



Liaison Committee

Corrected oral evidence: Artificial Intelligence Committee: follow-up

Wednesday 14 October 2020

11 am

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Members present: Lord McFall of Alcluith (Chair); Lord Bradley; Baroness Hayter of Kentish Town; Earl Howe; Lord Low of Dalston; Lord Tyler; Baroness Walmsley; together with Lord Clement-Jones; Lord Hollick; The Lord Bishop of Oxford; Baroness Rock; Lord St John of Bletso.

Evidence Session No. 3

Heard in Public

Questions 14 - 20

Witnesses

I: Amanda Solloway MP, Minister for Science, BEIS; Caroline Dinenage MP, Minister for Digital and Culture, DCMS; Lorna Gratton, Director, Digital and Technology Policy, DCMS.

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Examination of witnesses

Amanda Solloway MP, Caroline Dinenage MP and Lorna Gratton.

Q14 **The Chair:** Can I welcome our colleagues from government? I am Lord McFall of Alcluith, Chair of the Liaison Select Committee. I am joined by fellow Liaison Select Committee members. I am delighted to be assisted today by Lord Clement-Jones, chair of the former Select Committee on Artificial Intelligence, and some former members of that committee.

This is the third of a series of follow-up sessions focusing on key recommendations of former special inquiry committees. Thank you for participating in this new procedure, which was one of the many recommendations of the 18-month review of the House of Lords committees, which reported last year. I draw attention to the declarations of interest of Members who are participating in the meeting.

Welcome, Amanda Solloway MP, Parliamentary Under-Secretary of State at the Department for Business, Energy and Industrial Strategy, serving as a Minister for Science, Research and Innovation; Caroline Dinenage MP, Minister of State for Digital and Culture at the Department for Digital, Culture, Media and Sport; and Lorna Gratton, the director of digital and technology policy at the Department for Digital, Culture, Media and Sport. With that, I will hand over to Lord Clement-Jones for the questions.

Lord Clement-Jones: For the record, my interests are those that I declared at the beginning of the meeting. Ministers, welcome. I gather that you have agreed which of our questions it is more appropriate for each of you to answer. Lorna will answer the ones, I suppose, that she decides she needs to, so she is in a very awkward position. Lorna, I particularly welcome you, because I know you are standing in for Sana [Khareghani]. Give her our best wishes for a speedy recovery. You took over from Gila Sacks in May, who for some unaccountable reason went off to NHS Test and Trace.

Lorna Gratton: The country is in good hands. We can be sure about that.

Q15 **Lord Clement-Jones:** I will plunge in with the first question and then my colleagues will follow up.

Amanda, are the Government where they want to be on their AI strategy? What are their priorities for the next year, three years and five years for AI?

Amanda Solloway MP: Thank you very much. It is really a great pleasure to be here, and what an exciting and incredibly important topic we are talking about. I have regular meetings on AI and, every time I find out more, I get more and more enthused about it, so this is a great opportunity.

You are probably aware that the UK is currently third in the global AI index of countries, referred to as Tortoise. It is ranked behind the US and China on investment and innovation, which is a really strong and great place to be. The UK's position is thanks to our superb home-grown researchers, the healthy start-up scene, and the history of innovation in computing. We are in an incredibly healthy and strong place.

We want to continue building on the 2018 AI sector deal. That is really important. We had a £1 billion partnership between government, industry and academia. We have delivered a number of the sector deal commitments, including 2,500 places for AI and data science conversion courses starting this year. This includes up to 1,000 government-funded scholarships. That, to me, is such a significant thing that we are doing.

We want to maintain and grow our AI skills pipeline at every level. I am really keen to make sure that we enthuse people. I hope that will come across from both of us. We are establishing 16 new AI centres for doctoral training at universities across all the four regions, which, again, is incredibly important. We are delivering 1,000 new PhDs over the next five years and investing £50 million in AI fellowships to attract and retain top AI talent. Again, there are lots of really good things we are doing.

On guidelines for AI procurement, we are driving public sector adoption and have baseline ethics control for the spend on AI solutions. I think we will talk about ethics in a little more detail. It is recognised by countries around the world through our partnership with the World Economic Forum. The UK has an early global lead in AI and I am delighted about that. It is really important that we maintain it. We need to keep ahead, as I guess we will both reiterate, of the mounting international competition. Let us not lose sight of the goal on this.

