

EVIDENCE GIVING MEETING #7

All Party Parliamentary Group on Artificial Intelligence
APPG AI

30 October 2017
5:30 – 7:00 pm
House Of Lords, Committee Room 4A

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Main Focus

- •Which countries/communities are more prepared for AI – and can we use them as exemplars/case studies?
- •Best practice?
- •National or international issue: Can one individual nation decide on their AI policy and regulation, or do we need something multilateral?
- •Timing – when are we expecting these changes to take place? 3 to 5 years or 10 to 20 years?

Thought Leaders

- **Janghyun Yoon** – Mayor of Gwangju Metropolitan City, with his speech on “Smart Human City, Gwangju, in the era of AI – Harmony of Mobility, Energy, Culture and Human Rights”
- **Allan Dafoe** – Research Fellow at Future of Humanity Institute, University of Oxford, and Assistant Professor of Political Science, Yale University
- **Andy Forrester** – Director, HypeAccelerator Solutions
- **Parry Malm** – CEO, Phrasee
- **Catelijne Muller** – Rapporteur on Artificial Intelligence, European Economic and Social Committee
- **Dr Scott Steedman CBE** – Director of Standards, BSI Group
- **Alenka Turnsek** – Co-leader UK value chain transformation tax network, PwC
- **Dr Blay Whitby** – Associate Tutor, Engineering and Design, Informatics, University of Sussex
- **Lisa De Bonis** – Executive Digital Director, Havas London, and Cannes 2017 Juror

Janghyun Yoon – Mayor of Gwangju Metropolitan City

- Yoon Jang-hyun is Mayor of Gwangju Metropolitan City, South Korea. The Gwangju Metropolitan City is one of six metropolitan cities with elected mayors in South Korea and symbolic city of Korean democracy and human rights as a hometown of May 18 Democratic Movement in 1980 against brutal military dictatorship. The City of Gwangju under the Mayor Yoon's leadership is leading high-tech and creative industries, especially focusing on 4th industrial revolution with AI in South Korea. The City of Gwangju is the only local government has a special department to address the necessary administrative, financial and logistical tools for promoting 4th industrial revolution in South Korea. Therefore, new Korean government adopted Gwangju's policy for 4th industrial revolution as one of 10 critical government policies. The Mayor is looking into ways of exploring possible.
- 4IR is one the most critical issues of our time and there is much debate on whether it is a threat or an opportunity
- Three years ago, Gwangju has set a strategy on how to manage the 4IR
 - The city is a symbol for democracy and human rights in Korea
 - It is also seen as model of a modern city and has an ambition to become a smart city
 - Its main challenge is to find solutions between integrated technology
- AI has human right implications
- Governments need to ensure a smart human city
- Governments need to focus no on high tech but on high impact
- There is great opportunity for cooperation between the UK government and the Korean government as well as collaboration between the two countries' businesses

Allan Dafoe – Research Fellow at Future of Humanity Institute, University of Oxford, and Assistant Professor of Political Science, Yale University

- Allan Dafoe is an Assistant Professor of Political Science at Yale University and a Research Associate at the Future of Humanity Institute. His research examines the causes of great power war and the global politics surrounding transformative technologies, in particular concerning the existential risks from artificial intelligence. To help scientists better study these and other topics he also works on methods for causal inference and for promoting transparency.
- Most AI researchers are uncertain about the timeline of technological advance and there is substantial disagreement between the community
 - Recently launched a survey of machine learning researchers on their beliefs about progress in AI. Researchers predict AI will outperform humans in many activities in the next ten years, such as translating languages (by 2024), writing high-school essays (by 2026), driving a truck (by 2027), working in retail (by 2031), writing a bestselling book (by 2049), and working as a surgeon (by 2053). Researchers believe there is a 50% chance of AI outperforming humans in all tasks in 45 years and of automating all human jobs in 120 years, with Asian respondents expecting these dates much sooner than North Americans.
 - The survey also showed there is much discrepancy amongst the group
 - Main conclusion is that we don't understand intelligence well enough to forecast
- The challenge is for government to build policy and institutions that are robust to potential surprises that AI might bring
- AI is both an issue on the national and international domain
- On the national domain, UK can:
 - build the national infrastructure with best practices
 - invest in government competency in respect to AI
- For best practices, UK can look at: Canada
- Society needs international cooperation to decide how to build AI to be fair, democratic, and preserve global values
- Work with other countries to create technologies for social purpose
- The UK should emphasize on common good, convergence and best practices.- Government needs to lead by example.

