other areas I think that she is absolutely interpreting Tory modernisation in her own way and in a way that I would fully support.

What do you think modernisation under Theresa May will look like?

One of the main aims of the whole modernisation strategy was to say that the Tory party is not just for

>> the rich. That it isn't just for the people who are doing well, but actually for the people who are working hard. You can say well, perhaps it's the case that the Cameron version of modernisation put more emphasis on the people right at the bottom and the Theresa May version puts more emphasis on those who are not right at the bottom but are struggling. I think that that's a really healthy debate and we should be pleased the Tory party is arguing about whether we help the really poor or those who are just above them and struggling.

Looking at Trump, do you think he represents a style of politics which is more human?

I think that you have got to distinguish between his campaign and what the administration does. In terms of the campaign, that's absolutely right. One of the things that I found very positive about the campaign was that

it showed that actually all this kind of technologically enabled, incredibly expensive, grind out the vote - through micro-targeting people based on big data and technology - actually flopped in the face of someone with a very visceral, emotionally-driven human connection. I think that that is encouraging just in its own right in terms of the health of our democracy. In terms of what matters now, of course, is what his administration does and whether it lives up to the promises made around helping working people and decentralising power, which probably isn't something that was particularly reported in the UK, but actually was a big part of his message. During the campaign he attacked the centralised power structure in Washington DC and the influence of lobbyists and money in politics. That was one of the things that I found very attractive about him. The notion of decentralisation and putting power back in people's hand. But now, we have to wait and see if that's delivered. ●

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Becoming a member of Bright Blue enables you to support and partake in the championing of liberal conservatism.

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Why I'm a Bright Blue MP

We must provide opportunities for those left behind, argues the **Rt Hon Dame Caroline Spelman MP**



THE RT HON DAME
CAROLINE SPELMAN MP *is*
is the Second Church
Estates Commissioner

In 2016, we witnessed the global rise of populism. I believe strongly that this is a reflection on the inability of governments to adequately address the big challenges arising from globalisation.

For example, the low-waged in relatively rich, developed nations have seen a squeeze on their incomes as it has become harder to compete in a global marketplace. A recent poll found that 49% of participants felt that globalisation has pushed wages down for British workers, while 51% thought that it had led to more inequality between rich and poor.

It is not the case that global liberal elites have deliberately ignored this looming problem. However, the responses we have seen, such as the raising of the minimum wage to the living in the UK, and America's efforts to provide healthcare for the poorest, are palliative policies which have not addressed some of the underlying causes of inequality. In my opinion, countries have missed the opportunity to include more of their populations in economic growth and we must take the social frustrations being expressed through ballot boxes seriously.

This was a key theme at the 2017 World Economic Forum (WEF), where a new report was

launched on 'Inclusive Growth and Development'. This report includes the Inclusive Development Index (IDI) which measures 109 countries for inclusive growth. Out of these, 30 are considered within the sub-index of advanced economies. The UK ranks 21st just above America at 23rd. The marked difference is the Scandinavian region of Europe - at the top of the IDI is Norway, with Sweden 6th and Finland 11th. Organisation for Economic Co-operation and Development (OECD) data also shows that the UK had a higher level of income inequality (36%) than most European countries in 2013 based on the Gini coefficient for disposable income.

Growth in many advanced economies has not translated well into social inclusion, but I would argue this is due to a lack of focussed attention rather than an iron law of capitalism. We must encourage the development of new policy frameworks and creative ideas to strengthen broad-based economic growth that is inclusive of a large part of the nation's labour force, as Bright Blue consistently argues.

If we are looking at developing an agenda to boost social inclusion and economic efficiency, we should do so through a stronger focus on appropriate institutions. The role of institutions is a key principle in Bright Blue's underlying ethos. Institutions must be able to make the adjustments

to reflect a fast-moving world, or ensure that those entrusted in their care are well protected and equipped for global challenges. For example, if the education system failed to teach computer literacy, a whole generation of school children would grow up digitally disadvantaged. If basic labour standards fail to keep pace with technological changes and are too inflexible to support rising productivity through skills adaptation, then a whole generation of workers will find themselves facing redundancy. These changes will only intensify as the 'Fourth Industrial Revolution' strikes and new technologies threaten the old order.

Institutions must be able to make the adjustments to reflect a fast-moving world

I support Bright Blue's vision which believes in releasing human potential. Although we have substantial challenges to navigate as a global community, it is critically important that we continue to believe that individuals, no matter their background or identity, can flourish given the right support. We must provide opportunities for those who have been described as 'left behind', ensuring that they also start to see rising living standards and learn how to engage with and benefit from wider technological progress. ●

Driving off into the future

Sam Hall on Britain's love affair with the car and the technological changes to come



SAM HALL is a senior researcher at Bright Blue

Britain is a nation of car lovers. There are over 30 million cars on our roads, which together drive over 250 billion miles a year. They are a staple of everyday life, particularly for those living outside central London: taking us to work, carrying our shopping home, and transporting us to socialise with friends. Three profound technological shifts are about to hit the automotive world: automation, electrification, and digitalisation. But will these be changes for the better? And if so, how can government support and accelerate them?