We recognise the need to build on the success of the AI and data grand challenge and the AI sector deal. We will set out future plans for AI, including through the integrated review, our digital strategy and the upcoming UKRI AI strategy; there are lots of strategies. This will align with our recently published data strategy and the plans to increase R&D investment already set out in the UK R&D road map. We also have a road map from my point of view that sets out all the great ambitions that we have.

To inform this, the independent AI Council has developed an AI road map. We are awaiting publication. That details its recommendations for how AI should develop in the UK over the next few years. It will offer insight, advice and the next steps the Government could take to ensure that AI is both an enabler and a driver of post-Covid economic recovery and beyond. There are lots of things to look forward to. It is a field that we are excelling in and we are really keen, jointly, to make sure that that continues.

Lord Clement-Jones: Thank you very much indeed, Amanda. It is great to hear your enthusiasm and to hear about the road map. As you know, we see this in terms of opportunities and risks. We have talked about the issue of data and you have talked about the data strategy. Are data trusts part of the work that you would like to see going forward? There was the pilot with the Open Data Institute and so on. Is that something you want to build on as part of the AI strategy?

Caroline Dinenage MP: It is a really good question. As you know, we did a lot of work early on with data trusts and worked very hard on how we would set up that legal and governance framework around them. It was a

really big part of our thinking and we did some pilots on it. Clearly, there is real commercial confidentiality when it comes to businesses sharing data with competitors, for example. We were really pleased with the initial work that we did on that. We are now very happy to see ODI taking forward the work on this more broadly. I am really pleased that our national data strategy will have a whole pillar on data in the economy when it is published.

Lord Clement-Jones: Lorna, you are co-head of the Office for Artificial Intelligence, which has the co-ordinating role. Government is notoriously difficult to co-ordinate. How does it feel?

Lorna Gratton: It feels like we are making really good progress. There is a lot still to do, but you have heard today from other witnesses about the number of documents that government has published in this area, and the guidelines we are producing to make sure that the whole public sector is using data in the same way, with the same principles governing its use.

While co-ordinating across government is always a challenge, we are joining up really well. The Office for AI has added huge benefit in providing a focal point and allowing colleagues across government to know where to go, to make sure that we have the best advice. We are advised by the council, which you heard from earlier, and are getting the best expert advice.

Q16 The Lord Bishop of Oxford: Welcome, Ministers. As I said at the beginning, I work with the Centre for Data Ethics and Innovation and a little with the Ada Lovelace Institute. In general terms, how important is the ethical development of artificial intelligence to the Government's approach to AI? Can I ask you to comment particularly on the slow progress of the Online Harms Bill, at least as it seems to me? It is beginning to affect public confidence in the Government's commitment to ethics in this area. There is rising public awareness of the damage being done to mental health, particularly that of young people, by social media, as in the recent Netflix documentary, which I am sure you have seen. The Government seem to be moving extremely slowly.

Caroline Dinanage MP: Thank you very much, Lord Bishop. It is lovely to see you all. The Government take our responsibility in relation to the ethical handling of data and artificial intelligence incredibly seriously. A range of products have been produced to support civil servants and the rest of the Government in the way we look after, handle and manage people's data. The data ethics framework is part of that. That framework guides the appropriate and responsible use of data in government and the public sector. It comes under three overarching principles of transparency, accountability and fairness.

To your question on online harms, it is a huge piece of work. There have been some unavoidable delays over the summer as a result of Covid, but in many ways the experience of coronavirus and how it has impacted the country have brought into very sharp focus why this piece of legislation is needed. Let me give an example that you will all be aware of. The whole

country has had to work digitally. Things have progressed online much more quickly than we ever anticipated. Google has become the new classroom; Zoom, where we are today, is the new boardroom or committee chamber; Netflix and YouTube are the new theatres.

That has brought massive advantages in allowing us to see friends and family, kids to remain educated, and businesses to continue functioning, but it has also brought huge challenges. We have seen the levels of child sexual exploitation online rise over the lockdown period, as you will be aware, Lord Bishop. On the heinously unpleasant side of the online world, incidences of revenge porn, for example, have gone up enormously.

