

# PARLIAMENTARY DEBATES

HOUSE OF COMMONS  
OFFICIAL REPORT  
GENERAL COMMITTEES

## Public Bill Committee

### ADVANCED RESEARCH AND INVENTION AGENCY BILL

*Fourth Sitting*

*Tuesday 20 April 2021*

*(Afternoon)*

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#### CONTENTS

SCHEDULE 1 agreed to.

CLAUSE 2 agreed to.

Adjourned till Thursday 22 April at half-past Eleven o'clock.

Written evidence reported to the House.

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No proofs can be supplied. Corrections that Members suggest for the final version of the report should be clearly marked in a copy of the report—not telephoned—and must be received in the Editor’s Room, House of Commons,

**not later than**

**Saturday 24 April 2021**

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**The Committee consisted of the following Members:**

*Chairs:* †JUDITH CUMMINS, MR PHILIP HOLLOBONE, ESTHER McVEY, DEREK TWIGG

- |   |   |
|---|---|
| † Baker, Duncan ( <i>North Norfolk</i> ) (Con)                          | † Onwurah, Chi ( <i>Newcastle upon Tyne Central</i> ) (Lab)   |
| † Bell, Aaron ( <i>Newcastle-under-Lyme</i> ) (Con)                     | Owen, Sarah ( <i>Luton North</i> ) (Lab)  |
| † Blackman, Kirsty ( <i>Aberdeen North</i> ) (SNP)                      | † Richardson, Angela ( <i>Guildford</i> ) (Con)   |
| † Butler, Dawn ( <i>Brent Central</i> ) (Lab)                           | † Solloway, Amanda ( <i>Parliamentary Under-Secretary of State for Business, Energy and Industrial Strategy</i> ) |
| Crosbie, Virginia ( <i>Ynys Môn</i> ) (Con)                             | † Tomlinson, Michael ( <i>Lord Commissioner of Her Majesty's Treasury</i> )                                       |
| † Fletcher, Mark ( <i>Bolsover</i> ) (Con)                              | † Zeichner, Daniel ( <i>Cambridge</i> ) (Lab)   |
| † Flynn, Stephen ( <i>Aberdeen South</i> ) (SNP)                        |   |
| † Furniss, Gill ( <i>Sheffield, Brightside and Hillsborough</i> ) (Lab) |   |
| † Hunt, Jane ( <i>Loughborough</i> ) (Con)                              | Sarah Ioannou, Seb Newman, <i>Committee Clerks</i>  |
| † Mayhew, Jerome ( <i>Broadland</i> ) (Con)                             |   |
| † Metcalfe, Stephen ( <i>South Basildon and East Thurrock</i> ) (Con)   | † <b>attended the Committee</b>   |

# Public Bill Committee

Tuesday 20 April 2021

(Afternoon)

[JUDITH CUMMINS *in the Chair*]

## Advanced Research and Invention Agency Bill

### Schedule 1

#### THE ADVANCED RESEARCH AND INVENTION AGENCY

2 pm

**Chi Onwurah** (Newcastle upon Tyne Central) (Lab): I beg to move amendment 7, in schedule 1, page 6, line 24, at end insert—

“(5) The Secretary of State must, in appointing the members of ARIA, have regard to the desirability of the members (between them) having relevant experience.”

*This amendment would require the Secretary of State to have regard to the (collective) relevant experience of ARIA's members when using their power of appointment.*

**The Chair:** With this it will be convenient to discuss amendment 8, in schedule 1, page 6, line 24, at end insert—

“(5) The Secretary of State must, in appointing the members of ARIA, have regard to the desirability of the members including at least one person with relevant experience in relation to each of Wales, Scotland and Northern Ireland.

(6) In this section, ‘relevant experience’ means experience of one or more of the following—

- (a) the conduct of scientific research; and
- (b) the development or exploitation of scientific knowledge.”

*This amendment would require the Secretary of State to have regard to the (collective) relevant experience of ARIA's members in the devolved nations when using their power of appointment.*

**Chi Onwurah:** It is a pleasure, to serve under your chairmanship, Mrs Cummins, and to return to our deliberations on the Advanced Research and Invention Agency Bill.

Both amendments concern the diversity and characteristics of the members of the board of the Advanced Research and Invention Agency. We have heard repeatedly in our deliberations that the board has a significant amount of power and autonomy. In our view, it suffers from lack of oversight, which the amendments are designed to address.

