

Submission to House of Lords Select Committee on Artificial Intelligence Call for Evidence

Charities Aid Foundation

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- 0.1 Charities Aid Foundation (“CAF”) is a leading international civil society organisation (CSO). Our mission is to motivate society to give ever more effectively and help transform lives and communities around the world. We work to stimulate philanthropy, social investment and the effective use of charitable funds by offering a range of specialist financial services to charities and donors, and through advocating for a favourable public policy environment.
- 0.2 CAF’s in-house think tank, Giving Thought, undertakes policy research and analysis to understand the macro trends affecting philanthropy and the work of charities. As part of that work we have been exploring the impact of disruptive technologies such as AI on the work of charities and the ways in which people are able to support them.
- 0.3 We have kept our submission firmly focused on the impact on charities and charity donors. Partly this reflects our particular expertise, but also we believe that there are potentially significant impacts in this area that few are currently thinking about, and which thus need to be highlighted.

1. The pace of technological change

- 1.1 In terms of the state of AI in the charity world, our sense is that there are small pockets of exciting innovation set against a backdrop of low levels of awareness, skills and understanding. This is not a situation unique to AI: though it is difficult to generalise about such a diverse sector, charities often struggle to adopt and adapt to new technologies due to lack of resources and skills. One of the key points we wish to make is that charities will need support from government, the tech industry and forward-thinking funders to develop the skills and resources needed to realise the potential of AI for social and environmental good. Given the huge potential that this technology holds in this context, the opportunity costs of failing to involve charities could be enormous.
- 1.2 It is generally recognised that two key factors in the accelerated development of AI recently are a huge increase in the amount and availability of data and the development of more sophisticated algorithms (such as deep learning algorithms) that can use this data to refine and improve their performance. This represents a challenge, as availability of data may present a significant barrier to the successful development of AI in a charitable context. The data on social and environmental needs that charities could use to refine and target their interventions is often locked up in siloes within government and the private sector; and where it is available it is not presented in a consistent, usable format. The adoption of open data standards across the public sector and in the private sector (and within the charity sector itself) would thus be of huge benefit to charities.¹ Perhaps even more problematic is the data on outcomes, or the social impact of charitable interventions, which would allow us to measure and assess their efficacy and efficiency. This will be vital if we are to enable the application of AI to the allocation of

¹ E.g. The UK government’s [Open Standards Principles](#).

philanthropic capital, and – as we shall see – this is likely to be an area of enormous growth in a future where there is likely to be a huge range of high-volume, low-value automated transactions, if we wish to harness some of this potential pool of capital for social good.²

1.3 Examples of AI already being applied in a social good context include:³

-**AI social media analysis for suicide prevention:** US tech startup Bark.us provides an AI product that monitors children's social media activity across a wide range of platforms to detect early signs of suicidal behaviour.⁴

-**AI Chatbots providing medical advice:** Arthritis Research UK have partnered with Microsoft to pilot a service based on its Watson AI that can provide users with tailored information about the condition.⁵

-**AI live translation:** The Children's Society has begun experimenting with using Microsoft's AI-powered live translation tools to try to overcome language barriers in its work with young refugees and migrants in London.⁶

-**Using AI to tackle poaching:** The Lindbergh Foundation in the US has developed a programme called Air Shepherd, which uses unmanned aerial drones to patrol conservation areas and record footage. They have worked with a company called Neurala to apply deep learning algorithms to the data from these drones, with the aim of teaching them how to recognise poachers.⁷

-**Using AI to analyse scientific research papers:** Mark Zuckerberg and Priscilla Chan's philanthropic venture the Chan-Zuckerberg Initiative (CZI) has purchased a startup called Meta, which has developed an AI that can help scientists navigate, read and prioritize the millions of academic papers in existence.⁸

1.4 In broad terms, AI technology is likely to affect charities in four key ways:

i) **Creating new problems that charities will be called upon to address:** AI, like many technologies, will have unintended negative consequences, which charities will be relied upon to solve.

ii) **Developing new ways of addressing existing problems:** AI allows the analysis of data at an unprecedented scale and speed, which could suggest completely new ideas for solving social and environmental problems.

iii) **Offering new ways of working that utilise AI to support traditional charitable organisations:** AI could help to find efficiency savings in existing approaches or be used to ensure that organisations learn from their data on impact and improve.

