

Science and Technology Committee

Oral evidence: [Work of the Centre for Data Ethics and Innovation](#), HC 1927

Tuesday 5 February 2019

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[Watch the meeting](#)

Members present: Norman Lamb (Chair); Vicky Ford; Bill Grant; Darren Jones; Stephen Metcalfe; Carol Monaghan; Damien Moore; Graham Stringer.

Questions 1 - 74

Witness

[I](#): Roger Taylor, Chair, Centre for Data Ethics and Innovation.

Examination of witness

Witness: Roger Taylor.

Q1 Chair: Welcome. It is very good to see you. Thank you for coming. I understand you would like to get away at 11, if possible. It should be achievable, particularly as we are starting a little early.

First, will you set out your priorities over the next 12 months—the initial period?

Roger Taylor: Our priorities are to demonstrate that this is an effective answer to the issues raised in the Government consultation paper and, prior to that, by a number of organisations, including the House of Lords Select Committee on Artificial Intelligence and the Royal Society.

We have clear terms of reference. We have £2.5 million over the next 12 months to try to get up and running and to show that we can have an impact on these problems.

I will say how we are thinking about that. A lot of work has been done on thinking about the principles. Our job now is to ask, “What does this mean in practice? How do we create the governance regimes that will enable us to benefit from artificial intelligence, while ensuring that the way in which it operates is consistent with public attitudes and democratic values, and that it behaves in a way that is fair and that the public trust?”

Q2 Chair: Will part of that be making recommendations to Government about what law needs to change to guard against potential risks?

Roger Taylor: Yes. Advice to Government about changes in the law and identification of regulatory gaps and places where regulatory powers or capacities need to be strengthened are certainly within our remit, as is advice to organisations that are using artificial intelligence.

Take, for example, the use of artificial intelligence in HR systems for recruitment or by the police to support community safety. The question is not just, “Does the law need to be changed?” That may absolutely be an issue, but it is as much about whether the police service has the appropriate governance of how it is using artificial intelligence. Is it able to assure itself that this is not biased, that it is operating fairly and that the public support what it is doing?

Similarly, with an HR system, if the Government are using such a system, do they, as purchasers of that system, have appropriate assurances? Do organisations know what they are selling? Are they on top of what they are doing? Are they confident that it is consistent with equalities and human rights law, and not biased against people?

Our work will try to identify at every step of the Government’s chain where things need to be strengthened. In some cases, it will be about the



organisations purchasing or providing systems. In other cases, it may be about the regulators and, ultimately, the Government and the law.

Q3 **Chair:** Is there also a public awareness-raising element to your work?

Roger Taylor: Clearly, with a budget of the scale that we have, it would be over-optimistic to believe that we could make a significant impact on public awareness. Therefore, I would focus less on public awareness and more on listening to the public and understanding their anxieties—what they regard as acceptable and what they do not regard as acceptable.

In this initial period, certainly, our key role is to understand public attitudes, and the diversity of those attitudes—particularly thinking about communities that are most affected by the implementation of these technologies—and to be the voice of that into the organisations using the technologies.

Q4 **Chair:** Presumably, public attitudes are partly based on a lack of awareness of what is happening at the moment. Isn't there a role for someone to raise public understanding and awareness of how decisions are being taken?

Roger Taylor: That is exactly right, but, in many cases, that responsibility will lie on the organisations themselves. For example, if the police are using an AI system, it is incumbent on them, first, to make people aware of what they are doing, and, secondly, to have consulted appropriately with the public and tested these systems, to make sure that they can answer the public's legitimate questions about whether they are confident that this is sufficiently accurate and unbiased—that it is benefiting them collectively and is not harmful.

Q5 **Stephen Metcalfe:** You said that, rather than raising public awareness, you want to be able to listen to the public. Before I ask my question, I should declare my interest in this area, as co-chair of the all-party parliamentary group on AI. How do you go about listening to the public? How do you make sure that you are listening to a broad enough range of views, so that you are getting the right picture?

Roger Taylor: That is a very interesting question, and one we are working on currently. We will publish a strategy before the end of March that will lay out our thinking in detail. Everything I say today is subject to a process we have been through. We had the second meeting of the board very recently and have gone through a draft. The board will view that again. We are currently talking to stakeholders and will view the draft again at the beginning of March, before launching it. Everything I say should be taken in the context that we are working these issues through.

We are thinking about it at every level. To go from the top, we are thinking about how the board needs to engage directly. For example, we are looking to arrange our next board meeting with the Consumers



Association, to give the board a chance to interact directly with people and to talk about their issues.

Part of our terms of reference is “analyse and anticipate”. Those are the words that are used to describe it. It is about understanding where there are risks and where there are opportunities we are not able to take advantage of, often because of a lack of clarity about effective governance and how to use these technologies safely. In terms of how we prioritise those risks, we are looking both at how we can engage with civil society organisations and how we can engage directly with citizen panels.

We also think about it when we are looking at a specific project, such as a review of bias. There are two areas we are looking at. One is a review of microtargeting. The other is a review of management of risk of algorithmic bias. In both reviews, we are looking at specific issues.

It is really important to say that, on the one hand, there are some common themes that run through all these issues. On the question of management of bias, there are similarities between operating a credit risk system, using AI, that is unbiased and operating a policing system that is unbiased. Although there are links, the specifics and the consequences are very different. You asked whether we are hearing the right views. The views that need to be heard in relation to a policing system and the views that need to be heard in relation to a credit system are different. It is very much about who is affected by them.