Amendment 7 would require the Secretary of State to have regard to the collective experience of ARIA's members in the devolved nations when using the power of appointment. The Labour party believes that science can be an engine of progress for society, and that it needs to be by and for everyone, not a private cashpoint for the few. It is essential that everyone in each region of the UK benefits from the creation of ARIA.

The Government have made many levelling-up promises over the past 18 months, just as they have made many promises to support science, but it is reported that they are now on track to miss the R&D target spend of 2.4% of GDP, following the cuts to international science spend, which were debated in the Chamber this morning, and the failure to provide support to medical research charities during the pandemic, forcing them to make sweeping cuts. The Royal Society has said that the Government's actions, such as the cuts to overseas development aid and science, and the lack of clarity until the last moment about Horizon European science funding are undermining the ambition for the UK to be a science power. We do not want the people of this country to be short-changed by the Bill, when it comes to the levelling-up agenda.

Levelling up is not possible without utilising the skills and experience of all those who have extensive knowledge of scientific research and knowledge in each nation of the United Kingdom. Each of the devolved nations possesses subtle and significant differences in their research landscapes. Our amendment would require the Secretary of State to have regard to the relevant experience of ARIA members when making appointments. We cannot expect ARIA to function effectively for every area of the Union, if its key decision makers and knowledge base are restricted to one narrow region of England. I am sure the Minister agrees.

Labour recognises that, as does UK Research and Innovation. In November 2020, UKRI chairman Sir John Kingman told the Select Committee on Science and Technology:

“We have structures that involve regular consultation with the devolved Administrations and the funding agencies in the devolved Administrations.”

He also told the Committee that this good working relationship was in contradiction to the decision not to have board-level regional representation. He said:

“It was decided at the time that there should not be representatives of the devolved countries on the board. In practice, I would say that there are two members of the current board.”

As we see, UKRI has had to struggle against the lack of representation on its board, so let us make it official and clear from the beginning that ARIA is a national body. Research and development is a vital driver of growth, and we must utilise ARIA in each region and nation to unlock new markets and create jobs. We all want significant improvement in the way in which the benefits of research and development are shared across our nation, and we want those who contribute to it to come from all areas of our nation. I therefore hope the Minister welcomes amendment 7, which would ensure that.

In the evidence sessions, we heard about the importance of public service in attracting good people to the ARIA board. Tabitha Goldstaub, the co-founder of CognitionX and the chair of the AI Council, said:

“The most important thing is that I just kept hearing time and again from the community I spoke to, similarly to what the gentleman from DARPA said, that this is a time to serve. People really want to find a place to do research that saves people's lives, especially in the AI eco-system.”—[*Official Report, Advanced Research and Invention Agency Public Bill Committee*, 14 April 2021; c. 52, Q50.]

That desire to serve should be reflected by ensuring that we have people from across our nation serving. That is why we are proposing amendment 7.

Amendment 8 would require the Secretary of State to have regard to the diversity of the board members, including the representation of those with protected characteristics. The points that we are raising here were discussed in a previous debate on the SNP amendment grouped with one of our amendments, so I will not reiterate them, but I expect it to be recognised that science has a diversity problem. We want ARIA not to exacerbate that but to send a clear message against it. We are not looking to set specific quotas for ARIA, but we want to send a clear message to the scientific community and ARIA's chief executive and chair, whoever they may be, that diversity is essential to successful scientific research. High-risk, high-reward research should not exclude women or representatives from across our nations and regions.

**The Parliamentary Under-Secretary of State for Business, Energy and Industrial Strategy (Amanda Solloway):** Amendment 7 concerns the Secretary of State's appointment of ARIA's non-executive members. I have spoken to many experts, scientists and researchers about the creation of ARIA over the past six months, and one thing that has been made crystal clear to me is how important finding the right people will be to ARIA's success. That point was reiterated to this Committee in the evidence session last Wednesday. The importance of finding the right people extends to ARIA's non-executive members, and Professor Bond offered a valuable perspective on that. He was clear that we need a balance on the board and that it should include radical thinkers and those with different backgrounds in academia and industry. I was struck by his advice that we should have a board that was, in his words "small" and "slightly unusual". That is an important point.

