TCIDA evidence to APPG AI Meeting on DATA
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Prof J. Mark Bishop and TCIDA

1 Brief introduction

Good afternoon and thank you for the invitation to address this meeting of the APPG AI on ‘Data’.

My name is Mark Bishop; I am Professor of Cognitive Computing and Director of ‘The Centre for Intelligent Data Analytics’ - an industry-funded Research Centre in AI - at Goldsmiths, University of London. I also serve as a co-opted expert on AI for ICRAC - the International Committee for Robot Arms Control.

At TCIDA we specialise in the application of AI and the analysis of data, specifically to business and commercial problems. Influenced by the success of earlier work, as one of the three organisations who together developed the ‘SpendInsight’ Procurement Analytics system, we were established in March 2015 as the result of a substantial Joint Venture with Tungsten Corporation, primarily to investigate potential uses of AI in ‘business-to-business’ data-driven applications.

An analysis produced by SpendInsight for the National Audit Office identified potential overall cost savings to the NHS of at least £500million annually. The findings of this report were discussed in Parliament and changes to NHS purchasing policy were recommended as a result.

Most recently:

- In June 2017 I was invited to address the United Nations Interregional Crime and Justice Research Institute (UNICRI), in Turin, presenting a series of lectures on AI, Robotics and the risks of both.
• In November 2017 I was invited by the European Commission to speak at a high-level Policy Seminar on Artificial Intelligence in Brussels to discuss ‘Ethics, supervision and regulation of AI’.

• And also in November, alongside members of the European Parliament and European Commission, I was invited to address the 2017 HuaWei Academic Salon, to offer my views on ‘Why AI is advancing so fast and what comes next’.

The suggestions I offer in today’s evidence session emerged across extensive discussion with all the team at TCIDA - but in particular with my colleagues, Dr. John Howroyd, Dr. Stephen McGregor and Andrew Martin.

2 Evidence and policy recommendations

At TCIDA we envision a future in which Britain is at the forefront of the industry and society of data; a world leader in both technological applications and social practices. Our government has a vital role to play in this future, as an educator of the public, as an exemplar of good data practice, as a facilitator of the generation and manipulation of data through cutting-edge, industry driven innovation, and as a protector of individuals in their interaction with an increasingly complex and interconnected world.

In preparation for the roll-out of GDPR in May 2018, the Data Protection Bill of September 2017 repealed the 1998 Data Protection Act and instead, brought UK regulation into alignment with GDPR, clarifying that the UK will adhere to the principles of the GDPR post-Brexit.

Britain has always been a leader in information technology. With the right plans in place, Britain will be the natural leader in a new era of dynamic data-based enterprises and an informed and productive public, with British citizens emerging as some of the most data-savvy people in the world.

At TCIDA we believe Government should play an active role in educating people - not only about the dangers of data sharing (and their rights regarding protecting their data), but also the potential benefits - how to optimally release their data to the wider world.

1. In line with Recommendation 4 from the 2017 APPG findings on data, we agree that government should lead on the dissemination of knowledge of the rights and obligations specified in the GDPR through public bodies; this will enable data subjects to ensure the private sector also adheres.
Investment will be required to help these public bodies implement such a leading role, together with investment in the ICO as an effective authority on data protection, enabling it to handle a much-increased case load. Data sharing between public and private sectors, via ‘data trusts’, should be one of the primary goals of government policy.

Moreover, we recommend that government should openly address the situation regarding expectations on business in the context of both a hard Brexit and a soft Brexit; for instance the obligations on non-Union member businesses to maintain a representative within the Union.

2. Our second recommendation follows on from the above. In government and business there is often a need for trusted data. Post GDPR, with the data subject’s explicit permissions, high-confidence trusted data can be shared between organisations; the January 2018 Open Banking regulations explicitly address a data subject’s right to transfer banking information.\(^1\) For example, in a loan application the lender needs confidence that the applicants financial status has been correctly described. Now, with the subject’s authorisation, their bank must share financial data with the loan provider. This offers potentially huge improvements in efficiency and accuracy for the economy. Indeed, this kind of trusted data sharing is at the heart of a service offered by Factern - a company that TCIDA has recently been consulting with. Therefore, our recommendation is that government should encourage this kind of authorised data transfer between organisations by facilitating data sharing services throughout the public sector through bodies such as the HMRC, the NHS, and local government.

3. Lastly, Article (13) and (14) give the data subject the right to know (a) the nature and purpose of personal data collected from data subject (even in the case when the information was not directly collected from the data subject), and meaningful information about the logic involved in any subsequent data processing as well as the significance and the envisaged consequences of such processing for the data subject and Article (22) gives the data subject the right to demand both information about automated individual decisions and profiles made about them and, where the decision may produce legal - or similar - effects, “to obtain human intervention on the part of the controller, to express his or her point of view and to contest the decision”. We suggest that these articles are problematic for two key reasons:

- Particularly in the context of modern machine learning algorithms, it is likely to be quite difficult to provide the data subject with an explanation of the logic involved in arriving to a particular decision; typically, such complex algorithmic behaviour does not lend itself to simple explanation.

• Although the suggested use of icons to signpost data processing (as suggested in GDPR Recital 60) may help, in general it may not always be clear to a data subject that personal data is being processed; in which case, how can the subject know when to make a demand for explanation and/or intervention under Article (22)?

In this context, our final recommendation to position the UK at the forefront of digital rights world-wide is to keep the right to ‘human intervention on the part of the controller’ in cases where legal consequences follow, and extend the right to ‘explanation of the purpose of processing’ to all cases.