The last point to make is that there are the normal methods. It is about pulling together panels and thinking about how we have representative groups of people. We are particularly interested in exploring how to use digital mechanisms of engagement, because, at relatively low cost, you can reach large numbers of people and have quite sophisticated conversations. We must bear in mind the risks around that. Exactly as you point out, there is a risk that you do not necessarily talk to all the people you need to talk to. Therefore, we are very conscious of the need to have direct public engagement, alongside electronic systems.

Q6 **Stephen Metcalfe:** This is a comment, rather than a question. It is often the hardest to reach who are the loudest to shout when something happens. Digital is great, but, potentially, those who will shout the loudest are not digitally savvy.

Roger Taylor: I absolutely agree. It is often the people who are most affected by systems who get least chance to express a view before they are deployed.

Q7 **Chair:** You have already said something about what you are currently working on, including work on bias. Will you say more about your current work plan and how you intend to report on the outcome of the work that you do?



Roger Taylor: Again, we are working on this at the moment. We think that there are three levels. Part of our “analyse and anticipate” function needs to have some kind of high-level view of the landscape of where there are risks and opportunities. Within the budget, we will not be able to do an in-depth understanding of exactly where algorithms are being used across the entire economy, but we think that we can generate a sense of where the opportunities are and where the risks are. That will be put out in an initial report—

Q8 **Chair:** There will be a report that identifies risks and opportunities out there?

Roger Taylor: That is exactly right. We think it will probably be available in a variety of formats. Obviously, it will be published electronically. We will also look at how people may be able to interact with that kind of information.

We then have the two in-depth reviews, which will produce reports at the end of the 12-month projects. They will be specific to those areas. In the bias project, for example, we want to work across a range of sectors. It is quite important that the centre is cross-sectoral.

Q9 **Chair:** You are looking at criminal justice, employment, health and so forth?

Roger Taylor: Precisely. In each case, we will work with partner organisations to develop the appropriate governance and to make sure that, in finance, we are not doing something that is completely different from the way in which we are thinking about HR, where there are common approaches and standards. We want to develop those.

Crucially, it is about learning, because some areas have thought this through much more effectively than others. We must share learning from those areas that have greater insight than others. The report that will come out of that will address issues such as how you can have an effective governance system that controls for bias—what evidence you should be producing, what analyses you need to do, what processes you need to go through to assess that evidence, and who you should be talking to about it.

Q10 **Chair:** You will look at the role of auditing, for example?

Roger Taylor: That is precisely right.

Q11 **Chair:** The Turing Institute has recommended that that should be part of the landscape.

Roger Taylor: That is exactly what we are looking at. We want to implement and to test these processes. Clearly, working with partners is a key part of how the centre will work. It is partnership working here, so we need to bring our partners with us. We are in discussions with them about how this will work. A positive thing to say about that is that there is a significant desire from across the economy and across Government to



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have a consistent approach to how the governance of these systems operates.

Q12 **Chair:** You have the one-year piece of work on bias. You mentioned one other. Will you describe that?

Roger Taylor: Targeting is the other in-depth piece of work. Again, this is in development. We are looking at a review of the regulatory landscape across advertising, media and sponsored media. It will look at the desired outcomes from regulation and where there are potential regulatory gaps. There has been a lot of work that has indicated the unease that many people feel about microtargeting. There is a lack of understanding.

Q13 **Chair:** This is online digital companies targeting consumers, and so forth?

Roger Taylor: That is exactly right. It is the use of very specific information about—

Vicky Ford: Or it might be funded, very anti-remain organisations microtargeting with hate messages MPs in their own constituencies. I declare an interest.

Chair: Yes. It can be commercial or political.

Q14 **Vicky Ford:** It can also be incredibly divisive.

Roger Taylor: You are absolutely right. Perhaps we will come back to that.

On the reporting, there is the project report that I have described. In our terms of reference, we also have to lay a state-of-the-nation report, which goes to the Secretary of State. The first of those will be in 2020. It will then be laid before Parliament.

Q15 **Chair:** Good. How many days a week are you committing to the centre?

Roger Taylor: The job that I am currently doing is for two or three days a week.

Q16 **Chair:** Is that working out okay? With the funding that you have and the level of commitment that you are able to offer it, within your contract, do you feel that that is about what is needed?

Roger Taylor: I think that that is an appropriate amount of time. Clearly, with a remit this vast, every extra hour that you can spend on it is well spent. I think that it is an appropriate time commitment that is adequate for doing the role.

Q17 **Chair:** Are you able to manage your roles between this, Ofqual and HMI Probation?

Roger Taylor: That is exactly right. The Ofqual role is one to two days a week. I spoke to the chief regulator before applying for this role. I think



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that Sally is very comfortable that this is a workable arrangement and that I can play my role at Ofqual effectively while also doing this.

Chair: Good.

Q18 **Vicky Ford:** Will you take us through how the governance structure works, describing the decision-making processes and how you set it up? I am delighted that we have set it up. We are the first in the world, I understand. Will you take through the governance structure?

Roger Taylor: There is a board. At the moment, the board exists as an advisory committee within DCMS, but there is a plan to put it on a statutory footing.

Q19 **Chair:** Do you have the timescale for that?

