

Science and Technology Committee

Oral evidence: Work of the Science Minister and Government Chief Scientific Adviser, HC 1826

Wednesday 17 July 2019

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Watch the meeting

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

Questions 193 - 308

Witnesses

[I](#): Chris Skidmore MP, Minister of State for Universities, Science, Research and Innovation; Paul Drabwell, Deputy Director, Science Research and Innovation Directorate, BEIS; and Harriet Wallace, Director, International Research and Innovation, BEIS.

Examination of witnesses

Witnesses: Chris Skidmore, Paul Drabwell and Harriet Wallace.

Q193 **Chair:** Welcome, it is good to see you all. Thank you very much indeed for coming. Can we do very quick introductions?

Paul Drabwell: I am Paul Drabwell. I am a deputy director in the science, research and innovation directorate at BEIS.

Harriet Wallace: I am Harriet Wallace. I am the director for international research and innovation at BEIS.

Chris Skidmore: I am Chris Skidmore, Science Minister.

Q194 **Chair:** How concerned are you about the prospects of a no deal and its impact on science?

Chris Skidmore: Since the withdrawal agreement has fallen by the wayside in Parliament, I have been determined to try to ramp up my communication and desire that we find a solution to continuing in Horizon 2020.

Q195 **Chair:** Let's say we get to the end of October and leave with no deal. How concerned are you about the impact of that on the science community?

Chris Skidmore: Hugely. We need to move ASAP to try to secure continuation in Horizon 2020 and other education research programmes. There is a specific issue I want to talk to the Committee about on that. Obviously, association in Horizon Europe will not even open until after we have left the European Union.

Two weeks ago, I was in Finland at the EU Competitiveness Council bilateral with Commissioner Moedas. We have to get around the table with Taskforce 50 to look at the issue. Given the withdrawal agreement and its principle that nothing is agreed until everything is agreed, can we not look at potentially taking to one side the education, science and research partnerships and coming to an agreement?

Q196 **Chair:** What response did you get?

Chris Skidmore: The glimmer of hope I see is that there is a regulation on the table now, yet to be approved by the EU Council. It was up for discussion at the previous EU Council. It did not materialise as a final resolution, but that regulation is that, even in a no-deal scenario on 31 October, as long as the UK continues to pay into the budgets for Horizon 2020 and Erasmus+, we will have continued full participation in those programmes for the rest of 2019. It is only two months extra, but it provides a paradigm shift away from the principle of everything being included in the withdrawal agreement. If the Commission is saying we can continue in full participation even in a no-deal scenario, which was never on the table before, I want to make the case, "Can we not, until



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the end of 2020, secure our full participation in Horizon 2020 and in Erasmus+ while the financial framework programmes continue to the end of their natural lifecycle, and then look to go into association with Horizon Europe with the best possible intent?"

Q197 Chair: In your meeting with the commissioner, did you discuss the possibility of an extension beyond the end of the year, or is the commissioner looking at this only as an emergency measure to ease the pain at the moment of departure?

Chris Skidmore: That is unclear, and it is not necessarily the commissioner's responsibility. It is Taskforce 50 that makes those decisions. I am keen to get the opportunity to speak with Taskforce 50 on these issues, if possible, but it will be up to Taskforce 50 to allow me to do so. Given the paradigm shift between having no deal but continued participation in its programmes, we should look to rip out that chapter of the withdrawal agreement and say, "Look, everyone agrees we should continue in these partnerships. Let's put the money on the table and do a deal. Let's get to the end of 2020 when Horizon 2020 finishes its financial framework and get into Horizon Europe association negotiations when we can."

Q198 Mr Gyimah: In a no-deal scenario, essentially, we are saying that we do not want a deal, so I struggle to understand the paradigm shift.

Chris Skidmore: The paradigm shift must be that we depoliticise our research education partnerships and that, when we look at them, they are European based. When it comes to Horizon 2020, Norway is still an associate member. How can we take them out of the political dynamic and see them as politically neutral, and something we want to pay for?

Q199 Mr Gyimah: That brings me to my second question. I see how the research and science community on the EU side wants to participate in the discussion, but what assurance can you give us that the highest levels of the Commission, who will be thinking about the UK and our relations with the EU in totality, share that view? That is what is critical. Do Barnier and his team share the view that you are articulating now?

Chris Skidmore: That is something on which I cannot give any certainty to the Committee on their behalf. The key point is that on the programmes that are favourable to the EU, like Erasmus+, they have come out quite early to demonstrate continuity for Erasmus. Even with the delay in leaving the European Union, we got through the cycle in late May of the Erasmus participations.

Some countries questioned the status of UK Erasmus participation for the future, but the EU Commission sent out a letter to all national agencies saying they must not discriminate against UK students. That has its full backing. There are moments when Taskforce 50 and the Commission will move. They move quite fast. The dynamic is that you do not see this as a linear progression; suddenly there will be a movement.



Q200 **Chair:** If we do not get what you are working on, to go back to what you said at the start, you have very significant concerns about the impact on science of no deal.

Chris Skidmore: Absolutely.

Q201 **Carol Monaghan:** Minister, this is not just about money; it is also about people. It is all very well to say that we will continue to pay into it, but there has to be some agreement that the movement of people is still required, and that is quite a separate issue. What work are you doing to ensure that there is participation not just in terms of funds but in collaboration and movement?

Chris Skidmore: There is an obvious issue when it comes to collaborative projects.

Q202 **Carol Monaghan:** But that is what Horizon 2020 is all about; it is about collaboration, so that is everything.

Chris Skidmore: No. Some of the most significant grants that we cannot participate in are the mono-beneficiary grants where there are no partnership bids. The issues around some of the Marie Skłodowska funding are some of the most acute. Those are not partnership bids.

That aside, the issue around partnership is one that I am acutely aware of, and when it comes to being able to deliver continuity in being able to form those partnerships, UKRI obviously has a role. It will be able to distribute the funds effectively but also cover the administrative costs. We have been clear in making that case. When it comes to the guarantees that are in place, I wrote to all EU27 higher education research Ministers to demonstrate the nature of the Government guarantee and the underwrite extension. That demonstrates that, even up until Brexit, any scheme that has gone in before 31 October, even if it is approved after that date, will have full funding for the lifetime of the project.

We are trying to provide long-term certainty. On movement, we have the leave to remain scheme that has been announced by the Home Office, which gives 36 months for EU residents. We have made significant moves on visa programmes, particularly around exceptional talent visa schemes. I hope that is work in progress to demonstrate that we should continue to have freedom of talent, even if we are ending freedom of movement.

Q203 **Chair:** Would you personally feel comfortable continuing in your role if you did not get the adjustment you were talking about with the commissioner, and the Government plan, if the negotiations fail, to leave with no deal?

Chris Skidmore: Yes, because we have got to have someone at the table to ensure that the science and research community has someone fighting for them. I am holding a reception this afternoon for ERC grant-winners—27% of all ERC grant-holders. People ask, “Why are you holding



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this gathering?" I want to hold the gathering to be able to communicate to those people that—

Q204 **Chair:** Do you feel it is a responsible thing to go to no deal, given the deep concerns you have about the impact on science?