That has brought into even sharper focus the need for our online harms work. It has been useful in many ways to look again at that legislation through the post-Covid lens and to work with our colleagues in the Home Office, to see if anything needs to be more robust. Misinformation and disinformation were not tackled much in the original online harms White Paper. During Covid, they cropped up enormously. We saw misinformation and disinformation about the impact of coronavirus driven by 5G. We saw people going out on the basis of this misinformation and burning down not only 5G, but 4G and 3G facilities, because people could not tell the difference.

As part of that online harms work, we have had to deal with some really challenging aspects, which we may not otherwise have seen in such sharp focus. I understand your frustration, but in many ways this recent period has underlined more than ever the importance of doing this. We are now in the very final stages of bringing together all the different bits of government to align behind our work on this. In response to the consultation, we hope to publish our final position in the next few weeks and have the legislation ready to go forward at the beginning of next year.

The Lord Bishop of Oxford: That is hugely encouraging. Thank you very much indeed.

Lord Clement-Jones: Lorna, the office has the relationship on behalf of government with the GPAI. Does the GPAI have an ethical dimension as well?

Lorna Gratton: Yes, absolutely. We are a founding member of the global partnership, and the UK helped to develop the references and memorandum of understanding for it. We are a very active participant in the organisation.

Lord Clement-Jones: That is one way in which we are hoping to at least demonstrate where we sit in the ethical dimension, so to speak.

Lorna Gratton: Yes, indeed, on the international stage. As you heard from witnesses earlier, we have published multiple pieces of guidance on how we are doing it domestically, both advice on how government should use AI and, with the Alan Turing Institute, advice on the ethical use of AI more broadly across the economy.

Lord Clement-Jones: We may pick that up in a little more detail later on.

Q17 **Lord Hollick:** The Government placed AI and data at the heart of the industrial strategy they published in 2017. They also realised that there was a significant job to do to make sure that the public understood what artificial intelligence was about and about its benefits and risks, and were able to adapt to its introduction.

What steps are the Government taking to achieve that objective? In the previous session, we heard about the importance of building and maintaining public trust. I would be interested to hear from both Ministers what steps are needed to build and maintain public trust, particularly at a time when a lot of private personal information is needed to combat the pandemic.

Caroline Dinéage MP: It is an excellent question and at the heart of the work that we are doing. The challenge is that some parts of AI have slightly crept into our lives. These days, we use things such as Alexa and facial recognition on our mobile phones without even thinking about it. Meanwhile, the public feel deeply suspicious of some parts of AI. There seems to be no rhyme or reason as to how we will embrace some aspects of it and not others, on that aspect of trust.

We want to ensure the public understand AI, its powers, its limitations and its opportunities, but also its risks, so that they can see where it fits in among all the other types of transformative technology. We need to make sure that the facts are clear and transparent, so that technologies can be accepted and adopted, and bring great advancements, as happened in stem cell research in the UK.

This is where our brilliant AI Council comes in, because it has a specific working group dedicated to getting the narrative about AI right. Amanda and I have been working with them to identify a range of ways to develop public understanding of AI and all the opportunities that come with it. Those include the national data strategy and the skills toolkit from the Department for Education, which offers a range of digital skills courses, but wave 2 will soon include two new free AI courses. One is at beginner level, which would be entirely appropriate for me, and the other is at intermediate level, which would probably suit Amanda. That will also help. It is all about having a raft of different measures.

Interestingly, in June, the CDEI published its AI barometer, which is a major analysis of the pressing opportunities, risks and governance challenges associated with AI. It looked initially at five sectors: criminal justice; health and social care; financial services; energy and utilities; and digital and social media. That report noted that the lack of transparency from business causes concern, regarding decision-making tools, for example. We have a way to go to address these challenges, but we are on the right lines.

Lord Hollick: Is there a need for a framework to engrain the ethical development and use of artificial intelligence by government, industry and academia. If so, should it be put on a statutory footing?

Caroline Dinenage MP: We recognise that there is a need to develop mechanisms to increase the transparency and accountability that I have mentioned. That is why we have the data ethics framework and other guidance, such as the guide to using AI in the public sector. That is really important.

