



Exhibitions, events, books and reviews

Throughout 2018 we have attended book launches, exhibitions and conferences, especially those with a futures focus.

A Conference on Anticipation

It was amazing.

Anticipation 2017, a conference on a topic that is not taught at undergraduate level at any university in the UK, held at University College London, with several 100 participants, over three days.

The brief was “a unique, radically interdisciplinary forum for exploring how ideas of the future inform action in the present. It brings together researchers, policy makers, scholars and practitioners to push forward thinking on issues ranging from modelling, temporality and the present to the design, ethics and power of the future”.

Who was there? Computer scientists and physicists, social scientists, town planners and architects, futurists and strategists, educators and risk managers —

The conference was organised into multiple streams with titles such as Foresight and strategic ignorance, Modes of foresight in informing public policy and decision-making, Education and anticipation, Making futures matter: materialising anticipation, Innovations and their consequences – a very broad spectrum of participants and approaches. I dipped in and out of as many as I could and emerged with a few impressions, some of which are below. The proceedings are to be collected on the web site <http://anticipation2017.org/>

First, high energy and enthusiasm from speakers and audiences so that many sessions ran over into heated debate as conversations spanning across disciplines rolled out into the hall ways – and a varied demographic in terms of age, ethnicity and global location of “the day job”.

Second, the crucial importance of STEM (science, technology, engineering and mathematics) education in the western economies since WWII, now in developing countries, and the need for reframing STEM education for the post carbon era. STEM education was seen as needing a new language and purpose – to provide skills in thinking about the future – as we face the anthropocene. Once people are exposed to the ideas of accessing different futures, there is then the difficulty of building images of the future such that individuals can relate to them.

Third – to my shame I had not come across the Centre for the Study of the Sciences and the Humanities at the University of Bergen, <http://www.uib.no/en/svt>. Members of the Centre (from Italy, Canada, Netherlands, and Norway) presented an entire session covering an eclectic range of topics under the heading of “The old is dying and the new cannot be born”, on the future of governance. Contributions covered the ethics of scientific publications, governance issues raised by contention over fishing rights in the Canadian Pacific, how can questions about the sense or otherwise of ongoing expenditure on cancer research be usefully discussed.



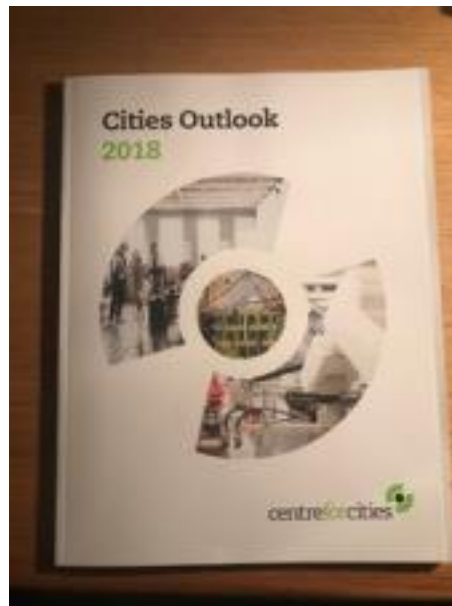
One of the outcomes of the conference was “to convene a group who are interested in teaching Anticipation Studies at undergraduate level. If you would be interested in getting involved in such a group – sharing ideas and curricula, developing joint activities, then please email Lucy or Katherine at this email address (**anticipation-2017@bristol.ac.uk**) with ‘Anticipation UG’ in the subject header so that we can involve you as this develops. Please flag what you might want to get out of and contribute to such a group.”

Written by Gill Ringland, SAMI Fellow Emeritus, [published 17 January 2018](#).



The Future of Work in Cities

On a rather blustery and damp day at the end of January, a large group of people gathered at City Hall for the **Centre for Cities** launch of the 11th edition of **Cities Outlook**, their annual analysis of economic data for the UK's 63 largest towns and cities.



This year's standing room only event – not sure whether it was the lunch provided, the view or the topic which encouraged its popularity – took as its focus The Future of Work in Cities and the impact increasing automation may have.

The session was opened by Chief Executive, Andrew Carter, who gave a short summary of the key points in the report, which is a comprehensive overview of UK cities and one of the first to look at them from an intra-national perspective.