Chris Skidmore: I think the dynamic even of an extension continues to pervade uncertainty. If we are to get to a position of leaving or not leaving, we just have to be able to do it, and, if we are to do it, just stump up the cash for any alternative scheme, or any mitigating scheme, even though it may be inadequate.

Q205 **Chair:** On the point about stumping up the cash, in the event of no deal will funding for the Horizon 2020 underwrite use funds from existing research and innovation budgets or will it be in addition to existing budgets?

Chris Skidmore: I am under the impression that it is in addition to existing budgets.

Q206 **Chair:** You are under that impression. Could you confirm that in writing to us, or are you able to firm it up now?

Chris Skidmore: I have always been under the impression, and have articulated, that this is additional money being made available by the Treasury for the underwrite guarantee and that the underwrite guarantee extension is not money coming out of UKRI or BEIS.

Q207 **Chair:** Are you conscious that concerns have been expressed about whether it is genuinely additional money, unless you feel able to strengthen what you are saying now?

Chris Skidmore: I thought I was quite strong in my answer.

Q208 **Chair:** But you are saying "under the impression." We need confirmation.

Chris Skidmore: It is additional money.

Chair: It is additional money. Thank you.

Q209 **Graham Stringer:** It is often said, accurately, that this country is a net gainer in terms of research grants through Horizon 2020, but through the regional development funds it is a net contributor to science elsewhere. Will the contribution to science that goes through the regional development funds come back to science in the UK after we leave?

Chris Skidmore: The RDF funds are the responsibility of a separate Department, although we now have a Minister, Jake Berry, covering MHCLG as well as BEIS in the portfolio, so he covers some of those funds. To be able to have joint departmental working in that respect is quite a positive opportunity. The shared prosperity fund will replace the regional development funds when it comes to our future relationship with Europe.



As for ERDF projects in the dynamic of deal versus no deal and what is approved and not approved, we will continue to fund them for their full cycle right up to the moment of them being approved, with us being in the European Union. Anything that is approved this year would continue to be funded until 2022. By now, the issue of a replacement is being worked on under the shared prosperity fund, and that will look to replicate it.

Chair: The point is whether it will meet the size of the net contribution.

Q210 **Graham Stringer:** What I am trying to get at is whether the money that is currently going to science out of the UK's budget will remain with science.

Chris Skidmore: That is a slightly different question.

Q211 **Graham Stringer:** Not really.

Chris Skidmore: Is it in respect of the regional development funds or the other science research budgets?

Q212 **Graham Stringer:** Where money is spent through other funds on science and we are a net contributor, the question is whether, when we come out, that money will remain in science. I realise that in the Government's budgeting they have it under different headings, but I would not like to see that money lost to science.

Chris Skidmore: The work Sir Adrian Smith is doing on future frameworks and how we can match what is lost in exiting the European Union is trying to look at what would be needed to put into the shared prosperity fund with respect to science and research. I understand that about 24% of the RDF is directed towards research and development.

Q213 **Chair:** You are aiming to match that with domestic funding through the Adrian Smith review.

Chris Skidmore: Sir Adrian Smith is finalising his report. He will present the top lines of his report to the high-level group on Brexit, which is meeting this afternoon. He will then seek to finalise his report, which will be published in early autumn, and that feeds into the wider conversation with the work MHCLG is doing on the shared prosperity fund. You would have to have the MHCLG Minister here for that, but it all feeds into the spending review and the nature of the funding that needs to be created.

Q214 **Chair:** I am conscious that we have a lot to get through, and we are already running behind schedule.

Chris Skidmore: I am happy to stay as long as you want.

Q215 **Chair:** The Campaign for Science and Engineering has expressed concerns about the administrative detail of the underwrite. At what stage are the negotiations with the Treasury in finalising the details of the underwrite? Has that now been resolved?



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Chris Skidmore: The details around Marie Skłodowska and ERC have not been finally resolved as yet, in having to demonstrate the underwrite guarantee that covers all existing projects. If we are a third country on exiting the European Union, because we have not resolved with the EU full participation, ERC and MSCA grants and some SME instruments will not yet quite have that guarantee. We have been working back and forth with the Treasury on whether there is a way we could achieve that funding and have it accounted for later in the spending review, but we have not reached a settlement.

Q216 **Chair:** Do you have a target date for when you will get it completed, because certainty is incredibly important to the sector?

Chris Skidmore: Once we have a new Administration and Chancellor, I will be straight to the table. I have already said to Adrian Smith that I need to get there ASAP to try to persuade the new Chancellor, whoever he or she is, that this is a day one priority.

Q217 **Chair:** Is the administrative system required to provide underwrite funding fully in place?

Chris Skidmore: Yes.

Q218 **Chair:** Will it be in a position to provide underwritten funding from 31 October?

Chris Skidmore: Yes. I am confident about the work taken forward by UKRI in terms of both the registrations and the portal. As of 12 July, we had 8,680 registrations. UKRI has set aside a budget to be able to recruit more staff.

Q219 **Chair:** What percentage is that of the anticipated figure?

Chris Skidmore: Off the top of my head, it is about 12,000 in total, but the issue about the 12,000 figure is that often they hold several grants. We think that the 8,680 are all higher education institutes. Every single funding partnership bid is covered when it comes to HE institutions. It is the SMEs that are still not.

Q220 **Chair:** It is quite an important area for SMEs. What are we doing to make sure they know what to do and to get them signed up?

Chris Skidmore: There are regular updates on no-deal preparations. We update them almost every two months, I think. UKRI is doing a significant amount of communications activity on that. It has stepped up and put aside additional money in its budgets to be able to cover not just the administration but reaching out to those SMEs. We think that for some of the SMEs linked to universities, when it comes to registration itself, it is almost reaching a point where we think we can go ahead.

Q221 **Chair:** I think you said that the Government will be in a position to provide underwritten funding from 31 October. Is that right?



Chris Skidmore: Yes. I am confident that where we and UKRI are with the preparations, administratively and financially, we are in place to be able to cover the guarantee.

Q222 **Chair:** As you were saying earlier, funding from ERC and MSCA programmes is not guaranteed by the underwrite. What progress has been made in establishing a suitable replacement?

Chris Skidmore: Those are two parts to the work that Sir Adrian Smith has taken forward. What are the alternatives we need to put in place, and what contingency measures do we need to cover them? That is not to say that we do not want to be able to continue in Horizon 2020 or not associate on Horizon Europe. It is very important—I make that clear. We want to be able to create an insurance policy, but also not to want to use it.

Q223 **Mr Gyimah:** Will the Swiss precedent of being outside the European research programmes for a short period of time cause some damage to the assigned space for a period of time? The value of this year for us is the multilateral collaboration. I want to know what plan B we have for multilateral collaboration to continue at the level it is if, for example, what you have outlined, which I think is a good idea, does not come off.

Chris Skidmore: You mentioned the Swiss example. In the UK, we have the second highest number of project participations in Horizon 2020. We are among the top five collaborators for 26 of the EU27 countries. There is almost universal concern among other countries in the EU27 that their major funding partner may be removed from the programme itself.