We feel the legal instruments and mechanisms are sufficient for now, but we are keen to watch how industry develops. We are keen to support businesses that want to innovate very responsibly. We know the public have protections already from the Data Protection Act and the GDPR that came in as part of it. If they are delivering services to the public, they are bound by the public sector equality duty that the Equality Act brought in, in 2010. In my previous role as Minister for Women and Equalities, that came up a lot. If a decision is made that affects the population unequally based on a protected characteristic, there are protections in place.

The collaboration with UKRI and the Office for AI is identifying potential next steps for supporting AI standards in regulation. They are really keen on bringing stakeholders from across the ecosystem to discuss what is appropriate and keep this under review.

Amanda Solloway MP: I agree with Caroline completely. I find it fascinating. I look online and think, "I like the look of that"; then before I know it there are things flashing up on screen. We need to be aware of what is happening, but the key for me is responsibility. We have to behave responsibly, and I hope that is what the road map will set out. We must communicate as well. We must be mindful that this is a major issue, and not underestimate what we need to do and take responsibility for. I know that, collectively, we will be doing exactly that.

Lorna Gratton: To echo Amanda and Caroline, transparency is key for building public trust, as is helping the public understand the current regulation framework with GDPR and the Equality Act, to give them confidence that there are already things in place to protect them and regulate the use of AI, and ensuring that people using AI understand the obligations they have to comply with.

Lord Clement-Jones: That is a very fair point about the existing amount of regulation, which both Ministers and Lorna mentioned. Are there any early candidates for regulation that are not already regulated, following from the AI barometer or work that the Council of Europe, for instance, is doing?

Lorna Gratton: I do not have specific thoughts on that, I am afraid. The approach we have been taking across government is that the sectors are best placed to identify the regulation needed in their sphere. We have typically not left it to the sectors to do, but they have the best understanding of what is needed, particularly in financial services. The regulator for the relevant sector has responsibility for determining what is needed in the sector and can draw on central resource from government to help understand that. You heard earlier from the ICO about how we are increasing co-operation between regulators, so that each has a good

understanding of what the other is doing and they can share best practice to build on each other's experiences.

Q18 **Baroness Rock:** Ministers, I would like to come to the use of AI in government. Talk through how government currently uses AI. I would like specific details of where government is effectively using AI and an understanding of the governance framework in place for use and procurement. We heard in an earlier session that there is a considerable disconnect between central and local government. I would like your views on that please.

Amanda Solloway MP: It is a really good and important question. In 2019, as I am sure you know, the GDS and the Office for AI published the AI guide, to help leaders across the Civil Service to understand what AI is and how it can be used to solve problems within their departments. Specific examples are really useful. We have used as an example AI being deployed to deliver improved public services from the Driver and Vehicle Standards Agency. Just to work through how we have managed to use AI on this, in 2019 the DVSA applied AI to help it identify garages involved in MOT fraud. It applied an AI clustering model to data on garages conducting MOT tests over a three-month period, to monitor behaviours.

Then the DVSA created a risk score for each garage in Great Britain. The risk score combined the output of the clustering algorithm—this is complicated, but it worked—with historical data about how frequently garages had been disciplined for not applying correct MOT standards. This allowed the DVSA to rank garages and their testers and helped it to identify regional trends.

For me, this is a good example of how AI can be used, because it is not just taking data and relaying it but using it to identify regional trends, as in this example. As a result, the DVSA has upgraded day-to-day garage test data every three months, which has allowed it to ensure that the model uses fresh data while providing stability to garage ratings. That is a live example of how we are using AI.

I had a grid drawn up, because I was not quite sure where everything sat cross-departmentally. We can share this grid. The central AI policy expertise is the Office for AI joint unit between DCMS and BEIS, as an example. Implementing AI across government is the Government Digital Service and the Cabinet Office. Government use of data is the Government Digital Service and the Cabinet Office. I could go on, but I am more than happy to share this with you, which might be an easy way of doing it.

AI has been deployed to free up valuable staff time, which can be dedicated to things other than fulfilling administrative tasks. This is where AI is working particularly successfully, in managing productivity. We can also explore machine learning and robotic processes. I went on a visit the other day and looked at an automatic process that required a thought process that sits behind how AI works. It was a repetitive task, so it was possible to save time.