With regard to the rise of automation, it is clear that northern cities will be more affected with 1 in 4 jobs likely to be lost rather than the 1 in 7 loss projected in the south. And even between cities across the UK there is a marked variation, this is something that we as a country need to act on now rather than waiting.

Gemma Tetlow, FT Economic Correspondent, looked at the data from a national perspective, saying that overall 60% of the UK population are positive about automation but are, nonetheless, worried that robots will destroy jobs in the coming years. She voiced concerns about whether policies and funding are really available to support the changing environment and also the impact that the Brexit effect has on the ability of organisations to commit to any one particular strategy.

We then heard from Marvin Rees, Mayor of Bristol, who sees cities having an increasingly important role in opening up of resources with place leadership at a local level growing. He sees the ability to harness the collective possibilities of a national and international network of cities as growing in importance in the coming years and



indicated that he felt the cost of getting this wrong might turn out to be higher than we may expect.

And finally, Naomi Climer, President of the IET, discussed how the potential for inequality is clearly there but we should remain optimistic overall as the possibility of creating meaningful work does exist. Investment in technology also needs investment in skills and there are good examples of organisations doing just this and enhancing the skills of their workforce. This led on the topic of education and how best to teach schoolchildren about automation, programming and coding and whether it is possible to have a root and branch overall review of the educational curriculum rather than constant (and largely ineffective) tweaks.

We then followed up with a lively question and answer session covering a range of topics from Universal Basic Income to the environmental impact of technology. There was, though, considerable focus on education and training and the need for access to lifelong learning along with the previously mentioned curriculum overhaul. In this year of engineering we should indeed spend time and effort on the requirements for STEM skills and encourage their take up at primary school in order to build a skilled and effective population in years to come.

Written by Cathy Dunn, SAMI Principal, [published 7 February 2018](#).



ESPAS Conference 2017

I spent an interesting two days in Brussels at the ESPAS annual conference **‘Global Trends to 2030: The Making of a New Geopolitical Order?’** on 22-23 November 2017. ESPAS is inter-institutional collaboration between the European Commission, the European Parliament, the Council of the EU and the European External Action Service, which aims to monitor global trends and offer strategic foresight to the EU’s decision-makers.

The focus this year was on Europe’s role in a new world order, and the conference’s accompanying publication: **‘Shaping the Future of Geopolitics’** contains a rich collection of over 30 original, forward-looking, anticipatory essays from the speakers. These were from European institutions and also from external perspectives – Russia, Middle East, China, Brazil, USA, Australia, and representing Africa. As last year a star contributor was Aaron Maniam from Singapore. One session was titled “What if winter were coming? Is Europe prepared for the security challenges to come? Which the panellists all answered with “no”.

The second day explored soft and hard power in this context, through the lenses of international regulation, of an economically interdependent world, and the future of warfare.

Cat Tully of SOIF organised an interesting breakfast meeting to discuss the successes and challenges of applying foresight in organisations – I will circulate the results later – and she also chaired a spoof “ESPAS 2035” interview with the Secretary General of the new European Congress formed after BREXIN in 2029.

Additionally, Angela Wilkinson had been commissioned to write a **‘Strategic Foresight Primer’**, an easy-to-use guide on strategic foresight, which was given to all delegates. Videos and photos of the event are available on the ESPAS [website](#) and, if you are on twitter or medium, you can read more about the conference at [#ESPAS17](#) and [medium.com](#).

Written by Gill Ringland, SAMI Fellow Emeritus, [published 21 February 2018](#).

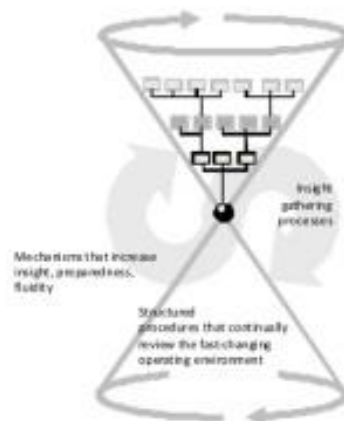


Beyond Crisis

In 2010, three of us – Oliver Sparrow, Patricia Lustig and I – wrote a book called “Beyond Crisis”. It was divided into three parts:

- Explaining why the post World War II world had broken irrevocably, so that after the crisis of 2008 there would be no return to Business As Usual
- The implications for leadership – the new shape of organisations
- Tools that could help manage in this new and uncertain environment.