We are looking to foster a culture that takes big bets and pursues transformational ideas. We have heard over and over again how rare are the people who can do that. The difficulty in finding the mix of people to best support that activity means that we should impose as few constraints as possible and cast the net as widely as we can. That is a strong argument against placing inflexible legislative constraints on the background and experience of the limited number of people we are looking for before we have been begun that process.

We will conduct robust appointment processes that will follow the governance code for public appointments. That code includes principles of fairness, merit, diversity and integrity, which speak to the intention of the amendment.

**Daniel Zeichner (Cambridge) (Lab):** Will that include weirdos and misfits?

**Amanda Solloway:** I can confirm that we are looking for incredible people; I have made that clear.

There is another area where we are in danger of over-engineering ARIA: in governance arrangements. Although I share the belief of the hon. Member for Newcastle upon Tyne Central that a well-balanced board will be important for ARIA, I also believe that there are sufficient incentives and processes to support that without any further legislative constraint. For that reason, I encourage the hon. Lady to withdraw the amendment.

**Chi Onwurah:** I thank the Minister for her response. Will she say whether there are any factors that the Secretary of State should consider when making these appointments? For example, schedule 9 to the Higher Education and Research Act 2017 establishes that the Secretary of State must consider the collective experience of the UKRI board when making appointments. Are there no factors that should be considered in the case of ARIA?

**Amanda Solloway:** As I said, we will have a really robust appointment process. All those things will be taken into account to get that incredibly special person that we need to lead ARIA.

Amendment 8 also concerns the appointment by the Secretary of State of ARIA's non-executive members. As I have said, I strongly believe that we should impose as few constraints as possible and cast the net as widely as we can in finding ARIA's members. There is a real risk that placing inflexible legislative constraints on the background and experience of that limited number of people we are looking for will hamper our ability to find the right person.

I do, however, recognise that it is important for ARIA to be fully connected to the outstanding R&D activity in Scotland, Wales and Northern Ireland. That will require ARIA to build strong partnerships with institutions and businesses in all four nations. I echo comments from elsewhere about the fundamental importance of relationship building to this activity, but it is not necessarily possible to legislate for that. In the recruitment for the CEO and chair, we will work with the devolved Administrations and stakeholders across the United Kingdom to broaden the search for potential candidates, to encourage geographic diversity from the outset of these discussions. That approach, seeking as far as possible to ensure that the pool of people considered for positions in ARIA is representative of the geographic diversity of the UK, is the right one. ARIA would ultimately not be served by extensive and specific requirements that limit the options. I therefore cannot accept the amendment.

**Chi Onwurah:** I thank the Minister for her response. We are hearing again that ARIA is not to be subject to regulation or oversight, regardless of what form that takes. The flexibility of which the Minister speaks can be seen by others as cronyism or the opportunity to ensure cronyism. The public are sick of mates being appointed without oversight. As I said in my intervention, other boards, such as the UKRI board, are required to consider the experience of the board before making further appointments. Would the Minister consider it acceptable if the entire board came from, say, Cornwall, which is not very representative, or had expertise only in nanotechnology? Cornwall is a very nice place and nanotechnology is an excellent scientific subject, but we heard from witnesses about the importance of having diversity of thought, background and experiences.

2.15 pm

The Minister says she is reluctant to place too strong constraints on the choice of the board, but it seems she is reluctant to place any constraints whatever, even given the need to include accountability, diversity and wide-ranging scientific experience and experience of the

regions. We tabled the amendments because we see other examples of organisations in the public sector that lack the necessary regional, national or gender representation or have other diversity issues.

**Kirsty Blackman** (Aberdeen North) (SNP): For the avoidance of doubt, we are happy to support the two amendments. On the issue of geographical experience, if we go with geographical knowledge as well, and perhaps get people who have specific expertise in, for example, energy-related technologies, such as we have around Aberdeen, and in technologies around AI, which we have in the area around Edinburgh, then we have geographic hubs as well as experience hubs. The amendment nicely allows for ARIA to make sure that it encapsulates all of that and not just, as the hon. Lady says, nanotechnology, which is brilliant but is not the only thing that we should focus on.

**Chi Onwurah:** I am in absolute agreement with the hon. Lady. She highlights an important issue. We want ARIA to be transformational. We heard the Minister underline that we want ARIA to transform real people's lives, but how is ARIA to do that if its members do not have experience on the ground in the different regions and nations of our country and if they do not understand the way in which the supply chain works in Aberdeen, for example, for specific technologies and sectors? We do not want ARIA to have a narrow focus or a narrow background of expertise. On that basis, I wish to press the amendment to a vote.