I have tried to make sure that I build up an extensive relationship with all the higher education research Ministers. I am happy to provide the Committee with a list of all the conversations and meetings I have had, both the bilaterals in the Competitiveness Councils and by telephone or separate meeting. From a European perspective, we have been looking to develop potential bilateral relationships with, say, the NWO in the Netherlands. I was in Berlin at the Going Global conference where I held a round table with the Fraunhofer, Max Planck and several other German research institutes. I am keen to ensure that on a research council by research council and institution by institution basis we reach out to be able to plug the gap, if that is needed.

Internationally, it is important to put on record that I view potential association with Horizon Europe as very much a hub-and-spoke approach to how we should be dealing with our future international research partnerships. We are European, and our partnerships are European. They should not be political; they should not necessarily be part of the EU. I know that they are, but can we try to change that dynamic? If we can, we can have the closest possible association with Horizon Europe when those negotiations open in November.



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I have also been meeting existing associate countries, in particular with the Swiss Minister, to have some of the discussions you mentioned about their experience in the past, and their experience with Erasmus. The Swiss have done a deal where participation in Erasmus allowed for continued participation in Horizon 2020. That is interesting because of the point about disaggregation. If you can match one fund with another to demonstrate that you are willing to continue with both, that is important, but the international research and innovation strategy that I published at Eureka in May this year sets out seven key pillars by which we want to expand our international partnerships.

Q224 Vicky Ford: Can you confirm that associate membership with Horizon Europe remains the preferred relationship?

Chris Skidmore: Yes.

Q225 Vicky Ford: How confident are you that associate membership will represent value for money?

Chris Skidmore: The regulations for Horizon Europe were approved in April and the final details need to be provided. The multi-annual financial framework still needs to be agreed on Horizon Europe. We have been there not just as a Government having the opportunity to be at the table, but British academics helped to draw up the programmes. Mariana Mazzucato has a mission-based approach. She was in Finland giving a presentation on her mission-oriented approach to Horizon Europe.

The interdisciplinary approach to Horizon Europe allows for the arts and humanities to be able to inform some of the subsets. From the grand challenge perspective we have set out, you could draw a Venn diagram to demonstrate that Horizon Europe is exactly covering some of the same challenge areas. I am very keen that we continue, because it mirrors a lot of the work that the UK Government have done under our industrial strategy, and it has been led by the UK. The question that arises is whether association in Horizon Europe can be the same model as association in Horizon 2020, or whether we can argue with the other associate members for a new form of association that will even allow for a continuation into ERC, MSCA and SME instruments. I will go into that discussion to try to make the case, in the same way as our partnership with ESA. We buy into certain pillars, but could we buy into all pillars?

Q226 Vicky Ford: Which are the missions that you find most exciting?

Chris Skidmore: When you look at the missions in Horizon Europe, personally I think the cancer mission has a huge amount of enthusiasm. There has always been the dynamic in Europe between excellence and expansion. In the healthcare mission that is set out, there seems to be almost universal agreement that it is a mission that should be followed.

As you know, I am interim Minister for energy and clean growth at the moment, and I am keen that we are able to demonstrate, even more so now, the value of science and technology in delivering net zero. It is



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striking when you look at the two different portfolios. There is common agreement over, say, the UK's partnership bid with Italy that the politics does not come into the climate change debate. Everyone agrees that the UK should be holding COP26, and the partnership with Italy demonstrates that, even though we are leaving the EU, we have a partnership with an EU member state. Having spoken to the French Minister on the phone, France is very supportive. If we can be in that place for climate, why can't we be in that place for science for the future? If we step back and try to demonstrate that science and research should be treated in the same way on the global stage as climate, we should be able to continue and, hopefully, have a strong association to Horizon Europe.

Q227 Vicky Ford: Most of our constituents would say that cancer and saving the planet are pretty high priorities for scientific research, so, if those are the two missions where you see us fighting to keep international collaboration, we need to make sure we get those messages across to the public. They hear a lot of jargon in this discussion, but if we are talking about cancer research and the fight against climate change, let's try to get the language clear. That is just an observation about the discussions so far.

On money, we know that the projects that are to be awarded this year and next year for collaborative science will keep running through 2021, 2022 and 2023. Do you have a view on how much money there is for UK science when you talk about needing the rest of Horizon 2020 funding to come in? How much of the "£39 billion" does it involve?

Chris Skidmore: It is not possible necessarily to model the next calls in the final year of Horizon 2020.

Q228 Vicky Ford: Is that good?

Chris Skidmore: If the Committee wants to think about the calculations, we have secured about €5.9 billion from Horizon 2020 to date, which is 13.45% of the total budget, and second only to Germany. That has taken place over several years. We have the final year of Horizon 2020 and I am not sure whether the €11 billion is the final tranche of money that is being released or whether there is more to come. If you carried on that trajectory of 13.5%, you are looking at between €1 billion and €2 billion at least, aren't you? Maybe there are other funds being released in that final tranche.

Q229 Vicky Ford: Of the "£39 billion" leaving the EU bill, how much is science and research funding? Maybe you might want to let us know later.

Chris Skidmore: It is difficult to put a figure on it. The same goes for Erasmus participation.

Q230 Vicky Ford: It would be interesting to know that.

Chris Skidmore: The £39 billion has been eaten away slightly because that was the thinking in March, and there is a two-year cycle. If you were



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doing a two-year programme, you would be continuing to spend. I think Erasmus is roughly €300 million a year.

Q231 **Vicky Ford:** Perhaps you could write to us with an estimate.

Chris Skidmore: Yes. The overall figures we have are across a five-year horizon, but in terms of the overall final year or two years—

Q232 **Chair:** Would you write and clarify it, if you can?

Chris Skidmore: The range will be between €1 billion and €3 billion.

Q233 **Vicky Ford:** When are you going to publish the interim findings of the Adrian Smith review?

Chris Skidmore: Adrian Smith is meeting the high-level group this afternoon.

Q234 **Chair:** In effect, that is him reporting back.

Chris Skidmore: Not reporting back entirely. It is still the top-line suggestions.

Q235 **Chair:** Last time, you said you were expecting him to report to Ministers by the summer. Is that still anticipated?

Chris Skidmore: The anticipation is that he will report to the Department.

Q236 **Chair:** When?

Chris Skidmore: A draft report will be going to the Department by the end of this month. We will then look to publish the report in full in September.

Q237 **Mr Gyimah:** You said that association under Horizon Europe is the preferred option. Is there a scenario under which we could walk away from association, given that the programme is still being designed?

Chris Skidmore: A scenario in which we would walk away from association is not one I would want to happen, but it would obviously be around the value-for-money case, because we do not know the overall budget for Horizon Europe. I think it is a price worth paying without even knowing what the figure is, but other EU countries will have to agree the figure for their nationally determined contribution. A decision will have to be taken jointly with the Treasury and will form part of the overall spending settlement that BEIS would have. We would have to be confident as a Department that that was value for money, weighing it against all the other spending priorities we would have in the industrial strategy.

Q238 **Chair:** Does your indication just now that you think it is a price worth paying, without even knowing the price, imply that you will be arguing for participation, full stop?



Chris Skidmore: Yes.

Q239 **Darren Jones:** Minister, could you update the Committee on the road map to 2.4%?

Chris Skidmore: Yes. I have given a series of four speeches looking at 2.4%. I began them in early May when I gave a speech at the LSE on people, to take Ms Monaghan's point that, first and foremost, one of the most important reasons for increasing the potential for science and research is based on a strategy for people.