It argued that products and services are able to be delivered efficiently using widely adopted management tools. But these could then be commoditised and were subject to price collapse. The increasing use of machine and augmented intelligence and robots has only accelerated that trend. To survive, organisations need to be insightful and adaptive. The Beyond Crisis model represents organisations in two parts – one responsible for efficient day to day operation and the other responsible for adaptation. Crucial are the links between the two parts and this is where the book focuses, distinguishing leadership characteristics needed for this organisation.



The book was well received, for instance by the former editor of the Economist and Deputy Governor of the Bank of England, Rupert Pennant-Rea “If you want to know how countries, companies and individuals can master the winds and waves that will dominate the next decade, this is the book for you”.

And it highlighted for us two things

- The difficulty of creating compelling images of the future compared with the relative ease of analysing history – and hence basing decisions on a foresighted view rather than a backward one
- The need to build the implications for leadership and the new shape of organisations into wider management thinking.

To tackle the first, we looked at some of the new science fiction. For instance, three new science fiction novels in 2017 engage with climate change. Kim Stanley Robinson’s **New York 2140** (Orbit) is a multi-layered novel set in a flooded Big Apple.



Paul McAuley's **Austral** (Gollancz) is set in a powerfully realised near-future Antarctica transformed by global warming. Jeff VanderMeer's vivid **Borne** (4th Estate) takes a different, neo-surrealist approach, with a flying bear as big as a cathedral rampaging through wastelands.

So science fiction can create strong images. But it has some hurdles in creating images of the future which help organisations think about their strategy. One is the pace of change, so that fiction is often overtaken by events. The second is – that it is fiction. The third is that there are a number of mega trends affecting the world today, so that in addition to climate change we are facing warfare through social media, the impact of changing demographics on the planning assumptions of many major corporates, the increasing inability of governments to match tax revenues with citizens' expectations. Science fiction finds it difficult to integrate these.

What is needed is a link back to informed thinking, which traces the potential trajectory of the megatrends, explores their potential impact and connections. So this will be the next book that Tricia and I write – watch this space.

The need to build the ideas from Beyond Crisis onto wider management thinking got a major boost by their adoption into a seminal work, **The MultiCapital Scorecard: Rethinking Organizational Performance**, by **Martin P. Thomas** and **Mark W. McElroy**. This book is about building a world where business and society thrive together. It argues that companies need to focus on solving the world's challenges and that using the tools of capitalism and markets are our best bet. The structures in Beyond Crisis provide a model for how such organisations could function. But how will business leaders know whether they have made this big pivot or how far they have to go to get to the hard-to-define sustainable? Business has been missing the right metrics and tools. This new MultiCapital Scorecard fills that critical gap: it is a . robust dashboard managers need to understand how they are really doing on environmental, social, and financial performance.

The common theme is the need for leaders to be able to engage with society in order to be sustainable.

Written by Gill Ringland, SAMI Fellow Emeritus, [published 5 April 2018](#).



London Visions: Exaggerated realities for possible futures – review

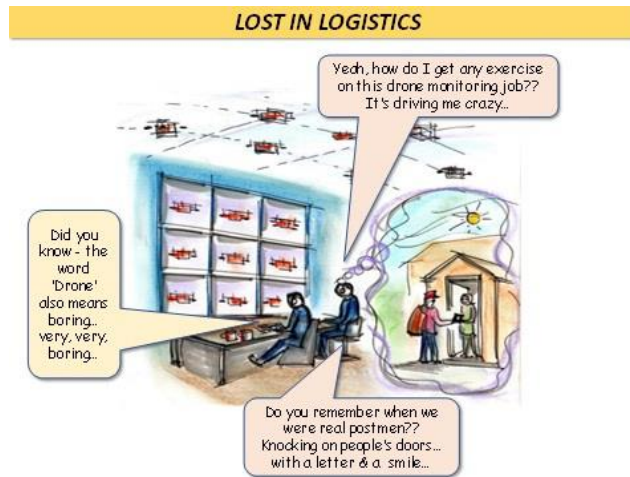
The Museum of London’s “**London Visions: Exaggerated realities for possible futures**” event ended recently. Its deliberately over-the-top visions were intended as scenarios of the future to provoke discussion and stimulate imagination. Although exaggerated, these visions are grounded in today’s realities, rather than being wild fantasies. The curator sought to avoid dystopian or utopian views, instead aiming to identify what adaptations to our way of living each scenario might require. “Flooded London” takes the current trends of climate change and rising sea-levels and envisages much of the current city underwater. But rather than regard this as a disaster, the vision sees it as a tranquil scene to be enjoyed. A man is pictured rowing into St Paul’s cathedral, and treating it as a swimming pool. Personally, I don’t think this vision was worked through enough – the ramifications are massive, even if one does look for the upsides.