Roger Taylor: "At the earliest possible opportunity" is the wording. Clearly, there is not a lot of legislative time available at the moment. We are hoping to address this early in 2020, but I cannot make any—

Q20 **Vicky Ford:** Will you take us through the board make-up and tell me what difference it would make if you were on a statutory footing, rather than not? Take the board make-up first.

Roger Taylor: On the board make-up, I am delighted by the board that we have brought together, because it brings a range of different perspectives to this issue. On the one hand, we have people such as Adrian Weller from the Alan Turing Institute and Kriti Sharma from Sage, who are working directly on the frontline. We have people from the data industry, such as Edwina Dunn. We have very experienced people from regulation, such as Glenys Stacey and Patricia Hodgson.

There is another category. I do not know quite what to call it, but they are people whom the public would rightly trust. We have Steven Croft, the Bishop of Oxford, and Robert Winston, whose work on ethics and IVF is very well known. I think that we have a really effective board. It has now met twice and is operating extremely well.

You asked what difference putting it on a statutory footing would make. Frankly, I do not think that it would make the blindest bit of difference, because that board is going to operate independently. We are quite clear about what our role and our duty are in this situation. Although we certainly think that it is appropriate to put this on a statutory footing, and we look forward to that, we think that the pre-statutory period is a useful time in which to establish the operating model and what the powers and the scale of the centre should be to address this issue effectively. I do not think that, in the meantime, the fact that we are not on a statutory footing is an issue. Our only powers, as currently structured, are to advise Government. That is what we will do.

Q21 **Vicky Ford:** Given that other parts of the world are looking at this and asking, "Should we do the same thing?", isn't it important that it is on a



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proper statutory footing, to set that example?

Roger Taylor: Yes, I think that it is. If you want to have an independent advisory body, securing its independence and its terms of reference in law is absolutely the right thing to do. I am simply saying that I do not think that, in practice, it will be an issue.

Q22 **Vicky Ford:** You are speaking from a practical point of view?

How often do you intend to meet? How are you engaging with the public? Can the public come to your meetings?

Roger Taylor: We have two structured meetings where we will organise interactions between the board, the public and civil society. We are pleased to operate in a transparent way, publishing our minutes and agendas and being clear about the process. At the end of March, we will publish our strategy, saying what we hope to achieve over the next 12 months and how we will go about it. We will also publish the specific plans for the in-depth reviews that we are doing, in which we will say how we propose to go about them and what the outputs will be.

We have a significant programme of stakeholder engagement, because very few organisations in the world are not thinking about this. Therefore, we have a major programme of just getting to meet all the people we need to meet, so that we can understand their issues. They include regulators, civil society, academics, industry, start-up businesses and other Government Departments. There is a very wide range of views and insights we need to connect into.

Q23 **Vicky Ford:** If something needs to be put on your agenda, how does that happen? We know that this is an area that is moving very fast. For example, let us take the tragic topical issue of social media and suicide-related matters. How does that get on to your agenda? How quickly can that sort of development get looked at?

Roger Taylor: We are thinking about this. On the one hand, these issues are complex. With our in-depth reviews, we do not really want to have anything that runs for more than 12 months. We are thinking about it as a six-month sprint, but, if we are talking about how you audit a system, we need to put some proper time and effort into reviewing that.

At the same time, we need to be able to respond promptly where there is an issue of public concern. We are just thinking through how we allocate our resources to allow us a sufficient resource to take an immediate look at particular issues and to identify next steps, or the degree to which something needs to be done. For example, facial recognition is another area.

Specifically on the issue of suicide, self-harm and the impact of social media on mental health, it is worth stressing that a lot of work is going on, particularly with the online harms White Paper. The other key



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principle is that anything that we do has to be additive to the work that others are doing. In any area we look at, there are—

- Q24 **Vicky Ford:** That takes me to my next question. I know that you discussed at your board meeting having a framework agreement with DCMS. Presumably, that is how you want that additive part to work. Will you explain a bit about how you want the framework agreement to work? When may we expect the agreement to be published?

Roger Taylor: I expect it to be published in March. We are currently agreeing it. The process that is laid out in the framework is that the centre will write to the Secretary of State. We meet quarterly, but we will write at the beginning of the year, saying, "This is the proposed programme of work that we intend to carry out." There is then a discussion, and that is agreed with the Secretary of State. Subsequently, the Secretary of State can say at any point, "I really think that you should address this issue." The centre will respond to that request after considering it and establishing that it can do something useful and effective in response.

- Q25 **Vicky Ford:** How does the framework agreement make sure that the board's independence is not compromised?

Roger Taylor: It is structured in the fact that the letter to the Secretary of State is signed off by the board and the final agreement has to be agreed by the board. In a pre-statutory phase, the board's independence is determined by the behaviour of the individuals and their willingness to agree to something that they regard as being a sensible use of public money.

- Q26 **Chair:** So you feel able to criticise?

Roger Taylor: Yes.

- Q27 **Chair:** Let us say that you make a recommendation for legislation and nothing happens. You will not hesitate to call out a failure?

Roger Taylor: Yes. The entire purpose of an independent Government advisory body is that it is able to advise Government. That includes both saying, "These are things that you should do that you have not done yet," and saying, "These are things that you have done that you should not have done."

- Q28 **Carol Monaghan:** How often does the centre plan on publishing its reports on Government recommendations and their uptake?