First, automation. Driverless cars are just around the corner, bringing with them a host of benefits. Removing the need to concentrate on the road, motorists will be freed up to spend time on more productive activities. Groups such as the elderly and disabled, now unable to drive, will gain the independence that comes from access to a car. But most importantly, as automatic driving systems are programmed strictly to follow the Highway Code, there will be a fall in the 25,000 people killed or seriously injured each year on Britain's roads.

The Government is ambitious about establishing the UK as a leader in this area. The soon-to-be-introduced Vehicle Technology and



Aviation Bill will expand standard motor insurance to cover times when driverless technology, rather than an individual, is in control of the vehicle. Car companies are already trialling driverless cars on our roads. To unlock the real benefit of reduced congestion, however, requires between a half and three quarters of the vehicle fleet to be driverless, according to government research.

Groups such as the elderly and disabled, now unable to drive, will gain the independence that comes from access to a car

Second, electrification. The internal combustion engine, which burns petrol or diesel, is on the way out, and looks set to be replaced by an electric battery. The benefits of electric vehicles are currently predominantly environmental. By swapping diesel

for electric, urban air pollution which is linked to over 40,000 premature deaths each year in the UK, will fall. So too will carbon emissions, which have recently been increasing across the transport sector as higher demand has offset efficiency gains.

In the future, however, electrification will deliver economic boons too, as the cost of batteries falls and electricity prices undercut oil.

Sensing the opportunity to achieve multiple policy objectives in one, Ministers have been vocal champions for electric vehicles, featuring them heavily in the Government's new modern industrial strategy launched earlier this year. The Government offers drivers up to £4,500 off the upfront cost of a new electric vehicle, and has released funds for new charging infrastructure. In the forthcoming Vehicle Technology and Aviation Bill, it will attempt to regulate this new market, for

>> instance by making it easy for drivers to use multiple companies' infrastructure without many different expensive memberships. But electric vehicles will struggle to penetrate the mass market until the number of charge points is radically increased from its current 12,000.

Third, digitalisation. Data is transforming how consumers engage with their car. Current vehicle owners can plan and navigate their journeys more efficiently with services like Google Maps, as well as generate an income from their vehicle by using digital platforms like Uber. In cities, it makes increasingly good

financial sense not to own your own car, with digital services like Zipcar giving residents access to cars without investing their own capital. Digitalisation, therefore, could drive cars off urban roads. Over time, land currently given over to roads and car parks could be repurposed to expand the number and size of green spaces.

Individually, each one of these three forces is a big change. But together, they are a revolution. We have not arrived in the future yet. Electric cars, for example, have just over 1% of the new vehicle market. Nor have all the policy questions been settled; particularly in digital

transport services, the debate about how to regulate self-employment is still raging. But the prize is great.

In cities, it makes increasingly good financial sense not to own your own car

As well as industrial opportunities for manufacturers and potential productivity gains for the wider economy, these new transport technologies promise an improved quality of life. On radically new terms, Britain's love affair with the car looks set to continue. ●

Bright Blue research update

James Dobson updates us on Bright Blue's research programme



JAMES DOBSON is a researcher at Bright Blue

At the end of last month the Prime Minister triggered Article 50 of the Treaty on European Union (EU) to notify the EU of Britain's intention to leave. The notification was quickly followed by the White Paper for the Great Repeal Bill, which sets out how the Government will ensure a functioning statute book after the UK leaves the EU. Brexit will undoubtedly dominate the headlines over the next two years as the Government seeks to negotiate a good deal for the UK.

What should the Brexit deal look like? Bright Blue is and will be at the heart of this debate. We

were co-producers and authors of a new cross-party *Brexit Together* manifesto, outlining a compromise deal that would satisfy both Leavers and Remainers.

Our recently published report, *Green conservatives? Understanding what conservatives think about the environment*, stated that we should have a 'Green Brexit'. Indeed, an overwhelming majority of Conservative voters want to maintain or strengthen all of the main current environmental regulations that derive from the EU.

Brexit presents both opportunities and challenges. The end of the Common Agricultural Policy (CAP) will save the UK exchequer billions of pounds. With this in

mind, we have recently launched a new high-profile campaign calling for the the Government to at least maintain current levels of grants for tree-planting.

A month before, we launched a new petition - with the support of a variety of civic society organisations - urging the Prime Minister to commit the UK to remaining a signatory to the European Convention on Human Rights (ECHR) after Brexit. The Government seems to be listening, reaffirming the UK's ongoing commitment to the ECHR in the White Paper for the Great Repeal Bill. But we know the Prime Minister is sceptical of the ECHR and that it is important to show her the importance and popularity

>> of the UK remaining a signatory.

This petition is just one of over 60 policies that we will be advocating in the final report we will soon be launching from our year-long inquiry on *Conservatism and human rights*, which is headed by a high-profile commission including three former Cabinet Ministers. This final report includes policies designed to: reduce all forms of discrimination in education, employment and society; protect human rights in the UK; and champion human rights in British foreign policy.