*Question put,* That the amendment be made.

*The Committee divided:* Ayes 5, Noes 9.

#### Division No. 5]

##### AYES

|                  |                  |
|------------------|------------------|
| Blackman, Kirsty | Onwurah, Chi     |
| Flynn, Stephen   |                  |
| Furniss, Gill    | Zeichner, Daniel |

##### NOES

|                |                    |
|----------------|--------------------|
| Baker, Duncan  | Metcalfe, Stephen  |
| Bell, Aaron    | Richardson, Angela |
| Fletcher, Mark | Solloway, Amanda   |
| Hunt, Jane     | Tomlinson, Michael |
| Mayhew, Jerome |                    |

*Question accordingly negated.*

*Amendment proposed:* 8, in schedule 1, page 6, line 24, at end insert—

“(5) The Secretary of State must, in appointing the members of ARIA, have regard to the desirability of the members including at least one person with relevant experience in relation to each of Wales, Scotland and Northern Ireland.

(6) In this section, ‘relevant experience’ means experience of one or more of the following—

- the conduct of scientific research; and
- the development or exploitation of scientific knowledge.”—(*Chi Onwurah.*)

*This amendment would require the Secretary of State to have regard to the (collective) relevant experience of ARIA's members in the devolved nations when using their power of appointment.*

*Question put,* That the amendment be made.

*The Committee divided:* Ayes 6, Noes 9.

#### Division No. 6]

|                  |                  |
|------------------|------------------|
| Blackman, Kirsty | Furniss, Gill    |
| Butler, Dawn     | Onwurah, Chi     |
| Flynn, Stephen   | Zeichner, Daniel |

##### AYES

##### NOES

|                |                    |
|----------------|--------------------|
| Baker, Duncan  | Metcalfe, Stephen  |
| Bell, Aaron    | Richardson, Angela |
| Fletcher, Mark | Solloway, Amanda   |
| Hunt, Jane     | Tomlinson, Michael |
| Mayhew, Jerome |                    |

*Question accordingly negated.*

*Amendment proposed:* 10, in schedule 1, page 6, line 26, at end insert

“with the consent of the Science and Technology Select Committee of the House of Commons.”—(*Chi Onwurah.*)

*This amendment would require that the Secretary of State seeks and obtains the consent of the Science and Technology Committee of the House of Commons for the appointment of ARIA's first Chief Executive Officer.*

*Question put,* That the amendment be made.

*The Committee divided:* Ayes 6, Noes 9.

#### Division No. 7]

##### AYES

|                  |                  |
|------------------|------------------|
| Blackman, Kirsty | Furniss, Gill    |
| Butler, Dawn     | Onwurah, Chi     |
| Flynn, Stephen   | Zeichner, Daniel |

##### NOES

|                |                    |
|----------------|--------------------|
| Baker, Duncan  | Metcalfe, Stephen  |
| Bell, Aaron    | Richardson, Angela |
| Fletcher, Mark | Solloway, Amanda   |
| Hunt, Jane     | Tomlinson, Michael |
| Mayhew, Jerome |                    |

*Question accordingly negated.*

*Amendment proposed:* 33, in schedule 1, page 6, line 26, at end insert—

“(1A) The Secretary of State may not appoint a person as Chief Executive Officer unless the appointment of the person has been approved by resolution of each House of Parliament.

(1B) ARIA may not exercise any functions under this or any other Act, nor may the Secretary of State make any grants to ARIA under section 4 of this Act, until its first Chief Executive Officer has been appointed.”—(*Stephen Flynn.*)

*This amendment requires both Houses of Parliament, under the affirmative resolution procedure, to approve the name of the proposed Chief Executive Officer. ARIA may not exercise any functions, nor may the Secretary of State make any grants to ARIA until its first Chief Executive Officer has been appointed.*

*Question put,* That the amendment be made.

*The Committee divided:* Ayes 6, Noes 9.