Roger Taylor: That would be part of our annual report on the state of the nation. There is a state-of-the-nation report and our annual report, which is an accountability report that will cover those elements and will be annual.

It is an interesting question. Obviously, we will publish on subject matters more often than that—that is currently the plan. If you are asking



whether the centre should report more often on its own performance, that is an interesting question that I will need to take away. A core part of how we are thinking about understanding our own impact is uptake of recommendations. Given the timeframe for that to happen, I am not sure that reporting more frequently than annually would add a huge amount.

We are also very interested in looking at how we collect on a systematic basis the views of the various stakeholders interested in the work that we do on whether we are addressing concerns and adding value. That could be looked at more frequently than annually. I do not know whether that was the thrust of your question.

Q29 **Carol Monaghan:** But you would see that as a shorter or less thorough report, if you are talking about reporting more often?

Roger Taylor: Yes. It is likely that that would be a consequence of it, but it might still be valuable. I would like to take that away before committing to do one thing or the other. At a minimum, we would report annually.

Q30 **Carol Monaghan:** Vicky has asked about engaging with the public. She has given a couple of examples. Have you discussed how you engage with the public and the processes that might allow that to happen?

Roger Taylor: The first thing to say is that there has been a public consultation about the remit and the way in which the centre will operate. We are now developing a strategy. We are talking to civil society organisations and to organisations that have a lot of expertise and experience, such as Nesta and Doteveryone, which have quite established mechanisms for public engagement.

This is quite well-understood territory. As I said, we are deciding exactly what our approach will be, but it will draw on well-established mechanisms. It is absolutely central to how we operate. The key function is to establish mechanisms that the public trust as being legitimate ways of using these systems, so it has to be at the core of what we do.

Q31 **Carol Monaghan:** Part of public trust, of course, is transparency and openness. We know that you will be working with Departments such as the MOD and that there will be highly sensitive information. How do you balance transparency with dealing with information that is as sensitive as this?

Roger Taylor: Clearly, when deliberating on ethical issues and considering information that may not be public, you need to do that privately. The transparency comes from the way in which, as you develop recommendations, you engage with people and test those recommendations. You can then present a very clear rationale and argument for why the recommendations have been reached. That process of how you generate recommendations and work with the public to do so seems to be the key to it.



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Q32 **Carol Monaghan:** If the information is less sensitive, do you see the centre being able to be more transparent about what is shared with the public?

Roger Taylor: Yes.

Q33 **Carol Monaghan:** There might be a concern that there were closed doors, but you see that there will be distinctions between potential—

Roger Taylor: That is absolutely right.

Q34 **Carol Monaghan:** Finally, how do you plan to spread best practice throughout Government Departments?

Roger Taylor: Again, we are thinking about this. We have started discussions with Government Departments that are looking at the use of these technologies. For example, we have talked to the DWP, which has various ideas. I sit on the advisory board that the Department of Health has established to start addressing how we adopt technologies. I do not know the precise mechanism by which we are going to do this, but a central part of our function is to understand what other Government Departments are trying to achieve and to help them.

One of the key areas where there is a lost opportunity and there are potential benefits to the public is where data is held in public sector institutions and could be used for public benefit—the health service is probably by far the biggest example—but lack of certainty about the ethical governance of those arrangements means that we do not benefit from them to the degree that we could.

Similarly, in areas the DWP is working on, such as open banking and open pensions data, we need to get the ethical governance right to ensure that people can allow the data to be used on their behalf, for their benefit.

These are areas where there is enormous value to be created. A key focus of the centre will be identifying where around Government there is a desire to do this and supporting, as far as is helpful, their efforts to do that.

I should stress that there is a specific arrangement with regard to health, with Fiona Caldicott as the National Data Guardian, advising on ethics of health data use. None the less, because of our cross-Government and cross-sector remit, that will be an area of interest for us.

Q35 **Carol Monaghan:** It is in its infancy at the moment. Do you think that in a year's time you will have a clearer idea of how this best practice can be shared? You say you are developing ideas at the moment.

Roger Taylor: That is exactly right. I will give you a sense of my thinking. A key part of it is thinking through the specifics of the practical implications for specific-use cases, rather than general advice. I have no doubt that there will be a level of general advice about how you assess



the impact of using algorithms and what the best methods are, but I also think that there is enormous value in working more closely on specific applications of the use of AI and working alongside Government Departments to see how they are implementing governance and to advise them on best practice. I would see it at both levels.

There is one thing we must be really clear about. Our terms of reference talk about providing support to regulators. In some people's minds, there has been an idea that, if you are a regulator faced with a problem to do with AI, you pick up the phone to the centre and the centre gets a hit team out to sort out your problems. We are not going to be operating at that level, certainly in the first year. We will need to pick our specific issues and to focus on those. A real tension is that there are so many things where we could add value, but, realistically, we could spread ourselves so thinly that we do not achieve very much at all.

- Q36 **Chair:** The other side of spreading best practice is where you have real concerns that need to be eradicated or addressed in some way. Have you come across areas of real concern? In the inquiry we did on algorithms we heard a lot of evidence about the fact that there are already significant developments on the ground in the criminal justice system—for example, decisions about whether to give bail rather than incarcerate someone—and the significant developments in America that may well end up coming here. One gained the sense that there could be a creeping emergence of this without any overarching principles established for where it should apply. What are you worried about from what you have seen so far?