This report from our commission will be quickly followed by a new polling report which unearths in greater detail how different Conservative voters think about human rights. Our *Conservatism and human rights* project also includes a

third major output: a new paper by a former senior judge on the history and future of human rights in the UK, with suggestions for the Government on the future of the Human Rights Act and the British Bill of Rights.

One of Bright Blue's major research themes is 'Social reform'. Indeed, our upcoming annual conference will provide a platform for people from different professional and social backgrounds to come together to discuss new ways of tackling stubborn social problems, from the housing crisis to global poverty. In the summer, we will also be publishing a new paper from an independent expert on the future of civic society, otherwise referred to as 'the big society', or even now 'the shared society'!

Our energy and environment

team will for the rest of the year be developing ideas for a cross-departmental approach to promoting conservation, both domestically and across the world. And, in our immigration and integration theme, we have just started a project seeking to understand more fully the effects immigration has on social integration. For this project, we will analyse levels of neighbourhood trust in local authorities in the UK and assess the impact of different socio-demographic factors, including levels of immigration, on it.

There are smaller projects on the future of citizenship and pensions to look out for too. As you can see, Bright Blue has a relevant and growing programme of research to inform public debate and influence government thinking. ●

Green conservatives? Understanding what conservatives think about the environment

Sam Hall

Preserving and enhancing the environment for future generations to enjoy should be at the heart of conservative thinking. But a small number of high-profile conservatives are sceptical of environmental policies, particularly those that mitigate climate change. This polling report unearths what most Conservative voters think about protecting the natural environment and reducing the harmful effects of climate change. It examines the views of Conservatives, including those with different socio-demographic characteristics, on key environmental issues such as air pollution, home energy improvements, Britain's power sector, and the future of environmental regulations post-Brexit.

LATEST REPORT



We're all Brexiteers now

People are putting the referendum behind them in a quest to secure the best Brexit, says **Matthew Elliott**



MATTHEW ELLIOTT *was*
CEO of Vote Leave and
is now a Senior Fellow at
the Legatum Institute

Despite the recent fightback from recalcitrant Remainers, led by former Prime Ministers Blair and Major, it is well worth remembering the majority of Brits have been keen to put disagreements over the referendum behind them. Far from trying to re-fight the battles of 2016 and perpetuate Leave-Remain divisions, most voters are now keen to embrace Britain's post-Brexit future, regardless of which way they voted. Indeed, a recent ICM poll showed that 68% of people now agreed that the Government should simply get on with delivering the result.

Among them have been many MPs who were wholehearted supporters of Remain during the referendum campaign, but have now embraced the referendum result - the largest number of votes for anyone or anything in British electoral history - and are determined to push for the best possible future for Britain outside the EU.

Grant Shapps MP is now backing Brexit "all the way, as hard as you like". Nick Boles MP has called for Britain to leave "without recriminations or regret, and challenge ourselves to develop a twenty-first century model of openness and dynamism that will be a lesson to

the world". And it is easy to forget that Theresa May MP, the Prime Minister who has pledged to lead us towards a new 'Global Britain', was indeed a Remain supporter herself during the referendum.

Countless business leaders who backed Remain, both from British and international firms, have hailed Brexit for the huge opportunities it brings, while trade experts, such as my colleague Shanker Singham, heading up the Special Trade Commission at the Legatum Institute, have got fully behind the result and are applying their considerable knowledge and experience towards shaping the optimal Brexit which allows Britain to flourish.

Far from trying to re-fight the battles of 2016 and perpetuate Leave-Remain divisions, most voters are now keen to embrace Britain's post-Brexit future, regardless of which way they voted

There is no doubt that many Remainers still feel uncomfortable about one major aspect of Brexit - immigration - in no small part due to the often inflammatory rhetoric of Nigel Farage and his allies. Anti-immigration quotes from Farage and others are still paraded by some Remainers as representative of the attitudes of everyone on the Leave side, perpetuating the myth that the

Leave vote was a vote to pull up the drawbridge on 'fortress Britain'.

This inward-looking, isolationist caricature of Brexit is not what I or my colleagues at Vote Leave campaigned for, nor do I believe is it what the country voted for. Throughout the referendum campaign, Vote Leave emphasised that it was not about stopping migration, but controlling it, and we highlighted the many benefits that migration, when managed in a properly balanced way, has and will continue to bring to the UK.

Far from pulling up the drawbridge, we argued that Brexit would give us the opportunity to end the current system which discriminates against talented people who want to come to this country but are not allowed in, simply because they happen to be born outside the EU.

It is manifestly unfair that unlimited numbers of people are allowed to come to the UK from anywhere within the European Union, whilst the best and brightest from elsewhere cannot. Brexit gives us the opportunity to end this discriminatory approach to immigration and implement an immigration policy that selects people based on the skills they have, rather than where they were born.