“Endless vertical London” considers the forecast of 13 million people in London by 2050 and asks how they might be housed. The response is a skyscraper that can be extended upwards without limit because of its spiral construction, and house the whole population of the city. It would contain its own ecosystems to support the occupants. This contrasts with another vision called “Megalomania” (though it’s not clear to me why) which sees the city endlessly being re-developed, buildings being replaced before they’re completed, the city as a never-ending building site – as I looked around the City afterwards, it seemed that was a very plausible scenario! Another high density scenario imagined widespread use of autonomous vehicles, which led to reduced need for roads, and the creation of more green spaces.

Another scenario looked at how the development of AI and robotics might play out. It described a fictional company called Farsight which created work environments that were fun – called “playwork”. These places would be so much fun that the issue of work/life balance doesn’t arise, it was all “funemployment”. Interestingly, it acknowledges this might not suit the shy, anti-social or recently bereaved. A separate part of the exhibition featured the results of a hyper-local social radio project in one tower block in Finsbury Park. This enabled people to share their views on their locality and their wishes for the future of the city.

Overall, I’m afraid I don’t think the exhibition achieved what it might have done. The exhibits were all well produced and attractively presented, but I found little emotional resonance; I didn’t get a real feeling of what it would be like living in that world. The concept of taking a known trend and exaggerating it sounded exciting, but the visions produced weren’t worked through enough – what would my home look like, how would I travel, what would work be?

When SAMI produces scenarios for clients, we put particular emphasis on how people would behave. Illustrating the scenario with news headlines is another way of capturing the feel of a new world. We often produce “a day in the life of...” word-pictures, or actual cartoons to capture the challenges and novelty of different potential worlds. It is essential that the scenario, no matter how different or challenging, continues to feel like a real world, with all its complications and difficulties.



We run training courses on scenario building – if you are interested please contact training@samiconsulting.co.uk

Written by Huw Williams, SAMI Principal, [published 25 April 2018](#).



The Future of International Institutions

The World Academy of Arts & Sciences is organising a Colloquium with organisations including the World University Consortium, and a number of academic institutions, in Paris in early May. The topic is “The Role and Impact of International Institutions on Economic Theory and Policy”. I am kicking it off with a talk on “The near future to 2030 and its potential impact on the role and impact of International Institutions on Economic Theory and Policy”. The abstract of the talk is as follows:

“Post World War II, UN-connected international institutions have been highly influential in developing economic theory and policy. In this paper we examine the global megatrends which are shaping the world in new directions and explore some of the implications for international institutions and economic policy.

We use the expression ‘megatrend’ to describe grand directions of travel in economic, social, political, technological or environmental spheres. Whilst the study of megatrends is a subset of foresight and scenario planning, the megatrends themselves inform national and company-sized foresight work. We have developed the ideas outlined in this paper in part through extensive work with global organisations – they will be developed in more detail in *Getting to 2032: Megatrends creating A Different World* (Lustig, P and Ringland, G, Cambridge Scholarly Publishing, autumn 2018).

The world seems really chaotic at the moment. As we write, headlines overturn many of our assumptions almost daily. How can thinking about megatrends help?

First, trends are not forecasts – they suggest directions of travel.



What they do is to provide a framework. Sometimes it is hard to spot major changes as they unfold around us because they do not make headlines. However, these trends are happening now and have effects both now and in the longer term.

Megatrends have far-reaching implications for economic policy. For instance, digital technologies: the paper will build on discussions within the European Commission’s Research, Innovation and Science Policy Experts Group. Their recent report argued that the advent of digital technologies is making science and innovation more open,



collaborative and global, with clear implications for economic policy. Other megatrends – such as demographics, migration and inequality – also have clear implications for economic policy. Many of the trends constrain nation states and governments financially. And of course, the trend away from the Washington consensus towards a multi-polar world is central to considering the future of international institutions.

The overall net effect by 2032 is likely to be the reduced funding of international institutions, due to a multi-polar international environment and the decreased ability of nation states to contribute – as they wrestle with shrinking revenues and unmet demands from their populations. We conclude by asking how this will affect economic policies by 2032.”