Roger Taylor: What you are describing is absolutely an area of concern, which is why we have prioritised the review of management of bias, which I believe the Committee recommended. It is certainly true that standards are not consistent across different sectors. For example, AI has been widely used in HR to sort through CVs, and the level of scrutiny of that compared with, say, criminal justice is lower.

It is also true that nobody yet has the answer. All around the world everybody is thinking this through. Financial services are perhaps relatively sophisticated. We are talking to the FCA and the Monetary Authority of Singapore. Around the world people are working out the right way to do this.

- Q37 **Chair:** Yet the technology is being applied here and now on an ad-hoc basis in lots of sectors.

Roger Taylor: It is. We need to be cautious that we do not jump to the conclusion that, just because the technology is being applied and we do not know that we have mechanisms that are as effective as we would like to manage the risk around bias, a lot of harm is, therefore, occurring, because the traditional mechanisms of governance continue to exist.

- Q38 **Chair:** Of course. There is plenty of bias in traditional systems.



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Roger Taylor: That is exactly right. We would not suddenly want to start shutting things down, but there is a sense of urgency.

Q39 **Chair:** It speaks to the urgency of getting principles in place.

Roger Taylor: That is absolutely right.

Q40 **Darren Jones:** I should declare a couple of interests. I co-chair a parliamentary commission on technology ethics at the all-party group on data analytics, and will probably be advising about powers for your centre. I have forgotten the second one, but I will try to remember it in the course of my questions.

My questions are specifically about the powers that you have. We have talked already about your role in advising Government. Essentially, you report to the Secretary of State for DCMS. If you wanted to have a look at the DWP and it said no, or made it very hard for you to do so, what powers do you currently have that would require it to co-operate with you?

Roger Taylor: None, apart from the power to say this is what has occurred, that we have a concern but have not been able to get co-operation in looking into it. Perhaps before we get to that point, internally the aim of the centre is to establish itself as an effective and well-networked organisation, such that, when we say this probably needs looking at, people's instinct is not to say, "Don't come anywhere near it," but, "We recognise this would benefit from an independent voice to look at how it is operating." That would be our ambition.

The objective in the first period is to test this model and establish whether it works. If the first step is to say there should be more powers for the centre, you correctly point out that the first thing you might look at is whether it should have powers to require information of some sort. At the moment, my sense would be that in our initial engagements with other Government Departments, regulators and industry, there is a desire within some sectors, but not all, to engage with this, which gives us plenty of scope to establish that we have ways of addressing the legitimate anxieties of the public and other stakeholders.

Q41 **Darren Jones:** We have already taken evidence from chief scientific advisers who have noted that some Secretaries of State like to listen to evidence and others do not. If you were bidding for new powers, is there anything that you think the centre could have that would allow for a change in political leadership that would continue to ensure your relevance and that you were listened to?

Roger Taylor: Under the current arrangements the Secretary of State is required to respond to recommendations, so that is the limitation of it. I think the appropriate thing for us is to test this model before making a bid for new powers. However, I would agree that the natural order of things would be, first, to seek powers to request information. You might



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then go to powers for other regulators to respond to recommendations, but I think it would be inappropriate to press for that at this stage.

Our objective over the next year is to establish that we do have a model that could work and, to the extent we do not have one that works because we lack appropriate powers, to identify that fact and come back here and hope to tell you about it, or make appropriate representations to Government.

Q42 **Darren Jones:** You will report on that as you go through?

Roger Taylor: Yes.

Q43 **Darren Jones:** I do not want to go into the budget specifically, because there will be questions on that later. However, I was very conscious that funding was announced for specifically named projects for the centre in the footnotes to the budget document. It was great to see they were being funded, but it did raise a question in my mind. Given the independence of your board, if, for example, you wanted to look at the impact on future work and, therefore, the way DWP or BEIS works, do you feel you have enough autonomy at this stage to be able to draw down funding to do particular work where there is perhaps a tension between Government policy and the work you want to do as the centre? You have today talked about wanting to be helpful and where you are being invited, which is great, but there is bound to be some conflict. How do you envisage working through that?

Roger Taylor: To be clear, the £2.5 million budget is not conditional upon specifics, but we have agreed to pursue particular bits of work. I am about to write to the Secretary of State and say, "This is what we have agreed," and sign it off. The work we are doing came out of discussions between the centre and the Treasury and the Department, and we feel that we have been able to determine and listen. We have done a lot of work looking at all the different things that different organisations have recommended we should look at, and we feel we have reached an appropriate point.

As for going forward in future, it is important that there is a core sum of money. An independent advisory body has to have a degree of independence in what it chooses to look at. As it moves on to a statutory footing, you are absolutely right: the board and I would certainly be nervous of money perhaps being too tightly tied to specific projects. That would limit its independence to some degree. However, it will also necessarily be the case that, should Government wish something to be looked at, but the cost of doing it is not viable within the centre's budget, we would have to say that to do it would mean—

Q44 **Darren Jones:** It would have to pay for it?

Roger Taylor: Yes.

Q45 **Darren Jones:** You are currently within DCMS. I remember my second



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point. I tried to put you on a statutory footing in the Data Protection Bill but failed miserably. One of my arguments was that you should have been in the Cabinet Office with cross-departmental oversight, as opposed to being specifically within DCMS. Do you feel that being in DCMS will restrict you in any way, or do you think siloed Government Departments are open to you coming in? We have heard evidence from the Government Digital Service about the difficulties it had in trying to go to Departments and telling them how to do things. Do you think that being hosted in DCMS will be a difficulty for you?