Whilst the main 'Project Fear' predictions of the Remain campaign have been completely blown apart by

>> the flourishing of the British economy since Brexit, it has left an unwelcome legacy, with many of those who supported Remain still fearing the worst as a result of the bombardment of overblown negative predictions throughout the referendum campaign.

It is no surprise that the relentless stream of dire economic warnings and claims that we would no longer be able to live, study and travel in Europe, accompanied by the incessant refrain that Brexit would mean “leaving Europe”, as opposed to simply leaving an unwieldy political project, has left many people in

Britain fearful that Brexit will see Britain cut off from the EU. But as time passes, it will become clear that we have nothing to fear in that regard.

The PM set out a bold and internationalist vision of Brexit in her Lancaster House speech, and made it clear that we will be continuing to cooperate as closely as possible with the EU on everything from economics and trade to security, research and higher education. Indeed, the EU’s Erasmus+ university exchange scheme already includes many non-EU countries as full members, and it would be extremely unlikely that the UK will not continue to be a

part of it, not least because the vast majority of the top universities in Europe are actually in the UK.

The consensus around making a success of Brexit is growing ever stronger as people increasingly put the divisions of the referendum campaign behind them. With the doom and pessimism of Project Fear being proven wrong on an almost daily basis, there is every reason to believe that Britain will emerge stronger, more internationalist and more united after Brexit. And the day will come when everyone will be able to say, “We’re all Brexiteers now”. ●

Ensuring creativity reigns

Vicky Ford MEP on the future of the Digital Single Market and how Britain must reinforce the message that it is open for business



VICKY FORD MEP is
*the Chairman of
the Committee on
Internal Market and
Consumer Protection*

Whilst much of the analysis on the impact of Brexit has focused on sector specific issues, I believe it is also important to look across multiple sectors to develop a holistic strategy and to avoid accusations of ‘cherry picking’ in negotiations.

The digital and creative sectors are amongst the fastest growing parts of the UK economy. At present, creative industries make up 5% of UK’s output and digital companies another 7%. Both sectors are significant

employers and ooze innovation and entrepreneurship. They are inextricably linked, as each is crucial to the other’s success. For example, vibrant e-commerce gives designers direct access to consumers, and digital platforms are now the norm for the delivery of music, film and video.

The UK was the driving force behind the Digital Single Market initiative, with good reason, as removing barriers to trade gives access to Europe’s 500 million consumers and thus encourages global players to base themselves in Europe. As such, the UK expected to benefit significantly. Furthermore, issues like safeguarding intellectual property, protecting children online

and combatting cyber security all require a cross-border approach.

After the UK leaves, the remaining EU countries will continue to develop the Digital Single Market. What it may look like, and what relationship the UK retains will continue to affect British creative and digital sectors.

These industries punch above their weight in their contribution to trade as digitally intensive companies already make up nearly a quarter of British exports. Whilst there will be potential opportunities from new trade agreements, it is important to recognise and that 40% of our creative exports 50% of our digital exports currently go to EU markets. For many businesses, access to the

>> Digital Single Market was a key factor in locating operations in Britain. If this is constrained key players may choose to reduce or relocate their European presence, therefore maintaining strong digital trade is of strategic importance for both Europe and Britain. Relying on World Trade Organisation rules is not an attractive solution as it does not offer protection against discrimination for cross-border service providers. Moreover, no existing EU Free Trade Agreement provides anything like the level of mutual market access currently experienced by the UK, therefore a specific and bespoke arrangement is required.

Both the digital and creative sectors point to the need for legal certainty and the desire to avoid regulatory divergence in the future. EU business laws will continue to impact UK businesses trading within the EU on issues like copyright, Audiovisual Media Services and consumer rights. Existing legislation in all of these areas is currently being updated for a digital age and British Conservative MEPs continue to be active in the scrutiny process.

Once we leave, the EU regulatory framework will not stop evolving so if new non-tariff barriers are to be avoided then a new cooperation mechanism will be needed.

Regulatory detail matters. When the 28 European finance ministers decided to change the rules for VAT on digital sales, it was small British creative businesses who suffered most as our micro-businesses had embraced the opportunities to sell online across borders. If a new relationship with the EU Customs Union means



additional bureaucracy, such as extra checks on sending small packages across borders, this could have a huge impact on creative sub-sectors.

Skills and talent are also fundamental to maintaining world leading status. Ensuring that strong home grown talent can easily be combined with international skillsets and exchanges of cultural experiences are straightforward and frictionless is essential for both sectors. Reassuring EU citizens of their status is important and if the UK chooses to introduce a visa-based system, this needs to reflect the sectors' needs and not just be based on earnings.

A clear and robust legal process for data sharing is crucial for digital communications. Over 10% of all global cross-border data flows pass through Britain, and three quarters of these also involve other EU countries.

The recent negotiations on the EU's General Data Protection Regulation (GDPR) set a complex balance between protecting personal data privacy whilst facilitating intelligence services, business and research needs. The UK Government's recent

signal that it intends to implement GDPR has given some welcome certainty. UK legislators will need to remain vigilant to reduce the risk of divergence in the future.