The colloquium promises to be a fascinating three days, with contributions from across the globe and based on analysis of a range of international and transnational organisations.

I will blog again after the colloquium.

Written by Gill Ringland, SAMI Fellow Emeritus, [published 2 May 2018](#).



“The Future Starts Here” at the V&A



© Victoria and Albert Museum, London

The V&A have put together a very interesting exhibition **“The Future Starts Here”** with some 100 objects selected to illustrate current trends and future possibilities. The exhibition, on until 4th November, is organised in five sections: Self, Public, Planet, Afterlife and “The Future is...”.

The **Self** section explored what it means to be human and how connectedness does not necessarily mean an end to loneliness. This first looked at the application of AI in the home – a robot laundry, called BRETT (**Berkeley Robot for the Elimination of Tedious Tasks**) – and moved on to cover Roman wearable technology (a ring with a door-key attached). The extent to which biotech can actually change the human form – and has already begun to do so – blurs what is human and what is technological. Other difficult issues around criminal profiling (remember phrenology anyone?) and staff monitoring were also raised.

In **Public**, issues around democracy, cities and the use of data were explored. Is direct democracy the next stage – as evidenced by an Estonian e-citizen card and flashmob demonstrations? If refugees can compete under a neutral flag at the Rio Olympics, what does that mean for nation states? Inevitably, there was a driverless car (the whole event is sponsored by VW), and zero-carbon, zero-waste cities (Masdar, Abu Dhabi). An example of crowd-funded infrastructure (a footbridge) asks the question of whether this a better way to pay for services than taxation. We were also invited to consider what it would be like to work for an algorithm – as UberEats drivers do. The third section, **Planet**, dealt with how we manage ours and whether we reach out to others, specifically Mars. After noting that we were now in the Anthropocene, a geological era shaped by mankind, there was a proposal to green the deserts with deep-rooted grasses – have we not seen the unintended consequences of eco-engineering before, in Australia for example? 3D printing in space as a way of managing inter-planetary missions seemed a more reasonable proposition. If Mars is the answer, what was the question?

Afterlife dealt with the prospect of living forever – who would want to do that? Cryonics potentially creates the potential for freezing bodies – or just brains – until health technology can cure their illnesses. Will we upload our experiences and knowledge to the web, and become virtual beings? The **Svalbard Global Seed Vault** providing the capability to recover plant life is one thing as is, similarly, the **Millennium Seed Bank**



at Kew, which SAMI Fellow John Reynolds helped set up. But the **Long Now** library, which aims to compile all the books needed to re-boot humanity in the event of a cataclysm, is surely something of a Desert Island Discs exercise, as everyone would have their own selection – Terry Pratchett anyone?.

Finally, visitors were invited to complete the sentence, **“The Future is...”**. Suggestions included “The future is vegan”, “the future is female”, “the future is slavery to AI”.

Overall, the exhibition was perhaps overly technologically optimistic: new inventions will together make our lives wonderful. There was little consideration of the fact that technology is largely value-neutral. It can be used for good or ill – human nature includes greed and the lust for power as much as goodwill and the desire for a better society.

How would you complete “The Future is...”??

The V&A is also hosting a day-long event, **“Toolkit for the Future”**, on 29th June. “Thinkers and makers question dominant futures and imagine alternative worlds, sharing perspectives on technology, politics, and speculative design”.

Written by Huw Williams, SAMI Principal, [published 20 June 2018](#).



The Future of International Institutions



The World Academy of Arts & Sciences organised a Colloquium with organisations including the World University Consortium, and a number of academic institutions, in Paris in early May. The topic was “The Role and Impact of International Institutions on Economic Theory and Policy”. I kicked it off with a talk on “The near future to 2030 and its potential impact on the role and impact of International Institutions on Economic Theory and Policy”. The message of this was that many international organisations are outcomes of post World War II thinking and spin out of the UN in some way. The UN is likely to become less effective over the next decade as the US pulls back financial and moral support. Other sorts of international institutions – connected to specific topics such as security, access to Arctic resources, etc – will become more effective.

The link to the web site is <http://worldacademy.org/newsletter/july-2018#n2>.