Roger Taylor: No. I have not encountered anything that gives me a sense of that being a difficulty. It is an interesting thought.

Q46 **Darren Jones:** But there have been no problems so far?

Roger Taylor: Not so far.

Q47 **Chair:** You say that at the moment you are keen to test the voluntary approach in getting information from organisations that you are looking at and so on. You have talked about your work on bias and the fact you are looking at the criminal justice system and so forth. So far, have you had good co-operation from police forces and others who are willing to share what they are doing and the data emerging from it?

Roger Taylor: Yes. My sense is that there is quite a strong desire among organisations to share how they are thinking about doing this.

Q48 **Chair:** They want to get it right?

Roger Taylor: Yes, and there is a nervousness that perhaps they are operating in a silo. They do not know what the expected standards are, and there is a desire to get together with others and work out the right approach.

Q49 **Chair:** So far, you have not witnessed any resistance from any quarter in co-operating with the work you are doing on bias?

Roger Taylor: No, but I should say it is early days. We have just had these conversations.

Q50 **Darren Jones:** On that point, the Parliamentary Commission on Technology Ethics did a roundtable on predictive policing. I forget the name of the academics, but they did a review of a police force's use of predictive analytics. In producing the documentation for them to review, essentially the whole thing was redacted because of commercial sensitivity. The suppliers said that their algorithms were commercially sensitive and, therefore, could not be shown to the people doing the ethics review for the police. The police felt that they had ticked the box in having an ethics review, but the people who did the report said, "When you are reading a document which says 'the...and, therefore', what conclusions can you come to?" Do you think that the centre will have to work with other regulators that have powers of enforcement to have unredacted documentation to be able to do the job properly?



Roger Taylor: I think that is right. For example, we were looking at targeting. We are working with the ICO, which has powers to demand information to look at where data are being used. The centre can then, as it were, test with the public the degree to which things that might be totally legal right now might none the less be regarded as unacceptable. Similarly, we are talking with the FCA.

Q51 **Darren Jones:** Do you need agreements in place to do that, or is it on an informal basis?

Roger Taylor: At the moment, it is informal. We are looking at creating MOUs with key partner organisations.

The objective is to establish governance of these systems that the public rightly can trust, and it is hard to see how you can get to that point if you cannot share sufficient information for people reasonably to trust what you are up to.

Q52 **Stephen Metcalfe:** A number of organisations—the Ada Lovelace Institute and the Alan Turing Institute—are looking at similar issues. What makes the Centre for Data Ethics and Innovation different, and where are there similarities? Do you intend to collaborate with these organisations?

Roger Taylor: I have met Ada Lovelace and discussed this. It will focus on particular aspects and is very much thinking about the gap between academic research and public understanding. Its remit is not to advise Government. Our remit is not focused on the very long-term issues; we are focused on the short to medium term where we think there is a real risk of harm, or missed opportunities that we should be enabling, and identifying specific recommendations right now that can be implemented. Therefore, we have a different remit. Ours is a Government advisory body; theirs is a civil society organisation thinking through these issues in a slightly different way, but we talk to each other and we are going to be careful not to repeat each other's work. It is very appropriate in these situations to have both a Government advisory body and independent civil society organisations that will come at things from different angles.

Q53 **Stephen Metcalfe:** Where does the Alan Turing Institute sit in that?

Roger Taylor: The Alan Turing Institute is perhaps a closer link. Two of our board members, Dr Adrian Weller and Professor Luciano Floridi, are from the Alan Turing Institute. I have met Adrian Smith. The Alan Turing Institute is a centre of expertise in the techniques of auditing an algorithm, so we are thinking about how we draw on its expertise in the work we do.

Q54 **Stephen Metcalfe:** What I am trying to get at is whether it is correct to have so many different organisations all looking at the same thing but from different angles. Would it be better if it was all under one roof? I am not denying the importance of your existence, but just trying to get my head around it.



Roger Taylor: The Alan Turing Institute has academic freedoms and pursues whatever it wishes to pursue; its remit is not to identify Government policy. There needs to be an organisation thinking about this in a cross-sectoral way that has a handle on what is happening, can advise Government and whose remit is specifically to identify where there are missed opportunities, regulatory gaps and so on. You do need an organisation that is given that remit.

It is quite appropriate that in the first instance that does not try to substitute for the regulation of each individual area. AI will be used in every single area, and, if you are the FCA and are responsible for the financial system of this country, you have to be responsible for it whether it is done by humans or machines.

You cannot take a chunk of those regulatory responsibilities that is to do with machines and pass it on to somebody else. The idea of an organisation that sits above a specific regulator, looks at the landscape, identifies where it is weak and talks to Government, and in turn the public, to determine what is and is not acceptable, and then says, "This is where we can do more to enable this to be used effectively," or, "We need to try to strengthen the power of regulators and their capacity to deal with the problem," seems like a sensible answer to that problem.

Q55 **Bill Grant:** I want to touch on the prickly issue of funding. I understand that the initial amount was £9 million spread incrementally over three years to 2020-21. Do you think that funding is adequate to meet what I suspect will be evolving and increasing demands on the centre?