Lisa De Bonis – Executive Digital Director, Havas London, and Cannes 2017 Juror

- Lisa is Executive Digital Director of Havas London and Global Strategy Partner on GSK's consumer health business. Part of her job is to drive this through the right mix of culture, talent, operational change and capability building. The other part is to inspire and help teams create those ideas that everyone simply wants to be a part of. Earlier this year, Lisa was a key figure and on-screen expert for the artificial intelligence project for ITV News, EagleAi, the world's first AI to be used to predict voter behaviour for a live broadcast. And in June 2017, Lisa represented the UK in the Cyber Jury during the Cannes Lions Advertising Festival. She's part of the Havas London and Havas UK Village Executive Leadership teams. AI will have implications across the board and in all sectors
- Technology is turning market upside down
 - Individuals face 5000 messages per day and people are learning how to tune these out
 - Study shows that consumers wouldn't care if 74% of brands disappeared
 - The same survey that consumers care more about brands with a purpose
- Case Studies
 - In the US, worked with TD Ameritrade to simplify access to education material by providing an AI-driven platform called Alvi
- Three suggestions:
 - To empower businesses to get involved. SMEs need to recognize how AI can work for them. Government must demystify language and build trust.
 - To invest in academia and attract a diverse group of programmers.
 - To 'walk the walk.' Government needs to lead by example and to share its data. It is important to also share successes and failures.

Andy Forrester – Director, HypeAccelerator Solutions

- Andy Forrester is Director and Founder of HyperAccelerator Solutions. He began his career in the British Army, before transforming as a technologist in the oil and gas industry. In 2007, Andy established HypeAccelerator Solutions and in 2012, HypeAccelerator opened its UK headquarters in Brighton, evolving expertise over the last decade in helping companies with their future technology and innovation strategies.
- Currently supports Department of Business, Energy, and Industrial Service in providing technology advising
- Many examples of how AI is used can be seen within the UK public sector
 - The Met Office, for example, works with the Alexa team for decision making; Alexa can interface with language in shipping
 - There is also a more sophisticated tool called DASK (dynamic task scheduling) that makes technology infrastructure more efficient. This is a powerful ML-driven library for analysing data in Python.
 - The Science and Tech Facilities Council has created Joint Academic Data Endeavor (Jade) – will be largest GPU facility for world-research in ML
 - Aims to address the gap between university systems and access to national HPC services
 - Alder Hey Children's Hospital – employed Watson to create the UK's first 'cognitive' hospital by harnessing big data and the power of IBM Watson
- Recommendation:
 - APPG AI can contribute to closing the disconnect amongst different organizations
 - APPG AI needs to be disruptive

Parry Malm – CEO, Phrasee

- Parry is CEO and co-founder of Phrasee, the A.I. that writes better email subject lines than humans. He was recognised as "Tech Entrepreneur of the Year" at the 2016 UK Business Awards. Parry is well-known in digital marketing. He has worked with countless brands and media outlets to help them optimise their online results, and is one of the world's leading experts on email marketing. He started his career coding middleware for CRM software, then sent out millions of emails for global brands, before running the strategy department for an ESP. He holds a BBA (1st) in Marketing & Statistics and can probably beat you in an Excel-off. On weekends, he helps wayward youths see the error of their ways through the magic of interpretive dance. Optimistic about economic opportunities of AI but the challenge for the UK is to unlock it
- The UK government needs to focus on long-term implications that technology will bring about rather than short-term things such as Brexit
- There is currently lack of investment in innovation for UK to become a leader in the digital economy of tomorrow
- Need to create incentives for start-ups such as Phrasee to grow in the UK and stay in the UK
- UK is the hotbed for academic research but that is not enough
- Individuals have to be trained in the latest AI applications
- UK government must create tangible policy to ensure today's diversity is represented in tomorrow's workforce
- Globally there is a trend for countries to adapt protectionist measures, UK should stand out and ensure open innovation
 - In Canada, the govt has opened its doors to skilled and non-skilled migrants
- UK government needs to build and support policy that:
 - Ensures future talent pool represents diverse groups
 - Open borders to innovation
 - Incentivizes Research and Development