Other issues such as EU Patents, trade and Conformité Européen (CE) marks, and continued access to cross-border capital resources, all require careful consideration and a smooth transition.

Relying on World Trade Organisation rules is not an attractive solution as it does not offer protection against discrimination for cross-border service provider.

There are signs that the Single Market, without the UK, risks being more protectionist and less open than it has been to date. This would not necessarily be in Britain's interest as digital innovators may choose to re-prioritise other parts of the globe. It is important the UK Government continues to reinforce the message that Britain remains welcoming and open, and continues to cooperate closely with our EU neighbours as well as other jurisdictions. ●

The Brexit wake-up call

Christophe Premat wants the Government to guarantee the rights of Europeans living in the UK immediately



CHRISTOPHE PREMAT
Premat is the French MP representing French nationals living in Northern Europe

A lot of people woke up on the 24 June, 2016 struggling to believe that Britain had chosen to leave the European Union. They were struggling because, heading into the vote count, the polls tended to show a slight Remain advantage in what had been a very tight race.

It was not just the polls but also the gambling world and the financial markets that seemed to be caught by surprise. It quickly transpired too that even the very people that had called the referendum had not expected a victory for the Leave camp and had made no preparations to see the country through the turbulences created by the vote.

Only a positive, courageous and more robust Remain campaign could have savaged a long and enduring British tradition of fabricating facts about Europe

The truth though, is that you only needed to leave London to realise a Leave result was likely. I am a French MP representing French people living in the UK, Ireland, Sweden, Norway, Finland, Denmark, Iceland,

Estonia, Latvia and Lithuania.

Travelling around the UK to meet my constituents, I realised early on that Brexit was a real possibility, no matter how disconcerting and unpleasant that thought was. Only a positive, courageous and more robust Remain campaign could have savaged a long and enduring British tradition of fabricating facts about Europe.

The truth though is that you only needed to leave London to realise a Leave result was likely

What was a surprise for some was, however, devastation for others. The EU is about human beings and their rights, notably the right to live, work and retire in another country. Yet three million Europeans living in the UK and 1.2 million British citizens living on the continent, most of them unable to vote on the 23 June, 2016, have been left in limbo by a decision taken by others.

After the vote, the French National Assembly decided on 20 July, 2016 to create a Select Committee working on the consequences of the Brexit vote. It published its conclusions in February of this year and pointed out the necessity of clarifying the situation of European citizens in the UK once Article 50 is triggered.

I held several surgeries, before

and after the referendum, trying to answer the wide-ranging questions French nationals in the UK had, including on work permits, permanent residency, dual citizenship, retirement rights, university fees, benefits and access to healthcare. There are many questions and all point to the uneasiness at best and fear at worst that the Brexit vote could take away what my constituents had been taking for granted. In many ways, Brexit has cast doubts on the life they have chosen. For a lot of them, Britain has indeed become their home, whether they have been in the country for a few years or for decades. The emotional impact of the vote on many is real and should not be underestimated.

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This feeling of rejection has been made worse, I believe, by the over-complicated process of applying for permanent residence, which places unnecessary administrative burdens on applicants. In a recent letter to the Home Secretary Amber Rudd, I asked that the process is made simpler and fairer. The EU Parliament has also taken up the issue and is setting up a Taskforce to investigate the British Government's treatment of EU nationals living

>> in the UK who have applied for citizenship or permanent residency since the Brexit vote. I will work with this Taskforce because EU nationals that have every right to be in the UK and remain in the country as permanent residents should not be the victims of unnecessary bureaucracy. My strong belief is that it is within the Government's power to simplify the application process and go beyond the mere digitisation of applications by rolling back some of the complexity that has been introduced over the last few years.

EU nationals that have every right to be in the UK and remain in the country as permanent residents should not be the victims of unnecessary bureaucracy

What is equally urgent is for the EU to stand up to the challenge that Brexit represents and implement much-needed reforms, strengthen its common policies and crucially reconnect with EU citizens.

France and other member states made it clear that despite the fact

that the UK had always have a different conception of Europe and had, at times, been seen as being difficult, they would have wished to continue the European project with Britain inside the EU, not outside. But they also made clear that the result of the UK referendum needed to be respected. There is no time to be wasted; it is now more than ever time to revive the European project and build a progressive and social Europe. ●



Can Brexit unite as well as divide?