I gave a second speech to launch IRIS at Eureka, which covered future international partnerships. The third speech, at London Tech Week, was on how we can support new and emerging technologies, because there is a clear role for Government in being able to support them when sometimes there is not a private sector market to assist that. The fourth speech was last week when I announced the latest RPI funds with an additional £100 million for business and £850 million-worth of public-private investment partnerships.

When I gave those speeches, I wanted to demonstrate leadership as a Minister and that this is one of the key challenges. Putting aside Brexit, which has been my priority for this year, if we do not begin to demonstrate significant public uplift in R&D spend at the spending review, we will not be able to have a catalytic effect to drive in private investment for the future. If we had a spending review period that ended in 2023, it would be a bit like the emperor's new clothes; people would quite quickly see that we would not hit 2.4% in 2027 with such a sharp uplift in the final four years. We need to act now.

In terms of next steps, what happens? UKRI has been working on two major projects. One is its infrastructure road map. Why is that important? We need to demonstrate the areas of the country where we do excellent work and we want to continue to fund that. Where are the areas of the country where we have the potential to do more? We need to be able to work out strategically how to invest in those locations better and build on the Catapult systems of networking and certain key technologies across the country.

Q240 **Chair:** Do you see maintenance of the Catapults as central to this?

Chris Skidmore: Yes. There has been a variety of performance in the different Catapult systems.

Q241 **Chair:** You are very committed to the concept and the principle.

Chris Skidmore: Absolutely. The quantum hubs have been established just recently.¹ I went to Sussex last week to see the work they have been doing with Surrey, and the complete faith they have in the hub as a

¹ [Note from witness](#): Should have said "The Quantum hubs have been refreshed just recently".



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means by which they have been able to create an entire ecosystem of researchers. They feel that we have almost created a UK-wide institution across institutions. Their enthusiasm was unparalleled, and we have done the right thing there.

In terms of UKRI's additional work, it will publish its own road map to 2.4%, demonstrating where it feels the Government will need to make investments and what we will need to do privately. One of the big issues is around leveraging private investment and the long tail of SMEs that do not necessarily have R&D as part of their business model. Hopefully, we will have the spending review. I am waiting to see what happens with the spending review. I am conscious that, if we have some kind of one-year flat cash settlement, it will cause numerous problems for how we manage our future funding bids.

Q242 Darren Jones: Will you still publish a road map if there is a one-year settlement?

Chris Skidmore: Yes. The UKRI work will be published shortly, this summer and in the autumn. Probably the infrastructure road map will come first and the 2.4% document will come second. Then we will have the spending review and the Government will publish, on the back of knowing the overall envelope we have, their own core document for reaching 2.4%.

Q243 Darren Jones: We are conscious that the OECD figures, the general source internationally, have a two-year lag between spending and reporting. Does your Department track in-year progress, and, if so, are you able to give us an update on what has happened since, say, 2017?

Chris Skidmore: In terms of ONS data and whether they are separate from OECD, I think they are. The ONS released them recently.

Paul Drabwell: Exactly. We would rely on ONS data to tell us the direction it is moving in, but you are right that it is subject to a lag.

Q244 Chair: Do ONS data conflict with OECD data?

Paul Drabwell: I do not believe so.

Q245 Darren Jones: What do those data show?

Paul Drabwell: They show an upward trend, albeit we still need that trend to shift further upwards. I think there was a slight increase from about 1.67% to 1.7%. I think the last figures showed that, but I would need to check.

Q246 Darren Jones: Is the lack of speed because of private sector investment or delivery of funding from Government?

Chris Skidmore: Historically, we have a lack of private investment. We still have a ratio of £1:£1.40 private investment compared with Germany at 1:2.60 and Israel at 1:3.50. We are fully aware of the leverage. If you take the RPIF projects announced last week, that is £220 million of



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Government investment leveraging £500 million of private investment. When we announced in January the 75 doctoral training centres, that was around £383 million, leveraging £450 million of private investment.

I am not sure—I can check and write to the Committee—at what stage that funding is released. Is the private investment counted in the same financial year, or is there a lag between the private investment coming in later, once the public investment has come in? You might have a situation where the public investment is up front to build the institute, for instance the DARTeC centre in Cranfield. Rolls-Royce has put a lot of money into it, but the initial building costs were money released from BEIS. I will have to check how that matches up. When the private investment comes in, does it arise in the same financial reporting year, or does it come in later?

Q247 Darren Jones: In your impact assessments or planning for a no-deal Brexit outcome, have you taken a view as to what hit that would have on private sector investment and, therefore, our ability to meet 2.4%?

Chris Skidmore: There has been no formal analysis in the no-deal preparation of the longer-term trends. The no-deal preparation that has been taking place has focused on the immediate short term and the financial Government grants that would need to be compensated. We all recognise the risks of no deal and the impact on business. Obviously, business investments would retreat if overall business decided to change its operating models to compensate for a no-deal Brexit. In terms of detailed figures, it would probably be impossible to know or calculate that.

Q248 Darren Jones: Minister, who have you backed for the leadership of your party?

Chris Skidmore: I backed Boris Johnson.

Q249 Darren Jones: And you have had those conversations.

Chris Skidmore: I backed Sajid Javid in the first couple of rounds.

Q250 Darren Jones: Have you had those conversations with Boris?

Chris Skidmore: Where possible. I am keen to demonstrate—as I think is Jo Johnson, who is also supporting his brother—that, when it comes to leaving the European Union, we cannot leave our European research and education partnerships behind. It is interesting to note that, when Boris Johnson was Foreign Secretary, he made a point of paying into Horizon and Erasmus, putting them to one side and trying to get those deals done early. That is a belief I shared, but the question is whether the withdrawal agreement will ever be reopened or it has to stay there in its entirety. Those questions are above my pay grade.

None the less, I would be keen, as I have articulated to this Committee, that we find the money. Let's put money aside for Horizon and Erasmus



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and try to get the financial framework programmes over the line and make a big, bold offer to the Commission on the issue.

Q251 **Darren Jones:** Presumably, you would agree that a do or die strategy on Brexit would be irresponsible in respect of your brief on science, research and innovation.

Chris Skidmore: No, because, when it comes to ensuring that we are able to leave in an orderly fashion, I supported the withdrawal agreement Bill because it allowed for that orderly transition. Many people in this room did not support the withdrawal agreement Bill and, therefore, have jeopardised continuation of the research partnerships.

Q252 **Darren Jones:** I am asking about no deal. I am conscious of the logic of your answers today. You recognise that a no-deal Brexit will have an impact on business investment, which will then limit our ability to meet 2.4%. You have recognised that a no-deal scenario would present significant challenges to our collaborations in Europe. You have recognised that we would like a solution to that, yet you do not recognise that it would be irresponsible to take a do or die approach to Brexit in respect of your brief.

Chris Skidmore: I do not recognise it as a die approach.

Q253 **Darren Jones:** That is the strategy your preferred candidate has put forward.

Chris Skidmore: I do not agree with the premise of the question or the terminology of the question.

Q254 **Darren Jones:** Minister, that was Boris's wording, not mine.

Chris Skidmore: When it comes to leaving, we have to be able to make the financial preparations to mitigate for all circumstances.

