EVIDENCE GIVING MEETING #2
All Party Parliamentary Group on Artificial Intelligence
APPG AI

27 March 2017
6:00 – 7:30 pm
House Of Lords, Committee Room 2

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Main Focus

- Does AI make better decisions?
- Can and should machines have the same values as we do?
- Legal system for decision making: (personal AI advisors, homes and cars insurance, and business insurance)
- The use of AI for military operations – ‘weaponisation’ questions
- Morality and ethics of AI / Values and moral philosophy
Thought Leaders

• Kumar Jacob – CEO, Mindwave Ventures Limited
• Prof. Marina Jirotka - Professor of Human Centred Computing, University of Oxford
• Dave Raggett - W3C Lead, The Web of Things
• Prof. Noel Sharkey - Professor of AI and Robotics, Sheffield University - CoDirector Foundation for Responsible Robotics - Chair ICRAC, Public engagement
• Ben Taylor - CEO, RainBird Technologies
• Rajinder Tumber - Senior Cyber Security Consultant & Auditor, BAE Systems
Kumar Jacob – CEO, Mindwave Ventures Limited

- AI has huge impact in health care, particularly in two fields:
  - Clinical decision making
  - Personalized healthcare
- AI has helped move the agenda in saving lives, assisting in predicting health conditions and personalizing medicine solutions
- Mindwave is one the pioneers in this field, developing digital products and services for health and care that have a positive impact on people
- There is an ongoing debate around exploitation of data
  - 1. regulation does exist about personal patient data
  - 2. regulation does not exist about anonymous data.
- UK needs to create a clear framework for when and how data should be used
- Studies show that most individuals don’t mind giving their personal data for health studies
  - Survey in the US showed that 91% of individuals are okay for donating data in health sector
• APPG AI needs to adapt a new methodology: Responsible Research and Innovation [RRI]
  • Stress inclusivity and democratic decision-making
  • Promote engagement from various stakeholders
• Framework based on 4 principles - AREA:
  • A – anticipate possible outcomes of research
  • R – reflect on motivation and products that come out
  • E – engage with relative stakeholders
  • A – act accordingly and be responsive
• This approach can help prevent possible issues with AI – issues linked to inequality, liability, etc.
  • Lack of transparency of algorithms can be avoided
• The key is to engage a variety of stakeholders (corporate, academic, and government) and to adapt different bodies to reflect on questions such as:
  • What will the possible outcome of technology be? Is the intended outcome desired? Who will it benefit?
• Computers need to think and to learn more like humans
  • Patience and empathy need to be embodied by machines
• There are two situations:
  • Sometimes it is okay for a machine to make a quick decision (i.e. a car's engine crashes if there is a pedestrian on the road)
  • Most of the times, decisions are not quick and there are multiple layers (i.e. mortgage allocation, social payments for disabled)
• Computers should think on multiple levels – social and emotional levels are important
• Different sciences – AI, cognitive, neurolinguistics, science – have to be combined in order to produce a desired outcome
• Decision-making by computers needs to be explained in a human-like way
• Unethical to have computers that cannot adapt to the nature of each unique situation
AI has potential for great impact but only if it is done right
   1. need to cultivate public trust
   2. need to create clear regulations and frameworks
   3. need to delegate which decisions can and cannot be made by machines
AI can also lead to a lot of biases: gender, social, etc.
   UK should focus on promoting transparency in order to avoid these biases.
   Justify why a majority of C-levels are white, middle aged males
Some decisions shouldn’t be delegated to machines
   Life death decisions
   Autonomous weapon system
Government must ensure protection of human rights and wellbeing. Economic prosperity should come second.
APPG AI can help work out which areas should be under clear human control
   This should be done quickly because AI technology is developing in high pace
Key theme in most AI discussions → liability
- Stakeholders in government, industry, and academia need to work together to create a framework for who is liable when things go wrong
- Calls government to act quickly to create a legal framework because AI won’t be able to be adapted effectively otherwise
- Society needs to be able to justify how decisions are made
  - It is critical to have an audit trail that one can follow to understand how a decision was reached
- Throughout history, computerization has created the need for new regulations to reflect new technologies.
Most people argue that AI should have an ethical framework based on ethical values – this is a complicated statement. What are human values?

- Not all people are the same. Not all people share the same values. Hence, whose values should we be considering?

- Are humans ethical?
  - There are many examples of humans not acting ethically correct. Hence, should machines be trained to act like humans?

- AI debate is much deeper and has to do with human nature.

- There are several scenarios in which human values have proven immoral.
  - I.e. Microsoft created a robot named Tay in March 2016. Tay learned by the communications she had with real people online and was suppose to act like a teenage girl. Soon, Tay started behaving strange (cursing and using violent terminology). Tay was shut down but the example shows how a reflection of society is not always a ‘good’ one.
Questions and Answers

1. Are there any steps in creating a regulatory framework that challenges AI black box?
   - Discussion right now is very fragment and industry-driven.
   - Government needs to create framework to guide industries and make sure they adapt a systematic approach.

2. Would regulation hinder development?
   - If regulation is based on empirical evidence, it can help foster development.
   - A human-check is required in order to make sure society is protected.

3. How do we deal with uncertainty?
   - New innovations include a section in which they anticipate their economic impact for the next 20 years. It should be expected that there is a section anticipating social and environmental impact as well.
   - Build on current understanding and adapt during the process.

4. Are we speaking with international players in AI (China, US, and Germany)?
   - It is worth looking at positive use cases from these countries to help us evaluate AI impact. Use cases can help us create frameworks and regulations.

5. Who is accountable/liable for an error?
   - This is a hot debate at the moment. Who is responsible? Individual? Machine? Corporate?
   - Some argue that the developer/designer is ultimately liable.
   - Current trends show that corporate entities (such as Google or Volvo) are taking accountability for actions.
   - There is no legal framework clearly stating who is responsible and blame is bounced back and forth.
Key Takeaways

• Embedded within AI are serious ethical implications related to human values, personal security, liability and accountability, etc.

• There is a need for clear regulation to safeguard society and assure AI moves forward in an ethical manner.

• We cannot draft and pass regulation until evidence is provided.
  • Need positive use cases illustrating how AI has impacted society.
  • Need to extract key findings from these cases and create recommendations.
  • Need to adapt a methodology like RRI to ensure public engagement and debate.

• The UK needs to work with international partners to learn from each others’ evidence and come to a consensus on ethical frameworks.