#### Division No. 8]

##### AYES

|                  |                  |
|------------------|------------------|
| Blackman, Kirsty | Furniss, Gill    |
| Butler, Dawn     | Onwurah, Chi     |
| Flynn, Stephen   | Zeichner, Daniel |

## NOES

|                |                    |
|----------------|--------------------|
| Baker, Duncan  | Metcalf, Stephen   |
| Bell, Aaron    | Richardson, Angela |
| Fletcher, Mark | Solloway, Amanda   |
| Hunt, Jane     | Tomlinson, Michael |
| Mayhew, Jerome |                    |

*Question accordingly negated.*

**Chi Onwurah:** I beg to move amendment 11, in schedule 1, page 6, line 31, leave out sub-paragraph 4 and insert—

“(4) The Secretary of State may refuse consent under sub-paragraph (3) only where the Secretary of State considers—

- (a) it necessary or expedient in the interests of national security, or
- (b) the person is unable or unfit to carry out the functions of the office.”

*This amendment would allow the Secretary of State to refuse consent to the appointment of an executive member of ARIA on the basis of their unfitness or inability to carry out the functions of the office.*

**The Chair:** With this it will be convenient to discuss amendment 12, in schedule 1, page 7, line 11, leave out sub-paragraph 2 and insert—

“(2) The Secretary of State may remove a person from office as an executive member if the Secretary of State considers—

- (a) it necessary or expedient in the interests of national security, or
- (b) the person is unable or unfit to carry out the functions of the office.”

*This amendment would allow the Secretary of State to remove an executive member of ARIA on the basis of their unfitness or inability to carry out the functions of the office.*

**Chi Onwurah:** I am not daunted by the 6:9 defeat that we have just experienced. We will continue in the hope of winning over Government Members to the improvements that we wish to see in the Bill. The amendments, which stand in my name and those of my hon. Friends, are just such constructive amendments to improve the Bill and, more specifically, to actually give the Secretary of State greater powers than he, perhaps in his modesty, has set out in the Bill.

Amendment 11 would allow the Secretary of State to refuse consent to the appointment of an executive member of ARIA on the basis of their unfitness or inability to carry out the functions of the office. Amendment 12 would allow the Secretary of State to remove an executive member of ARIA on the basis of their unfitness or inability to carry out the functions of the office. The amendments are necessary because greater oversight and responsibility are needed to avoid even the suggestion of the taint of sleaze being attached to science.

This morning, in response to amendment 10, through which we intended the Science and Technology Committee to review the appointment of the chief executive, I think the Minister said that we needed a different model of trust. The public need the existing models of trust to be upheld by our Parliament, our Ministers, our Executive, and the executives of agencies such as ARIA. It should also be clear that the Government are taking responsibility for who is on ARIA's board and has control of £800 million of public money and, more important, control of our scientific—and therefore economic—future.

The Bill places huge responsibility and power in the hands of ARIA's CEO with little ongoing accountability. The Secretary of State is responsible for appointing the chair, other non-executive members of the board, and the first CEO. All subsequent CEOs and all other executive board members will be appointed by the chair after consultation with the other non-executive members, as set out in paragraph 3(2) of schedule 1. Such appointments cannot be made without the consent of the Secretary of State, but as the Bill stands, the Secretary of State can refuse consent only on national security grounds. Why are national security grounds the only grounds on which somebody might not be fit or suitable to serve on the board of ARIA?

**Dawn Butler (Brent Central) (Lab):** Should other grounds, such as wanting to pursue eugenics in great depth, not be considered reasons not to appoint somebody to a board?

**Chi Onwurah:** My hon. Friend raises an important point. As we heard in earlier discussions, there are concerns about the areas of science, such as eugenics, that might be championed or accepted by potential board members. I would hope that belief in eugenics was sufficient to consider someone unfit for the board, but, as it stands, the Secretary of State would currently have no power to refuse consent for an appointment on that basis. I find it interesting to consider the workings of the Secretary of State's mind here. National security is clearly a critical issue, and it is the first duty of any Government to protect their citizens, but are there no other reasons why somebody might not be suitable?

2.30 pm

**Daniel Zeichner:** This is an opportunity; we can help spare the Government future embarrassment. Quite frankly, if we have this set of out-there people running the organisation and they then choose to appoint someone highly controversial, it could be extremely embarrassing. I remember occasions when Labour Secretaries of State had difficulties with scientific advisers. These are controversial areas, and I can foresee an extremely difficult situation. Without an ability to intervene, where does it lead?

**Chi Onwurah:** My hon. Friend makes an important point. It is important to understand that ARIA will be an independent agency, but it will be spending taxpayers' money and it will therefore reflect the public and the national interest. If somebody is recruited who, at the time or later on, is found to have views that are abhorrent to society, or not fit to serve on the board for other reasons, by what process could or would such a person be removed from the board? If, for example, after appointment of a member to the board, it was found that they championed eugenic research or that they believed in anti-vaccination mythologies, for example, would there be any means by which they could be removed?