Caroline Dinenage MP: This document looks quite complicated. There are different bits held across different areas of government, but I see that as a strength. I do not come from a political background; I come from a nice, normal business background. I am now in my sixth government department. The thing that terrified me when I first became a Minister was how not only government departments, but bits of government departments, work in silos. Sometimes the communication and collaboration are not as strong as you would want.

As an example, when I was a Health Minister, I published a carers strategy. Initially, the carers strategy had just been written from the perspective of the Department of Health, so it did not deal with children who are carers in our education system or carers in the welfare system. We brought people together from across government and, in the end, this document was signed by seven Ministers from seven government departments, and it worked.

Different bits of government are responsible for different aspects of this. As long as we get the collaboration and communication right, and we all get on with each other, which luckily Amanda and I do, that is a strength. This will impact every corner of government, not just national government, but, as you say, local government. We need to make sure that the tentacles of that reach as far and wide as possible.

Amanda Solloway MP: These capabilities are so important, because within the public sector workforce, for example, it will ensure that public bodies are well placed to use data science, including AI technologies, to improve public service delivery. As Caroline said, we meet on a very regular basis and it is important that we communicate and work together. I am happy to share this document, continue going through it, or whatever is most helpful.

Lorna Gratton: The Crown Commercial Service has implemented our procurement guidelines for AI. As you are probably aware, there is now a dynamic purchasing system, a recently launched AI marketplace, to help those who want to procure through the Crown Commercial Service to do so effectively. That goes from those who have no experience of doing it previously to those with more advanced procurement skills in this space. Local government has access to that. It was interesting and slightly disappointing to hear a previous witness say that she does not think that is disseminated well into local government. We need to take that away and make sure it happens.

Q19 **Baroness Rock:** Ministers, what training is provided in your departments to civil servants and other advisers on the ethical development and use of AI? Should we have a dedicated Minister for AI?

Amanda Solloway MP: Those are good questions. On the training provided to civil servants, the GDS develops and deploys data science in government services and operations, and builds data science capability and data literacy. That can be seen through initiatives such as the establishment of the government data science partnership, which is a joint

project between the Office for National Statistics, Government Digital Service, and the Government Office for Science.

Caroline Dinenage MP: On the question of a dedicated Minister for AI, I slightly answered it earlier on. The trouble with having one person responsible for everything in one government department is that other government departments may slightly disengage. The key thing here is to have everybody fully engaged and working as collaboratively as possible. Everybody needs to have ownership of this, because it is so cross-cutting. This ability to work jointly across all government departments is one of the strengths.

Lord Clement-Jones: That was the most sophisticated argument against a single AI Minister that I have yet heard, I must say.

Caroline Dinenage MP: It is based on bitter experience, I am afraid.

Lorna Gratton: I would just observe the slight distinction between digital data and technology professionals and then policy professionals. Lots of the civil servants in DCMS and BEIS are policy professionals. While it is vital that we have a good understanding of AI, we are broadly speaking not practitioners. There is extensive training available for those who are practitioners. They tend to be people who are more operationally delivering AI projects and who work in the technology and data professions. They will have training available to them. Broader policy civil servants have a lower but, I hope, still reasonably comprehensive level of understanding, because they are not executing on a daily basis.

Lord Clement-Jones: I have one final question, and I do not know whether it is for the Ministers or for Lorna. Is there more work to be done on compliance mechanisms as regards the data ethics framework or the procurement guidelines within central government?

Lorna Gratton: They are both reasonably new, particularly the procurement framework. We want them to be live and evolutionary, making improvements to them as we go, but it remains to be seen what level of compliance we get and whether we need to do things to improve it.

Q20 **Lord St John of Bletso:** Welcome, Ministers. Looking at the UK's place in the world, Amanda mentioned at the start that the UK is ranked third behind the United States and China in the AI ratings. My question elaborates on what is being done to retain this ranking. Is there enough engagement with and support for AI start-ups and key industries to help them maintain an edge? What is being done to attract the best AI talent from around the world with our universities? We appear to be doing enough on our standards and certification to help industries establish themselves as leaders. I believe, Caroline, this question should be addressed to you.