Catelijne Muller – Rapporteur on Artificial Intelligence, European Economic and Social Committee

- Catelijne Muller is an experienced advisor on European Affairs and Public Policy and member of the main Dutch and European Committees on Social, Economic and Labour Policy. She is a member of the European Economic and Social Committee and rapporteur on Artificial Intelligence. Catelijne also runs ENTRY2MARKET, an international consultancy and foreign trade firm based in the Netherlands. ENTRY2MARKET has been appointed by the Netherlands Enterprise Agency (Dutch Government) as executive organisation of the Starters International Business program.
- The European Economic and Social Committee is made up of 350 members from unions, industry, and other interest bodies like NGOs
- Recently published a report on the adaption of AI and its impact on society
 - AI can have huge benefits for society but there are challenges
 - The report identifies 11 domains of impact
 - It also identifies regulations/policies that have been affected by AI
- Governments need to focus on the quality of the AI and the systems themselves in order to have responsible development of AI and responsible use of AI
- AI learns from data
 - UK government needs to help clean data and to make sure stakeholders are aware of its limitations
 - An example of biased data is shown in ProPublica's experiment of a software used across the US to predict future criminals
- Societies need to create high standards for AI to protect all groups from the potential harms
- There is a lot of debate on whether an AI should have legal personality
 - European Economic and Social Committee argues it shouldn't as it is dangerous to humanize technology
- It is critical to remember: Technology does not overcome us and we have to manage it.
- Human are and should be in command

Dr Scott Steedman CBE – Director of Standards, BSI Group

- Dr Scott Steedman is Director of Standards at BSI, where he is responsible for the work of the UK National Standards Body, representing the UK internationally, and for advising industry and government on the role of standardisation in the economy. Prior to joining BSI in January 2012, Dr Steedman spent around 20 years working on major infrastructure and building projects in the UK and around the world for companies. Formerly a lecturer at the University of Cambridge, he has specialised in natural disasters, forensic engineering, and risk and innovation strategy. He was an independent member of the Defence Scientific Advisory Council for six years, authoring several reports on the management of safety and risk on MOD platforms.
- UK has been present in 95% of international standard committees
- iGovernment must take UK best practices to a wider community to drive the economy and society forward
 - We need a vehicle for thought leadership to be taken on a global level
 - Standards help AI ecosystem to have successful commercialization
 - Standards need a common framework and common language
- There are existing standards already created
 - BSI has created smart city standards that are now being used by international players
 - International Financial Reporting Standards have also been created
 - IFRS began as an attempt to harmonize accounting across the EU but the concept quickly was adapted by the entire world
 - IEEE SA has been pushing the standardisation in regards to AI ethics since 2016
- All of these standards follow the principle: humans in command
- Wendy Hall's review recently pointed out to areas where standards are important
- In the UK, there is lack of public awareness and low public confidence in the technology
 - There is no need to reinvent the wheel as we already have a powerful international structure
- If UK government doesn't participate, other countries will
- We need to act quick in creating data standards and a code of practice to implement ethical design

Alenka Turnsek – Co-leader UK value chain transformation tax network, PwC

- Alenka is a Partner in PwC's Value Chain Transformation practice in London and has been working in the international business model restructuring area for over 20 years. Alenka's role in centralised operating model projects is typically as an overall project leader bringing together various strands of operational, legal, tax and transfer pricing advice in a single deliverable to the client. She has advised clients across different industries. In the last few years Alenka has been specialising in the impact of the digital economy on operating models of multinationals including the impact on their value chains, value creation and allocation and their tax footprint. Alenka has provided input into request for information by the OECD on the Action 1 workstream on 'Addressing the Tax Challenges of the Digital Economy'. She has presented on the impact of the Digital Economy on the business and tax operating models at several PwC external events.
- There are both political and economic reasons for discussing how AI will impact taxes
 - AI is estimated 230 billion impact on GDP by 2030
- All large international countries are reviewing their tax framework and revising them for their own benefits
 - We need international consensus or there is a risk of creating international trade barriers
- Questions government needs to answer, include:
 - 1. How does it become entity to taxation in specific jurisdiction? Does it need physical presence? Does a product need to be traded in the UK?
 - Traditionally, physical presence was essential but with technology products can be produced remotely and traded remotely.
 - 2. What are the principles of allocating profits in-between jurisdiction? How do we measure intangible products?
 - Need to be careful not to create tension between countries that create AI and those that use AI
 - Need to have transparent rules
 - 3. Is corporation tax the right profit?
 - Corporation tax framework needs to be reformed.
- A potential solution would be to tax cloud intelligence
- Government needs to create a level playing-field
- UK government must review the thresholds on national and international level to ensure there is no double taxation;
- UK should focus on long term solution, depending on whether it wants to focus on exports or imports