Some personal reflections:

- A number of presentations focused on the shortcomings of UN agencies and organisations, with boundaries or terms of reference less relevant than when they were set up. One example was the Food and Agriculture Organization, a specialized agency of the United Nations that leads international efforts to defeat hunger. The current status is that obesity rather than food shortages are the key concern in the future; and that while the world can provide enough food for the growth in population, there will continue to be losses and inefficiencies in distribution.
- The need for a new economic theory was a major discussion theme – this is an ongoing open project for WAAS – <http://neweconomictheory.org/>– and starts from the position that the world confronts a paradox: Unparalleled global production capacity exists side by side with high and rising levels of unemployment, inequality, financial instability, social unrest and ecological degradation. Efforts to reform current economic policy and institutions are invariably opposed by both an intellectual orthodoxy and vested economic interests, drawing on the conventional wisdom of prevailing economic theory to support prevailing policies. The multidimensional challenges confronting



humanity today are human-made and can be changed by a change in thought and action. Theoretical limitations and misconceptions are a primary root cause of persistent poverty, rapid and rising levels of unemployment, inequality, and calamitous environmental threats. A fundamental change in thinking is needed to support a radical change in policies.

- One question which also recurred is the “best” way to organize for the benefit of society. While capitalism has many clear and manifest problems, a presentation from two Russian academics had a cutting analysis of characteristics of decision making and implementation by bureaucrats, raising the question in my mind – should we be talking about trying to improve systems without approaching the topic of the people involved and human motivation.

And Paris in the spring is magical!

Written by Gill Ringland, SAMI Fellow Emeritus, [published 25 July 2018](#).



New Scientist Live 2018 – a review

The “New Scientist Live Festival of Ideas and Discovery” took place at ExCel London from 20th-23rd September, the third in a series of annual events started in 2016. I attended on the Saturday.



The show was once again divided into five zones: engineering, technology, humans, earth and cosmos, but better laid out than for the first show two years ago. The stage areas had been given more space allowing more people to attend the speakers’ lectures. While the major exhibitors included big players such as BAE Systems, the European Space Agency and Shell as you would expect, it seemed to me that there had also been an increase in the number of stands aimed at families and trying to attract children to science.

Thus, “Mad Science” set out to inspire primary school aged children on a scale that made a difference. Currently, 30,000 children take part in a Mad Science After School Club. The “Little School of Science,” running holiday camps and science clubs, was a place to learn, experiment, explore and play for 3-13year olds. With a wider appeal, “Maths in the Real World” was a combination of seven different mathematical organisations joining forces to promote the importance and use of maths in everyday life.

Elsewhere, a light bulb moment occurred while I was talking to a representative of the Association for Nutrition. The UK Foresight Report on Reducing Obesity from 2007 is perhaps one of the most well-known and well-regarded reports that the unit has produced, but I hadn’t realised that anyone can call themselves a nutritionist, and today “expert advice” on social media drowns out the professional voice encouraging a healthy diet. The British Dietetic Association faced a similar uphill struggle. Pause for thought. At least they were there, as was Wateraid with some simple straightforward material on how to get clean water and decent sanitation to those who don’t have them through appropriate low-cost, long-term solutions.

Finally, with regard to the problem that affects us all directly – climate change, Copernicus¹, Europe’s flagship Earth Observation Programme, gave a most impressive demonstration of its databases that deliver freely accessible information on environmental issues. The climate change service provides quality assured information about the past, present and future climate worldwide, and can be searched with great specificity.

This gives a flavour of what was a much bigger exhibition. But to the speakers of the day. I settled down to hear four who were working at the frontiers of their fields.



Mathematical physicist Ivette Fuentes' presentation was entitled, "How to build a quantum teleporter." I must admit that I struggled to follow all the quantum mechanics(!), but the nub of what I understood her to say was this. At very small scale an electron can be in two places at once. It also has something called a spin property, explained as being either up or down. However, in this quantum entanglement, it is in a maximally correlated state or non-separable: in other words, the "state" of the electron in one place must be the same as its state in the other. Thus, if you can encode information in the electron particle in one place, it must appear in the other. If this all sounds rather weird, perhaps the more understandable and better-known point is that at the very small (and very large) scale quantum mechanics applies, but classical physics does not work. The current problem is to work out how to link the two together. However, Ms. Fuentes stressed that the era of quantum mechanics was coming, and that the UK was in the forefront of initiatives on quantum technologies.