Sunder Katwala argues Brexit is the most important decision the country has made for half a century and that ‘Remainers’ and ‘Leavers’ need to work together



SUNDER KATWALA is
Director of British Future

Brexit is the most important decision our country has made for half a century. However, our post-referendum politics have yet to rise to the scale of the occasion. We have seen little grace in either victory or defeat. We now move from the phoney war phase – a vacuum often filled by efforts to refight the referendum - to the real politics of the deal that Britain wants with Europe. Most of the public will now want to see the politicians do more to get out of the referendum trenches and work together on a Brexit deal that can bring the country together. That was the aim of the Brexit Together manifesto – which involved voices from Remain and Leave, left and right, a broad coalition involving voices from the Adam Smith Institute and Bright Blue to the Fabian Society, to set out the type of future Brexit vision which could make sense to most Leave and most Remain voters. The EU referendum split the country in many different ways through place, social class, age and education. Despite these splits the result remained unpredictable until polling day. For most, this was a difficult decision, not one of absolutes, but of contrasting doubts and scepticism of both sides of the arguments. The fear, loathing and mutual

incomprehension between the most ardent Remainers and Leavers on social media was very much a minority sport, especially popular with those who rarely talk to anybody who voted the other way. The mood at the school-gate in the final weeks of the campaign was very different: “I am definitely going to look into it more before I make up my mind” was a fairly constant refrain. That helps to explain why Lord Ashcroft’s referendum day poll found that four out of ten voters on each side say they made up their minds in the last four weeks. Rumours of a ‘Brexit realignment’ of British politics look rather exaggerated. The political projects that appeal to only one referendum tribe may hit a ceiling around 15% of the vote each, if UKIP were to be merely a voice of complaint for those who cannot see why we should bother negotiating at all over the Brexit terms, or if the Liberal Democrats become a mirror image for those in university towns who seek to ‘take our country back’ for the metropolitan liberal tribe. But no party that aspires to govern could take that approach. Power will go to those who can bridge the divide, not simply shout from one side of it. Brexit does present political difficulties for the Labour party, given that two thirds of their voters wanted to Remain, while two thirds of the constituencies that their MPs

represent had majorities for Leave. But Her Majesty’s Opposition’s challenges with leadership, economic credibility and party unity existed before Brexit. To argue there is some existential impossibility in combining an appeal to voters on both sides of the referendum is to miss the purpose of what politics is for. The Conservatives are riding high in the polls, but they are not doing so on Leave votes alone. Indeed, the recent ICM poll with the party hitting heady heights of 44% had the Conservatives combining 50% of Leave votes with 41% of Remainers - about four times the share of the Liberal Democrats. If Theresa May did not have any Conservative Remain voters, she would be in a three-way tie in the polls with Jeremy Corbyn and Tim Farron on 25% - rather than dominating the political landscape. The Conservative 2015 vote split 60:40 for Leave. The Prime Minister will want a deal that can keep most of those eight million Leave and five million Remain voters content, while reaching out too. That is what the national interest demands – and it would be a smart party strategy too. A ‘One Nation’ appeal has a particular resonance in a society that is more fragmented and divided than it would want to be. Having established that Brexit means Brexit, the next task is to demonstrate that the next phase can unite rather than divide the country. ●

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BOOKS & ARTS

Exhibiton: Robots

The Science Museum, London



FIONA SMITH is *Events and Administration Officer at Bright Blue*

Having avidly watched the TV series *Humans*, exploring what life would be like with robots by our side and what could happen should they become sentient, I approached the Science Museum's newest exhibition with some excitement. Visitors are greeted by rows of near-skeletal metallic heads, and a writhing robot baby.

But the birth of robotics begins not with androids, but with clocks. Clocks and clockwork previously seemed to propel the heavens above, prompting sage scholars and scientists to ask: were people built from a kind of clockwork too? Religion has often overlapped with science. Indeed, the Catholic Church commissioned early automatons or dioramas depicting Biblical scenes to educate and amaze.

The exhibition displays an intricate animated swan and a tiny robot spider. Descartes, the great thinker, proclaimed that only people have souls – animals are but mere automata.

Several film posters and toys are on display, from Cybermen to the Terminator. The twentieth century brought us the first voice-activated robots and heralded the



dawn of artificial intelligence.

All the individual elements of the classic humanoid robot are displayed. There are intricately detailed 3D printed hands. Bipedal walking was first conquered by Honda's P2 robot and made cute by its successor, SoftBank's Pepper.

Service robots are displayed, highlighting the promise of relief from labour and increase in leisure time. Now with increasing unease, as the future of automation arrives, we all ask about the safety of our own jobs. Artists are surely most secure – yet on display is a trumpet-playing

robot, and even an acting robot.

The actor cheerily calls out to me, "Hello there young man!" – there is still room for improvement, clearly.

The exhibition ends with an unnervingly realistic feminine robot from Japan (where else). Kneeling to take "her" picture, I am uncomfortable. I feel as voyeuristic as a tourist stopping to snap a Geisha. The other service robots deliberately don't look like people.

As I leave I eyeball the shop assistants at the exit- are they real? ●

Robots runs until 3 September 2017 at The Science Museum, London.

All Out War

By Tim Shipman



MICHAEL HOUGH is a
Research Assistant
at Bright Blue

All Out War is a comprehensive, balanced and thorough account of the EU Referendum campaign. Author Tim Shipman leaves no stone unturned in his quest to get to the bottom of the defining political contest of this generation as he talks with leading and influential contributors from both sides of the debate.