Dr Blay Whitby – Associate Tutor, Engineering and Design, Informatics, University of Sussex

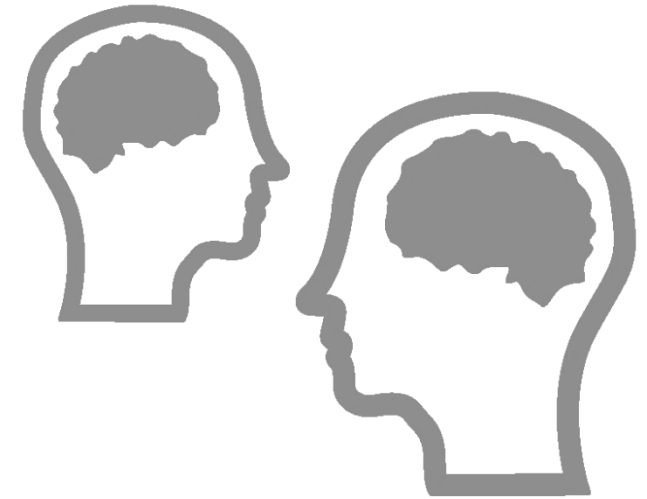
- Dr Blay Whitby is a philosopher and ethicist concerned with the social impact of new and emerging technologies. He is a leading researcher in the field and the author of many books, chapters and papers on the subject including 'On Computable Morality', 'Reflections on Artificial Intelligence: The Legal, Moral and Ethical Dimensions' and 'Artificial Intelligence, A Beginner's Guide'. Dr Whitby is a member of the Strategic Ethics Committee of BCS The Chartered Institute of IT and ethical advisor to the Royal Academy of Engineering. AI will have implications across the board and in all sectors
- Main conclusions
 - It is not too early to regulate AI. It might be a little on the late side.
 - Regulation has to be international.
- Technology can be created in various parts of the world and UK has little control about their standards, processes, etc.
- Public is poorly educated about AI and its implications.
 - Growing concern that society is not equipped to deal with potentially bad advice given by AI tools.
- Transparency in AI systems is key; we need rationality for how AI concludes with a given outcome
- The UK should lead on setting international standards
 - The World AI Forum would be a great platform to discuss these standards
- A minister for an AI is useful in raising the policy implication related to these emerging technologies
- International standards are not impossible, take into account the case study of the International Rules for Aviation created in Chicago in 1947
 - This didn't hold back aviation but rather helped facilitate it to become one of the safest ways to travel
- AI needs to be regulated and the decision-making shouldn't be dominated by one group

Questions and Answers

- 1. What are the priority areas government should focus on?
 - Use APPG AI community as a platform for stakeholders to voice their opinions on what the key areas of concern are.
- 2. How do people in the frontline feel about regulation?
 - Ai is an umbrella term and regulation needs to be adapted for specific use cases of AI.
- 3. How do we deal with the speed of today's technological advance?
 - Principles and standards must be dynamic. It is important to set the right principles within a corporate body.
- 4. How do we communicate AI implications to the rest of society?
 - Establish clear and common language, 'lingua franca' to spread the conversation to the

Key Takeaways

- It is not too early to regulate AI
- UK should lead the global arena in setting the standards for AI
 - Transparency should be a key standard for all stakeholders to understand rationality behind a given outcome
 - A World AI Forum on Global Governance could provide the right platform to link policy-makers together to shape agenda
- Governments need to help build trust in society and to raise awareness on what AI can offer
- Government should lead by example, to promote an open innovation environment and share use cases for AI technologies
- Government should appoint a Minister for AI





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