² For more, see Davies, R (2016) [Artificial Intelligence and social impact measurement: how do we get a Google algorithm for philanthropy?](#), CAF Giving Thought blog, 24th October.

³ For more see Davies, R (2017) [5 Ways AI is Already Having an Impact on Charity](#), CAF Giving Thought blog, 2nd June.

⁴ Johnson, K (2017) ["Bark.us saves teens' lives by using AI to analyze their online activity"](#), Venturebeat.com, 11th July

⁵ Weakley, K. (2017) ["Arthritis Research UK introduces AI-powered 'virtual personal assistant'"](#), Civil Society, 24th March

⁶ Roach, J. (2016) ["Microsoft Translator erodes language barrier for in-person conversations"](#), Microsoft blog, 13th December.

⁷ Moon, M. (2017) ["Drones and AI help stop poaching in Africa"](#), Engadget, 21st May.

⁸ Wagner, K. (2017) ["Mark Zuckerberg's philanthropy organization is acquiring a search and AI startup called Meta"](#), CNBC.com, 24th January.

iv) **Creating new governance structures and operating models for achieving social good:** AI could lead to ways of working which augment or even replace traditional charitable organisations entirely.

We shall touch on all of these in this consultation response.

Impact on society

2.1 AI is almost certain to have an effect on charities by altering the nature of social and environmental needs; or creating entirely new ones. This could pose major challenges for charities in the future if they are not only asked to spread their already-stretched resources even thinner, but also find that they struggle to develop the technical knowledge and skills required to understand these new problems and find solutions to them.⁹

2.2 Examples of areas where AI might exacerbate existing issues or create new ones include:

-Filter bubbles: We have already heard a lot about the potentially damaging effects that social media “filter bubbles” that result from algorithmic bias can do, by limiting people’s experience and trapping them in echo chambers in which they find their existing views and prejudices reinforced and amplified. The growing ubiquity of non-traditional interfaces (e.g. conversational interfaces such as Amazon’s Alexa or Microsoft’s Cortana, or augmented/virtual reality interfaces in the near future) means that this effect is likely to be heightened. As a growing proportion of our experience becomes mediated by these AI-driven interfaces, the danger is that they will seek to present us with choices and interaction based on existing preferences and thus will limit our experience even further (perhaps without us even realising it). This will create new challenges for charities in terms of things like heightened social isolation and decreased community cohesion. It may also make it harder for charities to engage with potential supporters, both because they might struggle to break through the filter of the AI interface to make the first contact and because it may become harder to create an emotional connection if people’s empathy for those outside their realm of experience becomes diminished.¹⁰

-Online influencing: The 2016 US Presidential Election exposed the extent to which it is now possible to apply machine learning software to data on online behaviour to reliably predict and manipulate the way people will react to information they are shown. Platforms like Facebook are allowing companies like Cambridge Analytica to access up to five thousand data points on every user,¹¹ which enables them to create profiles of individuals which can reliably predict not only preferences but reactions to new media. Such companies are able to take advantage of the learnings of behavioural economics, and in particular the work of Daniel Kahneman -that people are much more likely to react to information by relying on emotional reflex (System 1) rather

⁹ For a more detailed exploration of the new social issues that AI and other technologies could create see Davies, R (2017) [Future Imperfect: 10 new problems that technology will create and charities will have to deal with](#), CAF Giving Thought blog, 13th April.