**Kirsty Blackman:** Does the shadow Minister find it bizarre, as I do, that we have a higher bar for taxi drivers, for example, who have to pass a “fit and proper person” test in order to become a taxi driver, than for these people, who will be spending millions of pounds of public money? I recognise that that is a sensible thing to do, but there is not the level of oversight that we have for people such as taxi drivers.

**Chi Onwurah:** The hon. Lady makes a very good point on the comparison with a “fit and proper person” test for taxi drivers. That underlines the point I was going on to make. In the Bill, there is no statutory requirement for members of ARIA to possess scientific expertise or experience, whether individually or collectively. There is no floor—there is no minimum requirement—for their expertise. We have heard a lot about how wonderful and amazing and visionary they must be, but we have not heard about any floor for that expertise and, as I said earlier, there are no “have regard to” factors that the Secretary of State must consider when making appointments. Schedule 9 to the Higher Education and Research Act 2017, for example, establishes that the Secretary of State must consider the collective relevant experience of the UKRI board when making appointments. In this Bill, there is no floor. That is a huge concern for the Committee.

In the evidence session, Professor Philip Bond said:

“What you are doing in creating this kind of model is handing trust to people. You want people with high integrity who are brilliant, and then you let them get on with it, and you trust that they will do something that reflects their character.”—[*Official Report, Advanced Research and Invention Agency Public Bill Committee*, 14 April 2021; c. 25, Q20.]

With the examples that we have seen of Tory cronyism, do the Committee really think that we can just rely on trust when it comes to public interest and the public purse?

**Duncan Baker** (North Norfolk) (Con): One of the fundamental roles of a director is to exercise reasonable care, skill and diligence. As that is part of the fundamental concept of a board, I would suggest it is the collective responsibility of the chief executive and the entire board, not the responsibility of the Secretary of State.

**Chi Onwurah:** The hon. Member makes an interesting point, and it would be excellent if we understood better how the board would collectively exercise responsibility. When we talk about a board exercising collective responsibility, that is absolutely true. That is right, and it is what happens in the private sector. I would be interested to know whether the reporting requirements on private sector boards will apply in this case, but this is public money. It is £800 million of public money—taxpayers’ money. Particularly as we come out of a pandemic and recession, there are many worthy recipients of that money. Is the hon. Member truly saying that it should be spent and directed by people who have no accountability and cannot be removed? The Secretary of State is responsible for their getting the money, but will have no ability to remove them, no matter how unfit they prove themselves to be. On the basis that the amendments offer the Secretary of State further powers to ensure the fitness of the board, I hope that the Minister will accept them.

**Amanda Solloway:** Amendment 11 would extend the right of the Secretary of State to refuse an executive member appointment to include refusal of consent where a person is

“unable or unfit to carry out the functions of the office.”

It is important that the Secretary of State’s refusal rights are limited to where it is necessary and expedient on national security grounds. The freedom for the chair to hire the executive leadership team is a key feature of

ARIA’s independence from Government. The Secretary of State will hire a top-quality non-executive team who have the experience and expertise to oversee ARIA. We should trust their judgment to hire an exemplary set of executive members. I remind the hon. Member for Newcastle upon Tyne Central that the Secretary of State will appoint the inaugural chief executive officer and will set the tone for the quality of the future executive member hired by the chair, and I hope she will withdraw her amendment on that basis.

I will now move to amendment 12, building on my comments with respect to amendment 11. Once appointed, the terms of employment for executive members’ contracts are determined by the chair, with the consent of the Secretary of State, and only after consulting other non-executive members. They are expected to include standard provisions that would allow the chair to remove an executive member from office if that person is deemed unfit or unable to carry out the functions of the office.

**Chi Onwurah:** I thank the Minister for her earlier comments. Can she clarify what she means when she says, “They are expected to include standard provisions”? Is she saying that they will include the explicit provision for the CEO and the chair to remove members, and under what criteria or circumstances?

**Amanda Solloway:** To reiterate, and building on my previous comments, contracts are determined by the chair. The contracts that people will have are to be negotiated. Furthermore, in extremis, the Secretary of State may remove the chair and other non-executive members if he or she is particularly concerned by the quality of executive members recruited by the chair. It is for those reasons that the amendment is not necessary, and I hope the hon. Lady will not press it.