Roger Taylor: It is certainly true that, if this model works in the way I have just described, to deliver value and address the range of issues it would need to be funded on a larger scale. Part of the question depends on exactly what its remit will be. To what extent should it play a stronger role in, for example, public education? To what degree should it be able effectively to use stronger powers to collect information or support regulators? We need to do a bit of work and think through what we believe to be the right shape of the centre, but, even in its current format, to operate across the whole range of issues that I think the public would, quite reasonably, want us to operate, it would need to be on a larger scale than is currently budgeted for.

Q56 **Bill Grant:** Noting that it is in its infancy, have you given any thought to how the funding or budget may be reviewed, and by whom?

Roger Taylor: Yes. First, there is the annual review discussion with DCMS, which we are currently in the process of. Secondly, there is the spending review process, on which there is some initial thinking about the timing, which remains a bit uncertain. Then there is the conversation that will accompany any decision to move forward legislation and put it on a statutory footing. There is plenty of scope to discuss these issues both over the next 12 months and the next 24 months.



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Q57 **Bill Grant:** If I can just touch on the source of the funding, as we speak I suspect that you will be at the mercy of DCMS. Is it going to continue in that way, or do you envisage it being ring-fenced or direct funding? That is almost a wish list. How do you see it evolving?

Roger Taylor: It is evolving, and a similar question is whether the centre should report to the Secretary of State or Parliament. These questions have been left open in the initial period while the model is being tested with a view to addressing them when it comes to thinking about putting it on a statutory footing. Perhaps we need to reassess it in 12 months' time.

Q58 **Bill Grant:** At the moment you are at the mercy of DCMS?

Roger Taylor: At the moment our budget comes through DCMS.

Q59 **Bill Grant:** You envisage that that may change as the centre progresses and evolves?

Roger Taylor: Yes. I think at the end of 12 months we will have a view on that, and obviously it would be a matter ultimately for Parliament to decide.

Q60 **Damien Moore:** You have spoken quite a lot about listening to the public, engaging with organisations and working with partners, which is fantastic, but how does the centre plan to join in and influence the global conversation on AI and data?

Roger Taylor: I have a few things to say about that. We are engaging internationally. I have been to the US. We went to the G7 meeting in Montreal. We are starting to work in partnership with others. Sometimes there is a bit of a counsel of despair that says that nothing can be done about this; it is all about global industries. I do not think that is true; there is an awful lot that countries can do within their borders.

Most companies aim to obey the law. There are lots of areas where the stuff is being used. We have a huge amount in terms of health, financial services and the use of HR systems. In this country we have enormous traction. Across industry there are huge areas where we have plenty of traction.

Our first priority is to establish that we can govern this well in the UK. In doing so, it is important that we are in contact with international partners working on the same issue. I mentioned the Monetary Authority of Singapore. It has done some of the most advanced thinking about these areas in financial services. We need to listen to what others are doing, and there is barely a Government on the planet that is not now thinking about what to do about this.

Another good example is the work in Canada on having a framework for Government purposing of AI systems. That is a good piece of work on which we think we could work with them and build on, so it is important. Ultimately, where we feel we have good solutions, we want to go out and



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encourage our partners to adopt the same approach, because these will be global industries and as far as possible we want the regulatory and Government regimes to operate consistently around the globe, particularly in democratic pluralistic societies where we have particular issues about defining the right way to use these systems.

Q61 Damien Moore: It is good that there is positivity, but what challenges do you see working with international organisations?

Roger Taylor: I should stress that this is not an area where I have a huge amount of experience, but one of the reasons for focusing on what we can do within one country is that the speed at which you can make progress in getting international agreements is often slower than it is within one country, but that is just the nature of those conversations.

I would stress that, as always, it is related slightly to the number of people involved in the conversation. Bilateral conversations may often be as valuable as multilateral ones.

Q62 Damien Moore: You mentioned Canada. How does the centre compare with the Vector Institute in Canada or the DFKI in Germany?

Roger Taylor: We are different. If you take the German example, it is much more of an advisory committee. We are an organisation with a more established staff and an operating model; we are not just here to advise on issues and say, "That's likely to be a problem." We are here to find solutions and ways we can use this stuff safely. We are not quite the same.

We are probably a bit closer to the Canadian model. I am less familiar with that and would not like to comment too much on it. Every country is coming up with something. France has made it part of the Ministry; it is part of Executive government. It is thinking very much about the same issues we are thinking about, but without the independence.

Governments around the world are coming up with different models. I think we have quite a good answer. Over the 12 months we will test the model that we are proposing in the UK. I think the answer being put forward is a sensible one and has a good chance of being the right model, but we will definitely need to review it in due course.

Q63 Damien Moore: Would you say that, rather than learning lessons from other institutions around the world, we can give them some lessons?

Roger Taylor: We certainly could. They will hopefully learn as much, if not more, from us as we learn from them. That would be where we would like to be.

Q64 Vicky Ford: Bill suggested that funding would need to evolve and grow. Do you want to give any order of magnitude?

Roger Taylor: I prefer not to because we would need to think it through very carefully.



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Q65 **Vicky Ford:** Do you think this would build up over a period of years?

Roger Taylor: Yes, partly because this is not an area where we know immediately what the answer is. We have to scale it up; we have to establish it.

Q66 **Vicky Ford:** You are not saying that you are being constrained by the money that you have today?