¹⁰ For more, see Davies (2016), “Is technology making us care less about each other?”, CAF Giving Thought blog, 6th July

¹¹ Cheshire, T (2016) “[Behind the scenes at Donald Trump’s UK digital war room](#)” Sky News. Retrieved 18 August 2017

than a dispassionate analysis of information (System 2) – and employ “behavioural microtargeting” to deliver thousands of variants of content which is optimised to influence individuals.¹²

-Algorithmic bias: A growing amount of attention is being paid to the ways in which algorithms can entrench existing biases in the data sets they operate on, and the adverse effects this can have on individuals and even entire demographic groups.¹³ Given that many charities exist to represent the most marginalised people in society by ensuring that they have a voice and are able to exercise their rights and access services, this sort of targeted bias (whether intentional or unintentional) is a real source of concern. Charities could play a role not only in dealing with the symptoms of this problem when it occurs (by supporting victims of algorithmic bias), but also in attempting to prevent it by working with technology companies and government to provide oversight of the use of AI and algorithmic process and ensure that the unintended consequences are minimised.

-The Future of Work: AI could play a part in the large-scale transformation of the workplace; including the replacement of many white-collar knowledge-based roles that were previously thought to be relatively safe from automation. This would have an enormous impact on the shape of society, as we move to a world in which the majority of people no longer work. Solutions such as the adoption of some form of Basic Income have been proposed as ways to meet this challenge. However, given the centrality of the notion of work to our concepts of value and identity there are likely to be significant unforeseen consequences, and charities will have to play a key role in addressing them.¹⁴

-Inequality: Widening inequality is already one of the defining issues of our age. AI could exacerbate the situation by concentrating wealth and power in the hands of an even smaller minority of people who own and control the technology and its applications. Many of the charities that currently focus on campaigning against the corrosive effects of inequality will need to broaden the scope of their activities to include this new technological inequality.

-Digital Exclusion: Charities are already starting to play a key role in ensuring that their beneficiaries are not left behind by the pace of technological change by helping them to develop skills and giving them the opportunities to make use of things like the internet in a safe environment. As technologies like AI develop and converge they are likely to become ever more ubiquitous and access to them may well become a basic right (as the UN declared access to

¹² It has also been suggested that Cambridge Analytica played a role in the UK EU membership referendum, e.g. Cadwalladr, C. (2017) “[The great British Brexit robbery: how our democracy was hijacked](#)”, *Observer*, 7th May, although the firm has contested this claim.

¹³ For more, see Pickering, A. (2017) “[Algorithm’s Gonna Get You: What the rise of algorithms means for philanthropy](#)”. CAF *Giving Thought* blog, 18th January.

¹⁴ For More, see Davies (2017) “[Giving in a World Without Work? Automation, Universal Basic Income and the future of philanthropy](#)”, CAF *Giving Thought* blog, 11th January.

broadband to be in 2016). Charities will thus need to ensure they are in a position to help their beneficiaries when it comes to accessing these new technologies.

3) Industry

- 3.2 AI will offer new ways of addressing many of the challenges that charities currently deal with, and hence could make them more effective and efficient. For instance, real-time analysis of big data could be used for preventative services (such as the suicide prevention initiative highlighted above). Or AI could be used to automate advice services and interactions with service users (as in the Alzheimer's Research case already mentioned). These advice services would not only be lower-cost, but could be more effective than human-led services at getting people the information they require and also can be made available 24/7 so that people can access them whenever they need them.
- 3.3 Charities will face many of the challenges that we highlighted in the previous section facing wider society, as well as having to help others deal with them. For instance, charities may find themselves on the wrong end of algorithmic bias when it comes to things like insurance, banking services or regulation. Likewise, the future automation of the workplace will affect charities just like any other organisations (although there may be a positive impact if an increase in the number of people no longer working to earn money leads to a rise in volunteering).
- 3.4 AI could also have an enormous impact on the way that charities raise funds. It could be used for philanthropy advice services, encompassing things like which causes are most pressing, which interventions most effective and which methods of giving are most appropriate. This kind of advice is currently the preserve of the very wealthy, but AI could lower the cost sufficiently to make it a mass-market service.¹⁵ If this were to happen, it would open up new opportunities for charities to reach donors, but would also present new challenges: for instance, if the algorithms determining selection of charities proved to be biased towards already well-known organisations or towards popular causes, this could make it even harder for low-profile charities and those working in unpopular cause areas to raise funds.
- 3.5 AI also opens up the possibility of entirely automating the process of allocating philanthropic capital, by matching areas of most immediate need with the most effective relevant interventions based on analysis of big data. In a future where the expansion of the Internet of Things means that there are likely to be vast numbers of high-frequency, minimal-value machine to machine transactions taking place, we may hope to use a proportion of the revenue generated for charitable purposes. Given that it will be impractical for a human to have oversight of all these