Astrophysicist Chamkaur Ghag addressed a parallel problem: "The Hunt for Dark Matter". 85% of the universe was missing. Yet "Dark Matter" had existed since the beginning of time, and was the mysterious glue holding galaxies together. Addressing the key question of whether it mattered, he pointed out that in the absence of understanding it, how could we know what is going to happen next. How would it affect what we thought had happened in the past? To gain this understanding, we needed to go beyond standard model physics. He posited the question: "Where is the doorway?" Complex experiments had yielded no answers yet.

However, the talk of the day came from Daniel Davis on the latest developments in immunology. The basic principle of vaccination is the idea that an infection is dealt with more efficiently if the immune system has encountered the same virus or bacteria previously. By using harmless versions, vaccines work by provoking the immune system to build up defences against them. (Upon this basis I was vaccinated as a child against diphtheria, polio and tuberculosis etc.) Yet this is only adaptive immunity. It wasn't until 1989 that Charles Janeway of Yale University postulated that the immune system must contain receptors that interlock specifically with germs or infected cells. In other words, there is a part of the system that may be called innate immunity.

Since then:

"... the world of immunity has opened up to reveal ... not a simple circuit involving a few types of immune cells, but a multi-layered, dynamic lattice of interlocking sub-systems, one of the most complex and important frontiers of scientific enquiry that we know of."²

Professor Davis pronounced that this enhanced understanding of how the immune system worked had brought us to the cusp of a new world, and a revolution in how we deal with health matters.

The day ended with a keynote lecture from Carlo Rovelli on the nature of time. The context he outlined at the start of his talk – that time is not the timeline we think it is, that time is different in different places because of mass and so forth – will be familiar to readers here. I won't attempt to denote the abstruse ideas he developed in his lecture (his new book³ covers this subject) except to say that after listening to him for an hour it was easy to understand how he has become such a famous populariser given the calm charisma he brings to his delivery.

What must be mentioned was how the session ended. When the chair announced that there would be ten minutes for questions, my heart sank. (In my experience this usually means that some eccentric will drone on unstopably about their particular high horse for nine of them without asking anything.) On this occasion, however, five pertinent questions were put and answered directly and compactly. The last of them, to do with free will, elicited the following approximate quote from Spinoza off the top of Professor



Rovelli's head: "Free will is a fact which happens in our brain: we can't predict things about the world, or our internal state."

Those of us who apply ourselves in trying to make sense of our possible futures spend a good deal of time looking out into the various aspects of our social, cultural, economic, political and physical environment and beyond. My day at New Scientist Live was a reminder to give due weight to the world underneath and alongside the tiniest atom of matter and the world inside the bodies within which we are confined.

What we don't know about what we don't know may be more than we think.

References

1. The Copernicus ECMWF (European Centre for Medium-Range Weather Forecasts) websites demonstrated at the exhibition were:
 - a. atmosphere.copernicus.eu
 - b. climate.copernicus.eu
2. DAVIS, Daniel M, "The Beautiful Cure", The Bodley Head, 2018.
3. ROVELLI, Carlo, "The Order of Time", Allen Lane 2018.

Written by Tony Diggle, SAMI Associate, [published 21 November 2018](#).



What's Eating Europe?

This blog summarises the big issues that dominated #ESPAS18, the Conference of the European Strategy & Policy Analysis System, held in Brussels on 28/29 November.

The Rise of Populism

The rise of populist parties and politics within Europe and beyond is worrying the EU and its institutions. Within Europe, the Governments of several Central European member states, Italy, and the rise of populist opposition in other states – not to mention the vote for Brexit in the UK and the *gilets jaunes* demonstrations in France – marks a challenging departure from the centrist liberal democratic values that underpin the EU. The 2019 European Parliament Elections will be interesting. What if the populists win (unlikely but not impossible) or hold a large chunk of seats in the new Parliament (entirely possible)?

Beyond Europe's borders, the election of President Trump, as well as other populists in Turkey, Brazil, the Philippines and elsewhere strengthens the feeling that existing multilateral institutions are under threat.

ESPAS heard evidence from **Daniel Drezner**, Prof of International Politics, Fletcher School of Law & Diplomacy, that populism in the US may be nearing its limits, and that it may be spawning a counter-reaction. This was a welcome message to many at the Conference. On the other hand, other speakers warned that things would get much more challenging.

Will Populism produce its own antibodies, or will the 4th IR fuel the continuing move away from multilateralism and the liberal consensus?