Q255 **Darren Jones:** Earlier today, you were pretty confident that you would be at the table for the negotiations. Have you done a deal with Boris?

Chris Skidmore: No, I haven't, so this may be my last Committee appearance. I love doing the job and would love to be able to continue to do it, but it is totally in the hands of whoever decides will be the next Science Minister.

Q256 **Darren Jones:** To finish on a slightly less political question, your Department has announced an increase in the quality-related funding for Research England. Can you set out for us how you came to that settlement, and how it was reflected in the balanced funding principle in the Higher Education and Research Act?

Chris Skidmore: I have been very keen as Universities Minister to look at that issue. We have seen a significant uplift in challenge-led funding in the industrial strategy. So far, that is an additional £7 billion until 2021. That creates, as always with any increase in funding, the risk of disparity or a widening gap between the increase in challenge funding and things



like RPIF where you have to bring private sector involvement to the table. It is right that we do that, but there are some universities that will never be able to bring the Rolls-Royces or Airbuses into the equation. It is not right that they are penalised indirectly by not being able to access research funds.

We have seen effectively a flat cash settlement on QR since 2010, which led to a real-terms decline. I think I have visited 30 universities since December, and it has been made very clear to me that this is an issue. When it came to QR, I was keen to see how we could try to increase it and leverage more into QR specifically. I think we have seen a 2.32% increase in real terms this year, which is a 4.5% cash-terms increase in QR. It is a small increase; it is £45 million QR out of £91 million for research based in universities. I thought that was important. It sends a signal that we should continue to do this.

I am very struck by what has been happening elsewhere in European countries where they are able to demonstrate a real-terms increase over a fixed period of time. We have talked about representations that I would like to make to the future Prime Minister, whoever that is, around Brexit and how we can put the money on the table, but if we are making a long-term plan towards 2.4%, that should be mirrored in the long-term plan around research and development, in the same way that Germany has committed to a 3% real-terms rise over the next 10 years.

Q257 Mr Gyimah: The Government have shown a real commitment to science, and there has been an increase in science funding over the last few years. Are you at all concerned that in a no-deal scenario there is increased pressure on the science budget in terms of association and in moving towards 2.4%, and that there will be many calls on the Government in a no-deal scenario to provide funding for all manner of things? Are you concerned that science could get deprioritised? If so, what can you do to mitigate that?

Chris Skidmore: The way in which we as a Government should be able to communicate the value of research and development for the future is a point that Ms Ford picked up, linking it to some of our key challenges around net zero and accelerated detection of disease, ensuring that we can reduce comorbidities in the elderly population and highlighting where money is spent in the NHS and where it is being spent on climate. That is absolutely crucial for public communication on the value of science, so that people do not think these are just steel and glass buildings and nothing to do with them.

There is also a responsibility for universities to reach out to their communities. The work that has been done on the Civic Universities Commission to demonstrate the public engagement of universities interrelates with the protection of science. There is only so much money and there is a national debate on how we divide the pot, so it is about arguing the case for continuation. There are a number of programmes in science where we are still world-leading—for example, fusion.



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Chair: I am conscious that we are tight on time, so can you restrict your comments to what Sam asked? I think you have covered the question. Thank you.

Q258 **Bill Grant:** I am going to touch on foreign involvement in UK research and innovation, which is an important area. Do the Department or Government have any concerns about what is described as foreign soft power or influence on UK research, or indirect exploitation of research collaborations by foreign militaries in our research establishments?

Chris Skidmore: A theme that has run through this discussion is that partnership is now critical to any scientific collaboration. If you go back to 1981, only 10% of all UK research investment was collaboration with a foreign country. That has now risen to over half. We know that we cannot do without many of the countries with which we continue to collaborate. The areas of focus, whether it is looking at how to combat the Zika virus or how to increase rice yields, mean that we need to be on the ground in other countries demonstrating field research, but it works both ways.

Going down to Sussex, I was struck that every single lead professor on quantum was from Germany. They came from Germany subsequent to the investment that has been made in Britain. We are spending £1 billion on quantum, which is more than the whole of the EU27 combined, which demonstrates how investment can leverage that increase in foreign talent. I do not like the word "foreign" in these terms.²

Q259 **Bill Grant:** Overseas might be a kinder word.

Chris Skidmore: A key part of our international research and innovation strategy is that we continue to increase international research influence in the UK, as well as raising skill levels and increasing the number of UK researchers going abroad. Checks need to be done on those researchers. Universities UK has a legal guide for universities to make sure that they comply with the law and regulations on visas and with issues that need to be looked at, such as IP protection and surveillance and security.

Q260 **Chair:** On Bill's point, do you have a particular concern about the risk of potential exploitation by foreign militaries, or are you at this stage relaxed about that risk?

Chris Skidmore: Not relaxed. We would always be vigilant, and, if at any stage we were made aware of any potential influence, we would work across a range of organisations and security services to mitigate that effect and deal with it appropriately.

Q261 **Chair:** Are you relaxed about the amount of money that Huawei is investing in universities across the country?

² [Note from witness](#): Should have said "We are spending over £1 billion on quantum, which is more than the European Commission's Quantum Technologies Flagship initiative, which demonstrates how investment can leverage that increase in foreign talent."



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Chris Skidmore: Clearly, we want to ensure that we continue our partnerships with China, the United States and major foreign countries. When it comes to Huawei and 5G, DCMS has the policy lead, but I am aware that Huawei covers a number of university—

Q262 **Chair:** I meant their investment in universities. You do not have a difficulty with that.

Chris Skidmore: In my visits to universities, I have seen secure rooms, and certain researchers do not have clearance to go into additional laboratories. As long as checks have been put in place, and those processes are managed appropriately, it is right that we demonstrate our openness.

Q263 **Carol Monaghan:** Minister, we are not talking about the Zika virus; we are talking about quantum technologies. At the moment, we have superiority in the research that has been done here, but we also have small businesses, with links to universities, that have been bought by the Chinese Government or Chinese companies. That is a direct link not just to intellectual property but to the cutting-edge research that is taking place. If that is not a threat that in some way is being monitored, I am extremely concerned. Surely, you can give us some reassurance on that because academics are raising it as an issue.

Chris Skidmore: In the past, I have had experience as a constituency MP of the particular issue involving SMEs, and I am absolutely confident that the appropriate measures and alarm signals are put in place to be able to detect and identify any risk.

Q264 **Carol Monaghan:** I am astounded that you say you are absolutely confident, because people working there are not absolutely confident. What they say is that the IP is going to China; the things they are developing and their expertise have been taken there. It is not just about allowing them to compete with businesses here in the UK.

Chris Skidmore: That is a separate question, isn't it? There is a question of national security and a question of intellectual property.

Q265 **Carol Monaghan:** It is national security.

Chris Skidmore: Not all IP is national security. There is clearly an issue around the scalability of companies. I agree that if a small company has been bought up obviously China has the IP, but if the IP is not to do with issues of national security it is a problem when it comes to our wider industrial strategy that we want to resolve. We want to keep talent, but intellectual property is not always an issue of national security.

Chair: Do you have a final question?

Carol Monaghan: I will stop there. I don't think we are getting anywhere.