¹⁵ For more see Davies, R. (2017) "[Robotic Alms: Is artificial intelligence the future of philanthropy advice?](#)", CAF Giving Thought blog, 22nd May.

micro-donations, the application of some form of “AI philanthropy” is the most likely solution.¹⁶ This represents a vast new pool of potential income for charities: one which will dictate new approaches to fundraising based on social impact measurement and put an onus on organisations to understand how the algorithms which determine how philanthropic funds are allocated actually work.

- 3.6 AI may also be one element of an existential threat to the very notion of a charitable organisation. The convergence of AI with blockchain technology opens up the possibility of creating AI Distributed Autonomous Organisations (AIDAOs):¹⁷ decentralised organisational structures in which networks of human and AI-controlled nodes are able to interact and work together towards shared goals, without the need for a centralised structure for decision making, logistics or asset ownership. These structures may lend themselves well to charitable purposes, as they could democratise the processes of distributing assets to those in need or campaigning for social change. If this happens, it will raise fundamental questions about the role that traditional charities could still play (perhaps as expert nodes or “oracles”, or as curators of social issues for others), but may even supplant the idea of a formalised, centralised charitable organisation.¹⁸

The role of the Government

- 4.1 We agree with the recommendation of the House of Commons Science and technology Committee in its 2016 report on “Robotics and Artificial Intelligence”, that an ongoing Commission on Artificial Intelligence be established; and crucially that this includes representation from the charity and NGO sector.¹⁹ These organisations represent many of the most marginalised groups and individuals in our society, so it is vital that they are able to speak up for them in the debate over the development of AI and also that they are able to highlight concerns about the potential impact on the wider work of charities.
- 4.2 Government can also play a role in ensuring that charities and their beneficiaries are able to harness the potential benefits of AI technology by providing funding and support to develop skills in the charity sector and for work which seeks to boost digital inclusion.

Learning from others

- 5.1 There are existing initiatives in other countries which seek to explore the risks posed by the development of AI, and in particular the role that philanthropic funders can play in trying to mitigate these risks. For example, the Open Philanthropy Project has a dedicated focus on

¹⁶ For more see Davies, R. (2016) *Giving Unchained: Philanthropy and the Blockchain*. London: Charities Aid Foundation.

¹⁷ For all of CAF Giving Thought’s work on blockchain technology and charity, see <https://www.cafonline.org/about-us/publications/blockchain>

¹⁸ For more, see Davies, R. (2017) *Losing the Middle but Keeping the Heart: Blockchain, DAOs and the future decentralisation of charity*. London: Charities Aid Foundation.

¹⁹ <https://publications.parliament.uk/pa/cm201617/cmselect/cmsctech/145/145.pdf>

“Potential Risks from Advanced Artificial Intelligence”, through which it gives grants to support research and work in this area.²⁰

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²⁰ <http://www.openphilanthropy.org/focus/global-catastrophic-risks/potential-risks-advanced-artificial-intelligence>