Caroline Dinenage MP: It is a really important question. We are well placed to take a real strong leadership role on AI, because we are, as you say, third in the world at the moment under current rankings. As one of our success stories, we are third in the world for producing tech unicorns.

We have more tech unicorns, these billion-dollar mythical creatures, in the UK than Germany, France and the Netherlands combined. That is really important.

We are fourth in the world for scale-up investment, behind only the US, China and India; £10.1 billion was invested in UK tech companies in 2019. We have now overtaken the US for foreign investment per capita. Part of that is having the right business environment and skills, but it is also having a reputation as a safe, ethical, humane and attractive place to do business. We are keen to flex all the opportunities that come from that and use it to take a strong leadership role in this environment.

Amanda Solloway MP: Something that I am very conscious of, under my portfolio, is ensuring that we encourage start-up businesses and SMEs, while also looking at scale-ups. We have a responsibility to make sure that we are supporting all of these. AI must not be underestimated. I know we have said it time and time again, but I just see it as being so useful. It takes us forward and leads us into the future. We are both absolutely in agreement on that.

Lord St John of Bletso: Could I ask you to elaborate on what we are doing to attract the best AI talent from around the world to work with our universities?

Caroline Dinenage MP: It is partly about having a global reputation, which we get from all these successful businesses. It is about having not only the right economic and legislative environment to succeed, but a reputation as a country that does this really well. It is partly about making sure that the investment is there. We have the ambition to raise total R&D investment to 2.4% of GDP by 2027. As Amanda says, it is about having access to scaling capital. Alongside capital, accessing talent is vital. The new points-based immigration system rolling out from January will be really favourable to STEM talent, which we desperately need for our tech scale-up.

Amanda Solloway MP: To refer to the R&D road map that was introduced on 2 July, we are really conscious of utilising talent from around the world, working collaboratively and working globally. The Office for Talent is looking at making sure that we keep people here by offering lots of opportunity, and AI is a massive opportunity, but also that we attract people. With the road map, I have looked at laying foundations and, going forward, how we attract all that talent. The visa will definitely help with that. There are lots of things that we are mindful of.

Lorna Gratton: We are investing £50 million in Turing AI fellowships, specifically to attract and retain the very top cutting-edge AI talent to the UK. We also support Tech Nation, the organisation that helps UK start-ups scale up. Some of our most successful unicorn companies have been through those programmes. It runs specific programmes to help AI companies scale, to make sure that we genuinely stay cutting edge.

As the PM mentioned in his speech to the UN General Assembly last year, we are looking to engage further in standards organisations internationally to make sure that the UK's norms and values are represented at those organisations and reflected in decisions that they take. This shows the UK at the forefront of innovation in this area, as a great place to come and run an AI company.

Lord St John of Bletso: What mechanisms can be put in place, Lorna, to enable more collaboration between universities and industry? What lessons have been learned from our main competitors?

Lorna Gratton: It is a really good question. You heard from Wendy, who is on the AI Council, earlier in this session. The AI Council provides us with lots of input and ideas on this. The Office for AI works really closely with UKRI on how we can get successful spin-outs out of university. That will be a focus of our work going forward: how we make sure that the benefits of AI are not concentrated in individual universities but reflected in productivity increases across the economy through widespread adoption. The council is very mindful that that should be a focus for government going forward and we listen to its advice regularly.

Lord Clement-Jones: Thank you very much. That was a very brisk answer. The Select Committee was very keen on using the British Business Bank in the future to fill that scale-up capital gap, which is still there and is an impediment to companies not selling out too early. That was one of our observations, which still holds true. Ministers and Lorna, thank you very much indeed. It has been an excellent session.

The Chair: Can I reiterate those comments about the government witnesses and, indeed, all the witnesses, and thank them for the generous time and deep expertise that they have shared this morning? I would like to thank in particular Philippa and our Committee staff, as well as the technical colleagues, for the smoothness of the process this morning, given that this is a trailblazer for this innovation today.

The AI Committee, Lord Clement-Jones and his members, will draft a report and that will be forwarded to the Liaison Committee for agreement and then publication. One witness today, I believe Professor Michael Wooldridge, used the phrase "stick with this". The Liaison Committee is indebted to the AI Committee members and in particular the witnesses for, indeed, sticking with this.