Q266 **Bill Grant:** Following on from Carol's extremely serious concerns,



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Minister, you must have a method of risk-assessing inward investment. It went up from 10% to 50%. In essence, that has to be welcomed, but with that significant increase there may be an increased security risk in the form of influence by foreign militaries and companies. Parallel to that, what advice and message do you send to those engaging in overseas investment, which is to be welcomed? "Foreign" is a derogatory kind of word, so we will call it overseas investment. What advice do you give to universities or research establishments when they are engaging in probably high-risk research, in the sense that it can be used to disadvantage this nation and/or its allies?

Chris Skidmore: This is where UKRI plays a key convening role in being able to demonstrate to universities what processes need to be put in place. Regular workshops are held with universities to talk through some of the issues. Our last workshop on this particular issue was held on 24 May. I am happy to send details to the Committee. We want to make sure that, when grants are made, the processes they go through with the UKRI are rigorous and checked and that we are not giving out money to institutions that cannot confirm the requirements that are needed to demonstrate that the research collaborations are secure.

Q267 **Bill Grant:** Are the Department or the Government aware of the risks of interference by foreign militaries? Are you confident that you have systems to mitigate those activities?

Chris Skidmore: Yes.

Q268 **Mr Gyimah:** The Home Secretary asked the Migration Advisory Committee to report on salary caps by January 2020. Is that enough?

Chris Skidmore: When I became Science Minister, I discussed this with the Committee on a previous occasion. When the MAC report was published, with a 30K cap, I asked Patrick Vallance, the Government's chief scientist, to work with GO-Science and do an analysis of the impact on science in order to feed that into the Home Office's official review of the immigration White Paper.

I want to make sure that it is quite clear that 30K would be incredibly damaging for the laboratory technician level. We want to make sure that those scientists and their families—it is important to mention them—can continue to come here and work and are not given the red card. The Home Secretary's movement on that has been welcome, and I hope we can come to a resolution sooner rather than later and that it is all fed into the post-2020/beginning of 2021 system. It is important that when that system is in place we are able to demonstrate that we are open and welcoming. We have begun that transition and there is much more we have to do to achieve it.

Q269 **Mr Gyimah:** Is the report that you commissioned from GO-Science ready and, if so, are you able to share it with us?



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Chris Skidmore: I will come back to you on that in terms of the work that went in, and whether it was a letter from Patrick Vallance that went in.

Mr Gyimah: It would be helpful to know what his analysis says.

Q270 **Chair:** Presumably, you are aware of the report mentioned this morning on the radio of a consortium of business and education bodies calling for the cap to be lowered from 30K to 20K. Do you share their concern, not only in terms of the impact on universities but on wider industry?

Chris Skidmore: I do share their concern, but I am also interested in whether the cap is 20K, 21K or 22K. It is interesting to look at what a researcher should be paid at that level. In the first speech I made on 2.4%, I was quite vexed about ensuring that we provide secure career paths for early career researchers, and we are taking work forward with Vitae on the new concordat on those issues. Is 20K a dynamic for saying that for the future that is an acceptable salary for somebody with a first-class degree going into a highly technical and experienced role? I would not want the cap somehow to be lowered to an extent that it would create a floor mechanism by which it would then excuse universities to pay top talented people the lowest possible amount.

Q271 **Carol Monaghan:** We are not always talking about first-class honours graduates; we might be talking about technicians or support staff in the lab. A lot of them are EU nationals as well. This has been raised repeatedly by the academic community. They are extremely concerned because they will not necessarily come into the categories that would class them as highly skilled. What steps are you taking to ensure that they are included in any review?

Chris Skidmore: Changes have happened recently for the future visa regime. I know that a decision has been taken to look at how we can increase the number of lower-skilled non-EU migrants to the country when it comes to the labour market test for tier 2. The required skill level for tier-2 workers has been reduced from RQF 3 to 5 to attract medium-skilled migrants. I think that signals a direction of travel that demonstrates skill levels. There are exceptional talent visas, but the point about laboratory technicians, where we have reduced it to A-level or equivalent, will demonstrate greater flexibility. I hope that is a move we can continue to make.

Q272 **Carol Monaghan:** Do you see the salary threshold reducing for those staff? They would not be classified as highly skilled, as you say. We on this Committee might recognise them as highly skilled, but within the Government's own paper they would not be recognised as such. There has to be some recognition of that. If there is not, we have a problem.

Chris Skidmore: I think that the Home Secretary in his letter to the MAC set out four or five points that he would like it to consider. One of them included exceptions. We also have the shortage occupation list. When it



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came to looking at some of the technician roles and certain areas where there was a particular need for technicians, that was increased this year.

Q273 **Chair:** It will be addressed by way of exceptions.

Chris Skidmore: No. We also have regional salary thresholds; the MAC was asked to consider them. That is a mechanism for calculating future salary thresholds and the impact of salary thresholds on a range of issues, which include the supply of labour and the short, medium and long-term effects on the economy. A number of other factors, aside from looking at just the cap, whether it is regionality or exceptionality, will also be considered.

Q274 **Carol Monaghan:** Will regionality be considered? The salary thresholds have been set for the south-east of England, not the rest of the UK.

Chris Skidmore: Yes.

Q275 **Carol Monaghan:** We have not seen movement on that yet, so you are saying that there will be.

Chris Skidmore: I am saying that the Home Secretary wrote to the MAC on 24 June asking it to consider regional salary thresholds.

Q276 **Vicky Ford:** For the record, I should have declared an interest, because I have not done it before. Since 5 July, I have been a board member of Anglia Ruskin University. It is an unpaid role, but clearly they receive and bid for research grants.

Chris Skidmore: Congratulations.

Q277 **Vicky Ford:** Thank you. When will the executive board of the national quantum technologies programme be established?

Chris Skidmore: I have some specific details on that. We are in the process of setting up a new programme board that will take forward recommendations on skills, road mapping and strategy developments. Lynn Gladden, executive chair of EPSRC, is chairing the group.

Q278 **Chair:** Is the programme board the same as the executive board, or is it different?

Chris Skidmore: The programme partners are in the process of finalising details of the board and aim to meet for the first time over the summer. It will be chaired by Lynn Gladden, and the new advisory group of senior experts from industry and academia will also be established by challenge and advice on strategic direction for the programme. In terms of the specific issue, BEIS officials have offered to brief the Committee privately on the details of what will be taking place in the next couple of weeks.

Q279 **Vicky Ford:** The Committee would be interested to know how you are going through the process of identifying people to sit on the board.

Chris Skidmore: We can set that up.



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Q280 Vicky Ford: Are the Government still expecting innovation centres to be established? I declare an interest because one of the organisations that gave evidence on that to this Committee was Teledyne e2v, which is headquartered in Chelmsford.

Chris Skidmore: We are keen to continue to engage with industry on the need for innovation centres or not, but, while that engagement is carrying on, the ISCF wave 3 quantum challenge has set aside funding streams that could be used to support robust business cases on this issue for the future. Funding decisions for the future, whether or not it is spent on innovation centres, will be made by either the chair of the programme board or the challenge director, depending on the size of the investment or the programme delegated signing authority limits. We are expecting competitions and calls to start in late summer or early autumn for ISCF wave 3. Decisions on innovation centres will be looked at separately within that envelope, but that is where the money would come from if a decision was taken on any additional ones.