The book is scrupulously fair to all leading participants and steers clear of personal attacks

Shipman explores the internal battles within the Conservative Party and the Labour Party and the efforts of Cameron and Corbyn to keep their parties together. There are revelations about the differences of opinion in Cameron's top team over the calling of the referendum, and the subsequent decisions of Michael Gove and Boris Johnson to campaign for Leave. Detailed insight is provided into the tension between the Labour In campaign led by Alan Johnson and Jeremy Corbyn's team, and the seeming reluctance of the Labour leader to play a more active role.

There are forensic detailed records of the extraordinary breakdown in relations between rival Leave

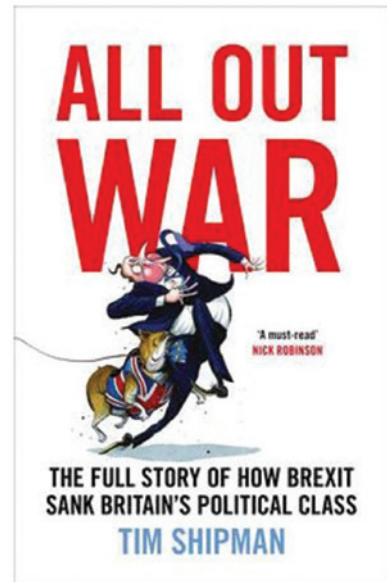
supporters and the battle for the nomination between Vote Leave and Grassroots Out. The controversial Dominic Cummings features prominently, alongside the attempted coup which could have removed him from the Vote Leave team and possibly have changed the referendum result.

The Remain side of the argument is not neglected as Shipman looks rigorously into the decisions made by the Remain campaign. The book shows figures from the Conservative Party, the Labour Party and the Liberal Democrats forming a temporary alliance as they all briefly focused on the referendum campaign.

Background is provided into the Eurosceptic camp and the long-term planning of figures such as Daniel Hannan on how to force and fight a referendum. There is coverage of Douglas Carswell's controversial decision to defect from the Conservatives to UKIP and Steve Baker's guerilla tactics to enforce defeats on the Government in the House of Commons.

The story could not be and is not told without an intrinsic look into the prominent figure of Nigel Farage and his financial backer Arron Banks. Farage's role in the victory of the Out campaign is sure to be debated for many years to come and Shipman sensibly resists making a definitive judgement.

All the dramatic moments from



the campaign are covered, starting with the deal Cameron struck with Europe, the deliberations of Boris Johnson (including the famous writing of two opposing articles for the *Daily Telegraph*) before finally opting to back Vote Leave, the visit of President Obama, the threatening of an emergency budget from George Osborne, Nigel Farage's infamous 'Breaking Point' poster, and of course polling day itself.

For anyone interested in knowing what happened in this campaign both in public and behind the scenes, this book is a must-read

The book culminates by looking at the leadership contests both

>> major parties embarked on after the referendum, beginning with the initial decision of David Cameron to step down leading onto the remarkable decision by Michael Gove to turn on Boris Johnson and put himself forward for leader and the subsequent coronation of Theresa May.

The final chapter is a clear, concise

and well-researched account of the entire campaign; the political ramifications and how things could have ended differently.

The book is scrupulously fair to all leading participants and steers clear of the personal attacks and unsubstantiated opinions which have become too common in the aftermath of the EU referendum.

Shipman has provided a clear, balanced and fascinating account of the EU Referendum Campaign and what came next. For anyone interested in knowing what happened in this campaign both in public and behind the scenes, this book is a must-read. ●

All Out War, Tim Shipman; William Collins; 688pp; £19.99

Cleverlands

By Lucy Crehan



RYAN SHORTHOUSE is the Director of Bright Blue

Cleverlands is a clever book. Author Lucy Crehan, a former teacher, travels to and writes about five different countries – Finland, Japan, Singapore, China and Canada – that consistently top the annual international rankings for PISA tests in reading, maths and science for 15 year olds.

The best countries prioritise teacher training, autonomy and progression

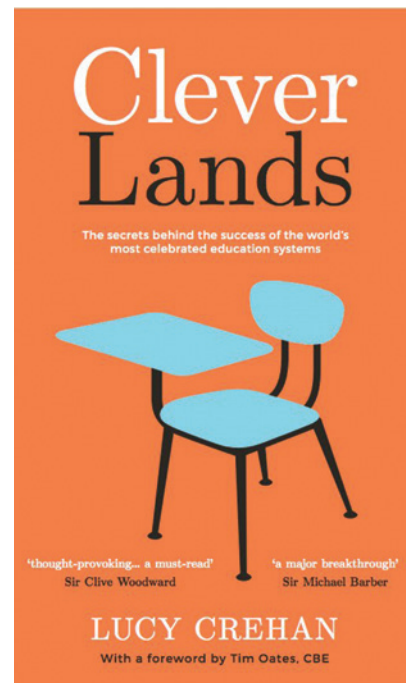
Crehan explains their success by assembling and summarising a wealth of the best academic evidence, interweaving it with stories of her experiences speaking to and working with parents and teachers from these “education superpowers”. She, wisely, develops her own relationships

with people from random, average schools when visiting these countries, rather than trying to arrange visits through formal channels.