Roger Taylor: The only thing I would say is that in much of our work we are somewhat dependent on the speed at which our partners wish to operate. To take the example of auditing the bias in algorithms, we are not able to do that for the banks, police forces and so on, so we are reliant on them working with us and testing different approaches.

Q67 **Vicky Ford:** In the previous Budget, the Chancellor announced a 2% digital sales tax. A number of people have said to me that they want to spend this on stopping online harm, the social media abuse of women and greater education of children. Do you have a view on how that should be funded, or how one should include industry in funding the ethical work, or is that a whole other question?

Roger Taylor: I do not have a view on it at this stage, and I would like to come back to it. As long as there is a clear break between the funding and how it is applied, I do not think it necessarily creates tensions, but we need to think it through very carefully. If you found yourself regulating an industry where your income depended on industry thriving, it would not really work, in the sense that if it was to thrive it would have to behave unethically.

Q68 **Vicky Ford:** There are lots of questions to seed in your mind?

Roger Taylor: Yes.

Q69 **Chair:** If you have any further reflections on that, come back to us.

Roger Taylor: Yes.

Q70 **Darren Jones:** Prime Minister Trudeau and President Macron have said they are going to set up an interparliamentary panel on AI. Has there been any conversation between your centre and the Government about the UK's involvement with that?

Roger Taylor: No. There have been initial conversations with the French Government about working together. It is an interesting development. It is absolutely worth pursuing and international co-operation is important. However, I would also like to stress that, in terms of the use of my time and the centre's resources, we should prioritise coming up with solutions that the public can trust in this country. That should be our No. 1 area of focus.

Q71 **Chair:** AI is only as good as the data it learns from. In the context of health, we heard evidence about the extent to which data in the NHS are dirty; they have not been cleaned up properly and, therefore, cannot be



relied upon. There is also a question about whether the social determinants of health—socioeconomic indicators—are properly reflected in the data we have. Will all that be part of your investigation into bias? It seems to me that the best way to test both the data and AI combined is through an auditing-type approach because you are seeing what emerges as a result of the combination of the two. What thoughts do you have on that?

Roger Taylor: It is a very good question that highlights the complexity of the situation. In testing for bias, what is your gold standard for the truth of the world, as it were? For everything, you are drawing on data to understand how the world is behaving, but no data are perfect. It is important to understand that there is not just a technical answer—you come up with an equation and it is not biased. What you have is a messy world in which you have things that appear to operate beneficially for people and produce reliable results. The question is, how do you test the reliability of that? What evidence can you produce for the bias of it? Who is competent to assess that evidence? Perhaps most crucially of all, how do we have this conversation in a way that is sufficiently clear to the general public that they also have trust that this is being done in a responsible way?

That is a very difficult question. In particular, when you get into administrative data on health it can become extremely messy. It is one reason we are seeing the most rapid progress in these areas through the use of scanning data, which are relatively reliable and consistent. We see huge strides being made in the robotic ability to read a scan and identify whether somebody is ill.

On your point, to achieve a fair, legitimate and democratic data-driven world in a way is less to do with the algorithms. Algorithms are not relatively easy to produce, but that is not the challenge. The challenge is getting the data and access to it right, and ensuring that the people who can access it are doing it responsibly and with the appropriate level of governance to know that we have operating systems that are fair and beneficial. It is all about the data; data are absolutely crucial to the whole set up.

Q72 Chair: We have had evidence in our inquiry on algorithms and the extent to which within health—it applies also within police forces—individual trusts are entering contracts with innovation companies, whether it is DeepMind or whoever it might be. We called for some work to be done on ensuring that when contracts are entered into value comes back to the NHS. We have a unique dataset across a public health system and there is the potential for private companies to make very substantial profit, including in other jurisdictions.

Are you looking at that area? There are competing issues. There is the fact that through collaboration NHS patients potentially benefit—better diagnostics, prognoses and treatments—but there is also the issue of whether the NHS ought to be getting some financial payback for the



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benefit of all NHS patients. Are these issues within your remit?

Roger Taylor: They are within our remit. I am personally very interested in this question and would be keen to pursue it. I cannot say that at the moment we have identified a resource and budget to do it, or have an agreement with the NHS on how we might do it, but it is a really important issue.

Q73 **Chair:** But it is happening on the ground here and now.

Roger Taylor: Yes. I do know that the Department of Health is also focused on this issue, so it is a question of making sure we can add something useful to the discussions.

There is legitimate public anxiety. A lot of the issues have been about, how do you know you have not inadvertently transferred a whole set of value to an organisation that you never meant to give it? Do we have a reliable answer to that question?

There is also the issue about making sure we have not given somebody an unfair competitive advantage in dealing with the NHS. A number of issues have to be worked through.

The only thing I would say about whether there should be a payback to the NHS from the use of data is that that is a sensible suggestion, but I would prioritise. First, can we safely deliver the benefits? The benefits of achieving much greater and swifter access to more reliable and lower-cost diagnostics for our own population are hugely significant. The only thing I would be worried about is if we did not achieve that because we had spent months wrangling over a financial contract. I would not want it to get in the way of people benefiting from it.

Q74 **Chair:** You have to make sure you are considering all these factors in reaching a rational conclusion?

Roger Taylor: Yes, that is absolutely right.

Chair: Thank you so much. It has been a really interesting session. We appreciate your time, and you can get your train to wherever you are going.