Q281 Vicky Ford: You have not yet had any applications for sites because the process is not there.

Chris Skidmore: Not that I am aware of.

Q282 Vicky Ford: But they are still considered important overall.

Chris Skidmore: We want to take forward engagement with industry on whether or not there is a need for additional innovation centres. If there is, the money would come out of the funding stream that has been set aside under ISCF wave 3.

Q283 Graham Stringer: You have decided to take forward the formation of the research integrity committee. Can you tell us what schedule you have? You mentioned that you will consult the devolved Administrations. How will you consult them?

Chair: We are delighted that you have decided to go ahead with it. It is a good and important move. We recommended it, so we are pleased; it was very good news.

Chris Skidmore: Thank you for the recommendation. It is great to have the opportunity to take the Committee's recommendations and begin to put them forward.

Chair: We look forward to more of it, Chris.

Vicky Ford: Over many months and years.

Chris Skidmore: Your recommendations on Horizon 2020 and Horizon Europe would not go amiss.

In terms of research integrity, there is the issue around the concordat signatories group, which is a slightly separate issue, but I want to update you on that as well. UKRI is a member of the concordat signatories group, and GO-Science is co-ordinating Government Departments'



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interests on it. A consultation on the revised version of the concordat on research integrity closed on 5 April. I know that, when Universities UK is holding the pen, it will be providing updates to the Committee on the revised concordat shortly.

Q284 Chair: Do you anticipate that Government Departments will be able to sign up to that new, revised concordat? I think that was the ambition.

Chris Skidmore: When it comes to looking at the issue of the concordat, all Government chief scientific advisers signed up to its principles and the form of scientific research undertaken by the Department. GO-Science will be drafting texts for Departments putting those principles in place, taking into account the Government's different functions and legal considerations. I support the development of Universities UK's strengthened research integrity concordat and making its requirements explicit so that the expectations are very clear on what is necessary to meet it. That is greater transparency, including around the clinical trials issue that we mentioned.

We have also been working with UKRI. They will begin the process of the appointment of an independent chair and panel, and will provide the Committee with an update in the autumn. The intention is that the new committee will commence operations in early summer 2020. That is the update I can give this Committee.

Q285 Graham Stringer: How will you consult the devolved Administrations?

Chris Skidmore: I am keen to ensure that consultation with devolved Governments is strengthened and maintained. When we had the Smith review, there was full consultation with the devolveds on any future new opportunities for creating funds that would be bid for. I expect that the consultation would mirror what has just happened with the Smith review. I am keen when we engage with the devolveds to try to step that up with them. My next HE research devolved ministerial meeting will take place in October with the Ministers.

Q286 Graham Stringer: Having accepted the Committee's recommendation, do you think that we, as a Committee, should be involved in a pre-appointment hearing of the chair of that committee?

Chair: I think the answer is yes.

Chris Skidmore: Yes. The issue is about working with UKRI on the process and what their process is. I was just looking in my notes to see when the appointment for a chair might take place.

Q287 Graham Stringer: What lies behind this was a concern that, when scientists have not behaved properly, there should be a process of finding out about that and reporting it. That is the really serious issue, not the bureaucracy of setting up the committee. Since you have been Science Minister, how concerned are you about the integrity of science in our universities?



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Chris Skidmore: This is an issue that must be continually looked at to protect our international reputation when it comes to drawing in researchers for the future. We want additional researchers to come to the UK; we want UK researchers to have the ability to partner in other countries. It is protecting our brand. We make up 0.9% of the world's population, but we have 15% of all research citations.

Q288 **Graham Stringer:** Nobody is going to disagree with that. The real question I was asking is, how much of a problem do you think it is?

Chris Skidmore: In terms of that issue, UKRI has commissioned research for an evaluation of the effects of incentives in the research system on research behaviour. It will report back in quarter 3, 2019. When it comes to the issues of scale and demonstrating, we have to be informed by some of the evidence that UKRI should bring together and produce. I am looking forward to seeing that.

Q289 **Chair:** You may have said this; apologies if I missed it. Did you confirm that, led by either the Department or UKRI, there will be a formal consultation on the remit for the committee? It seems important that we actually get the design right.

Chris Skidmore: We have not committed to that yet, but, based on transparency and trust, it would make sense that we continue along a path of demonstrating that.

Q290 **Chair:** It would be good if we can bring people along with us and ensure maximum consensus on the design.

Chris Skidmore: It is anchoring in the concordat as well and reflecting on the consultation of the concordat. We have looked at whether it should be a completely separate, independent committee outside UKRI's remit, and we decided in the end that we would establish an independent chair and panel membership under the auspices of UKRI. Even though we looked into establishing a completely independent body, UKRI came across the fact that there were legal issues with regard to data sharing that would have constrained an independent body.

Q291 **Chair:** I had heard that.

Chris Skidmore: There were issues that we have been working through, but I guess it is balancing how fast we can make sure we get the committee up and operational, and have the chair in place.

Q292 **Chair:** I would be grateful if you could keep us informed on that.

Chris Skidmore: Yes. We want to ensure that UKRI is able to provide updates. I am happy to do anything the Committee would like in writing.

Chair: That would be helpful; thank you very much.

Q293 **Stephen Metcalfe:** Good morning, Minister. What do you think are the advantages of open access?



Chris Skidmore: I am in favour of open access and of moving ahead with plan S. As the United Kingdom, we are already a leader in demonstrating our commitment to open access. There are questions around how the transition can be established effectively. With regard to open access and plan S, it seems a no-brainer, but there are issues around, for instance, individuals who have to fork out 10K to produce a monograph of research and are financially penalised. There are issues around learned society journals—not the Elseviers or the Wileys of this world—that might struggle under those processes.

As to what will take place, we have the UKRI open access review examining the best way to deliver the UK Government's ambitions on open access. The review is taking into account the plan S principles. They are developing a range of policy options to take forward plan S, which will feed into a consultation document to be published in the autumn and go into 2020. I am very keen that we reassure the academic community that we are not going to create any perverse incentives, but that this will happen. This will be the future. We cannot hold back. We cannot stop it.

Q294 **Stephen Metcalfe:** In your answer, you highlighted a number of the challenges and risks that need to be looked at in the review. You did not actually say what the advantages of open access are.

Chris Skidmore: I think they are self-explanatory on so many levels, around the opportunity for increased rapid collaborations, for hyperactivity, and for me, as a historical researcher, to be able to access journal articles and ensure that I can build on the latest research and follow up leads. It sets in train a much more rapid pace by which engagement can take place.

Q295 **Chair:** Are there any potentially unintended consequences if this country moves ahead faster than other countries?

Chris Skidmore: We can look at California and what they have already begun to do with the arrangements they have signed. In so many areas, we continue to be at world-leading level. I would not want us to fall behind. There are risks to protection of research that—

Q296 **Chair:** We will be making all our publicly funded research available internationally without any commensurate return of the favour.

Chris Skidmore: That is a broader philosophical point around science collaborations. When you look at issues around funding for ERC and where money is spent on a research project, are we comfortable with British money being spent on a British researcher going abroad to study in a different institution? Who benefits? It must be around focusing on the issues that deliver benefit in the longer term.