Her approach to evidence gathering and reporting is, refreshingly, as carefully constructed as what you’d expect from a high-quality academic paper. In fact, her fieldwork is ethnographic. But her storytelling means it’s a lot less dry.

She spots cross-national trends, which she helpfully sums up in the final chapter. Take note, Theresa: most high-performing education systems do not select children into different schools until they are aged at least 15 or 16.

The best countries prioritise teacher training, autonomy and progression. Indeed, teachers have more time in their working week and year for continuous professional development, thanks sometimes to bigger class sizes. Their curricula focus on fewer topics, giving the time for all



children to master concepts – and the expectation really is that all children will achieve, with personal catch-up tuition rather than separate curricula and indeed classrooms for those who are struggling. A challenging

>> curriculum need not squeeze out the nurturing of character skills or the enjoyment of school life.

Her “geeky gap year” teaches you a lot. For a long time now, I have campaigned for all young children to participate in high-quality pre-school education, since there is robust evidence that it boosts long-term attainment.

Take note, Theresa: most high-performing education systems do not select children into different schools until they are aged at least 15 or 16

Crehan’s policy tourism certainly supports this. But it has made me think again about the starting age of formal schooling, which in these top-performing countries is older: six or indeed seven. The majority of young children are still in pre-school (apart from in Canada) but for longer, learning through play, but they are not expected to be reading or adding up until later.

There’s some really revealing and quite peculiar stuff in this book. In China, there is a policy of *hukou*, which means people can only access public services in their registered hometown. Migrants to Shanghai, who have a secure job, can send their children to primary school in the city. But this is not possible for high school attendance, apart from a few ‘qualified’ migrants or those with good connections. So nearly half of the city’s children – who are poorer and less educated – leave the city at age 13 or 14, excluding them from Shanghai’s PISA tests, which are remarkably good. In



Japan, meanwhile, there is a strong sense of *rentai sekinin*, or collective responsibility. So much that, in junior high schools, teachers do not tell off the naughty children for their misbehaviour, but a chosen child who is class leader, which rotates throughout the year.

One criticism of Crehan’s work is her tendency to try and explain every phenomenon she encounters. Sometimes there simply isn’t any or sufficient research on it: instead of admitting that, she dresses up speculation as rigorous explanation. She can, in some places, try too hard to describe occurrences to fit with overreaching themes and arguments she is pushing.

Crehan can, in a few instances, also fall back on tired assumptions, without questioning them. Such as the societies in the West are more individualistic and less community-orientated than in the East. But, in China, she uncovers *guanxi*: where people use mutually-beneficial

relationships to help them in their personal and business lives, such as asking a friend to help a child get into a good school or university. Whereas in Canada, which Crehan believes is the education system she would most want her child schooled in, the most qualified teachers are Learning Support Teachers, providing extra tuition for those who are struggling or have special educational needs. These are just two examples where the cultural clichés don’t apply.

A challenging curriculum need not squeeze out the nurturing of character skills or the enjoyment of school life

This book deserves to be read by everyone interested in education policy. It is filled with quantitative and qualitative evidence, presented in a rigorous and entertaining way. Top marks for Lucy Crehan. ●

Cleverlands, Lucy Crehan; Unbound; 320pp; £16.99

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Social reform

Bright Blue is generating fresh thinking about the purpose, design and financing of the UK's education and welfare systems to boost life chances and national prosperity. To compete in the global race, Britain needs to significantly improve the skills of its workforce and broaden access to high quality academic and vocational education. As the economy becomes more globalised, competitive and automated, Britain's social security system also needs revamping to improve its effectiveness and popularity.

Green conservatism

Bright Blue is a leading centre-right voice devising and promoting policies that can cost-effectively safeguard the environment at the same as strengthening the economy. We produce rigorous analysis and fresh policy ideas to help the UK solve the 'energy trilemma' of achieving decarbonisation, affordable energy and security of supply. In particular, our work focuses on key policy areas such as air pollution, protecting the natural environment, the post-coal energy mix, energy efficiency, climate finance and investment, and international development.

Human rights

Human rights now have a bad reputation among the public, especially conservatives. But human rights are vital. They protect individual freedom, especially from an overreaching state. Our work explores how human rights can be better understood and enhanced in the UK and abroad, with a particular focus on: the contents of the forthcoming British Bill of Rights; the role of human rights in British foreign policy; and how to tackle racial, gender, sexual, disability and religious discrimination.

Integrated Britain

Immigration, on the whole, has been good for Britain, especially our economy. But it brings pressures, especially to low-skilled workers and certain communities. Our work devises ideas to ensure that the benefits of immigration are maximised and the challenges minimised. One such challenge is the integration of people from different social and economic backgrounds, which yields significant private and public benefits. Reforming institutions to encourage greater social mixing is particularly important for building a more integrated Britain.