The 4th Industrial Revolution and the Rise of the Global Corporations

Frans Timmermans, First Vice-President of the European Commission observed that the 4th Industrial Revolution means different things to different blocs:

- For China it's about extending state control
- For the US it's about the growth and exercise of big US corporate power in the world
- For Europe it's about morality and democracy: if democracy can't control the 4th IR, people will look elsewhere for answers

It seems likely that whatever meaning we place on it, the 4th Industrial Revolution will usher in more disruptive change to people's employment and standard of living, and the prospects of young people, who already suffer high rates of unemployment across the EU. Those affected adversely will be more receptive to populist politics. The tide of populism may continue to rise.

The message of ESPAS was clear: we need to embrace the 4th Industrial Revolution: change is inevitable. But Europe's desire to control and regulate it may be impossible



in practice. We heard that last year 40% of capital investment in AI went to China, 38% to the USA, and the remaining 22% was spread around the rest of the world including Europe. If the US and/or China lead the 4th Industrial Revolution, then it will be likely to have American and/or Chinese characteristics.

Will Europe be able to shape the 4th IR, or will it be swept along in its wake?

The Economic Outlook

There was some encouragement about the relative economic recovery in the state of the European economies, but speakers warned that much of the damage of the years since the crash had not yet been undone, and that there remain pockets of relative poverty, as well as high unemployment, and skewed patterns of debt across the Eurozone.

Looking to the future, Europe lags behind the US and China in investment in infrastructure and Research & Development (for example, the figures above on AI investment) and any rise in unemployment as a result of the 4th Industrial Revolution will reduce the revenue from employment-linked taxes, which are currently 48% of revenue across the EU. Where will Europe rank among the economic heavyweight contenders?

Will Europe rank among the economic heavyweight contenders or will it become an economic middleweight?

Europe in the World

Speakers from Asia and the Middle East observed that Europe had declining influence in the world. From being one of the main influences on developing nations and their politics and economics, Europe was now lagging far behind other powers.

Against this background, the competitive advantage enjoyed by the USA and China in AI and other cutting-edge technologies suggests that Europe may be on a trajectory of declining influence. This comes at a time of global threat, with the rise of non-state groups destabilising countries and regions, and the spread of frozen conflict, as well as the resurgence of Russia, and regional powers tempted to follow undemocratic models of governance. One speaker warned that Europe was ignoring the threat posed by Russia. Others said that Europe has “gone to sleep” since 1989.

Europe is not alone in being concerned about this. Liberals beyond Europe want to see Europe be more assertive in promoting its values. And, from a US point of view, **Bruce Stokes**, Director, Global Economic Attitudes, the Pew Centre took an Atlanticist view, warning that the US and Europe were declining in influence, and therefore had very little time to seek to influence the upkeep (or reform) of multilateral rules-based global governance.

More encouragingly, we heard from **E Gyima-Boadi**, Director of Afrobarometer, that support for democracy in Africa is strong, about 70% (not following the downward trend in the west). Also there is support (75%) for term limits for office holders, and a growing willingness to protest, especially among the rising numbers of middle class and young people.

Economics aside, what can, and should, Europe do to promote western liberal and democratic values? What are the prospects of success?



The Demographics of the Global Village

Based on UN Demographic Projections, the West (Europe and North America) will comprise only 8% of the world's population by the end of this century. What price European values when the World is much more Asian and African, and the economic centre of power has shifted back to Asia (where it lay for centuries before the 1st Industrial Revolution).

What Is to Be Done?

The mood at the Conference was mixed. There was a sense among some of “declinism” – the sense that Europe has fallen behind the leaders, and will fall further back as the century progresses. Others believed that European values were of a superior character and could still win through. Clearly the EU wishes to do what it can to promote a multilateral, rules-based system of world governance based on liberal, democratic values and with proper transparency and accountability in place. But does Europe have the economic heft and political will to rise to the challenge?

ps. Don't mention the Brexit

Had there been British Brexiteers at the Conference, they might have been surprised and even perhaps disappointed at the lack of discussion of Brexit. It featured in the various discussions of the rise of populism, and there was some regret at the UK's imminent departure. **Ramon Valcarel Siso** MEP, a Vice-President of the European Parliament, described Brexit as one of the saddest events in the history of the EU. But the prevailing mood was that Brexit is a done deal, sad though it may be, and that Europe needs to focus its entire attention on these future challenges.

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