Q297 **Stephen Metcalfe:** There are benefits, but it is a transition. You talked about the costs of potentially publishing research. One of the principles that cOAlition S has explained is that "where applicable, Open Access publication fees are covered by the Funders, or research institutions, not



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by individual researchers." First, do you agree with that, and, if so, how is it going to be enforced?

Chris Skidmore: That specific detail, when it comes to institution subscriptions versus individuals, will be part of the consultation that Research England will take forward.

Paul Drabwell: That is absolutely right. It is all part of UKRI's review to look at the costs of the system. Currently, there is a block grant that goes to universities and supports what are called APCs, which are the charges that basically fund publishers to make journals open access. That is around £24 million in block grant. Part of the review will look at the costs of that system and whether it should be sustained, so it is an open question. As a principle, we support it, but one has to look at the costs of the system as a whole.

Q298 **Stephen Metcalfe:** There will be a system in place that enforces that, potentially.

Paul Drabwell: The UKRI review will come up with recommendations and BEIS Ministers will consider them. Quite what that system will look like and the extent to which the state will actually support the costs is a moot point and will be part of the review.

Q299 **Stephen Metcalfe:** Research institutions, and particularly learned societies, have depended on income generated through publications. Are you concerned about the impact that this change may have on their financial viability, and is there going to be any support offered to those institutions or learned societies? I assume that you accept that they do very good work outside core research, but that work requires funding. If their funding stream is reduced, presumably their sphere of activity will be reduced.

Chris Skidmore: I am sorry to give a holding answer, but the review will assess and support economic open access models where the fair, transparent and reasonable costs of open access publishing are met. We recognise that we have a broad range of publications from the learned societies. As a fellow of the Royal Historical Society, I receive *TRHS*. I am also a fellow of the Society of Antiquaries and I receive *The Antiquaries Journal*. Those are publications that are subscription membership, bolstered by income subscriptions that sustain them. *The Antiquaries Journal* has been running for 300 years. I would not want to see it go under just because we created open access.

Q300 **Chair:** There are also commercial journals, which is a significant sector in this country.

Chris Skidmore: It is balanced because we have the three big publishers, and most of our payments go to them. Subscription expenditure has risen significantly over recent years. Reed Elsevier's recent annual report shows the adjusted operating profit for their academic journal division to be 40%. It is balancing how we maintain the



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niche journals that we all know versus the main operating publishers that have a vested interest in maintaining the status quo. Whether the status quo is right for the future is another matter.

Q301 Stephen Metcalfe: The two organisations of which you are a member and from which you receive publications presumably make money out of that.

Chris Skidmore: They make money to cover the costs of the journals, but it probably balances out. It is quite a tight ship, I imagine.

Q302 Stephen Metcalfe: The scientific learned societies make income from publications, which they then use to further their core aims of supporting and improving the base of researchers in their particular field. I hear what you said about the review. Are you personally concerned that changes may affect the amount of work the learned societies are able to do to support their wider community?

Chris Skidmore: I hope not. We have the review in place, and we want to move forward. There was a slight delay through the updated guidance that came out through plan S following the feedback exercise; 600 responses were received from that, which led to an additional year for implementation. We recognise that there are still unresolved issues. We have to make sure that the point you made very loosely is addressed and that we can establish a process that mitigates any unintended consequences.

Q303 Carol Monaghan: Minister, we know that in the UK public trust in science is extremely high and we do well on that. However, we have seen recently the impact of communications against the measles vaccination. There was a figure recently quoted in *The Telegraph* that half a million children in the UK are now unvaccinated. What role do you see the Government having in ensuring that evidence is clearly presented and communicated to the public to ensure that situations such as those we currently have with measles do not arise again?

Chris Skidmore: When it comes to public communication of science on the particular issue around measles and the role the chief medical officer can play, every Department now being fully staffed with its own chief scientific adviser is important and I want to see GO-Science playing a more influential role in that debate. When it comes to the evaluation of public attitudes to be able to inform how additional policy decisions have to be made, the public attitudes to science survey has been running since 2000. The surveys take place every few years.

The results of the sixth survey, PAS 2019, are currently being analysed to produce a full report that will be ready for release in autumn 2019. It will feature four different methods of data gathering, which include literature review, a quantitative survey, a qualitative survey, and social media analysis for the first time, to analyse how communities are discussing certain topics and highlighting some of the predominant issues that are being shared.



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Q304 **Carol Monaghan:** Something like the anti-vaccination lobby is identified through that. What are the Government going to do to counter that?

Chris Skidmore: The key point is around solid and robust public information campaigns delivered by Departments through the Government Communication Service to demonstrate that vaccination is essential for creating herd immunities, and to ensure that there is a role for local partners as well. I entirely agree that there should be the ability to use the surveys to demonstrate what subjects of interest the public are focusing on. Is it the issues around vaccinations? We have been there before with what happened with MMR and how difficult it was to move back to a place of demonstrating that pseudo-science was leading to that.

Q305 **Carol Monaghan:** That took a number of years, though, and in fact some people still raise questions about it. It would be good to have some reassurance from you that there was going to be a machine counteracting that very quickly.

Chris Skidmore: We are very clear that the NHS and its public information campaigns, with the establishment of Public Health England and its separate budgetary processes to focus on public health issues, will be doing that. Using the public attitudes to science survey is an important basis for demonstrating where the money needs to be spent, and to demonstrate and evaluate what the public are focusing on. When it comes to information and disinformation, I see that Damian Hinds of DFE has released additional guidance to be taught in schools, focusing on the social media aspects.

Q306 **Chair:** Finally, I have a quick but important question on the Augar review, which recommended a reduction in fees to £7,500. Universities are obviously concerned about a potential funding gap. I understand there is an estimate of possibly a £1.8 billion funding gap. The Government have not committed to implementing any recommendation, but can you reassure us that, if that was to be implemented, the entire shortfall would be made good by Government through other means of funding universities? The last thing we want to do, which would undermine your own commitment to the 2.4%, is to reduce the funding of universities, which inevitably would impact on the funding of research.

Chris Skidmore: The Government line is that it is a matter for the new Prime Minister, whoever is Education Secretary and whoever is the Chancellor, to look at the nature of the top-up for the T-grant if the fee level is reduced to £7,500. We have just recorded a video. Universities UK is doing an event after Augar that is taking place this afternoon. I have recorded a speech for that, covering some of the issues.

Q307 **Chair:** Does it answer this question?

Chris Skidmore: The Augar review has come up with a number of measures. He obviously does not want it to be cherry-picked, but it will be up to the Government to take forward implementations. If there was a top-up to the T-grant, it would cover the money that will be lost, which is



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a cross-subsidy, as we know; it is a delicate balance at the moment. Teaching roughly washes its face—roughly the amount that is spent.

The Augar review is an interim report into the overall post-18 review including reports by KPMG that demonstrate that the cheapest course is £8,300 for an English degree. The £7,500 fee level would need subsidy for every single course. The myth that, somehow, with some courses that cost £5,000 to put on, that is being spent elsewhere is not true, but if you are not going to top up the T-grant it is not worth making the cut in fees in the first place, because the damage it would do to universities would be countered—

Q308 **Chair:** You yourself will fight to ensure that there is no reduction in funding resulting from that.

Chris Skidmore: Yes.

Chair: Good. Thank you very much indeed. Thanks to all of you for your time.