**Kirsty Blackman:** We have asked an awful lot of questions about the appointment of the CEO and chair. Does the Minister understand that her answers have not given us comfort? To say that the roles will be appointed by the chair and the chief executive does not help us a huge amount, because we are not very happy about the process of appointing those people, so for them to be able to appoint other people does not help us in any way, shape or form. Having more safeguards in place would give us comfort that those people will be fit to do the job.

**Chi Onwurah:** I echo the point made by the hon. Member for Aberdeen North. We recognise that a significant amount of power lies in the chief executive and the chair, and there is no oversight from Parliament or others of those appointments. To say that the chief executive and the chair will have the power according to contractual negotiations to remove members does not reassure us. The Minister said that the Secretary of State could, in extremis, remove the chair. Would she write to me to set out what the in extremis circumstances would be?

I am keen not to detain the Committee unnecessarily. We are raising important matters, but since the Minister is not happy to accept them, I beg to ask leave to withdraw the amendment.

*Amendment, by leave, withdrawn.*



**Chi Onwurah:** I beg to move amendment 13, in schedule 1, page 9, line 11, leave out paragraph 11 and insert—

“11 The Secretary of State must by regulations make provision establishing the procedures to be adopted for dealing with conflicts of interest of members of ARIA, members of a committee or sub-committee or ARIA’s employees.”

The amendment seeks constructively to improve the Bill by providing greater transparency and oversight, and thus avoid potential scandals or sleaze that are currently overwhelming various aspects of this Government. The amendment would require that the Secretary of State make regulations to establish the procedures to deal with conflicts of interest involving ARIA’s members and staff. We recognise that ARIA should have close links with the private sector. ARIA will not be able to achieve its transformational goal without working closely with the private sector.

As was stated in the evidence sessions, part of the UK’s particular challenge is the commercialisation of existing fantastic ideas, so working closely with the private section is important. However, the Committee must be aware that we have seen time and again, particularly now, that the revolving door between the private and public sectors can be open to abuse, especially—I say reluctantly—under this Government. Only last weekend, writing in *The Observer*—other newspapers are available; I mentioned *The Daily Telegraph* earlier, so I am trying to be fair—the senior Conservative MP and Chair of the Liaison Committee, the hon. Member for Harwich and North Essex (Sir Bernard Jenkin) said:

“The line between public service and private gain is shamefully blurred”.

He went on to say:

“In the meantime, the government can establish not so much new rules but new processes and education, which encourage more of the proper conversations about values, integrity, ethics and how to behave when there might be potential, or even just perceived, conflicts of interest.”

He went on to recommend training in conflicts of interest. Again, we are constructively giving the Government—obviously the Bill was drafted before some of the scandals that they are embroiled in came to light—the opportunity to follow his advice.

2.45 pm

It is a standard approach internationally. The Defence Advanced Research Projects Agency, which is the inspiration for ARIA, has clear conflict of interest rules. In the evidence sessions, we heard from a number of witnesses whose evidence supports the amendment. Dr Peter Highnam, deputy director of DARPA in the US, made an excellent contribution. When discussing the ways in which ARIA might be able to invest in ideas, programmes, companies and so on, he said:

“Of those that you listed, the only one that we do not do is take investment positions in companies. That is not what we do. You can make a proposal to us for research. You may offer a cost-share, depending on whether it is a major company and very systems-oriented work, all the way to a standard research grant to a university or small business, or a combination of those things.”—[*Official Report, Advanced Research and Invention Public Bill Committee, 14 April 2021; c. 47, Q41.*]

He also said:

“I can speak only to how DARPA operates. We have very rigorous review processes—technical, financial and others. We have conflict of interest rules and so on that we all follow. There

are robust processes and independent looks at those processes. Again, we could not operate any other way.”—[*Official Report, Advanced Research and Invention Public Bill Committee, 14 April 2021; c. 38, Q29.*]

I highlight the fact that DARPA does not allow for the taking of equity interests in companies, yet still has much more rigorous conflict of interest rules—we have none—and a process of accountability that the Bill neglects. When I pressed Dr Highnam on whether programme directors, when they go back to the private sector, are allowed, for example, to direct finance at the companies to which they return, his response was quite clear and critical: “No.” We do not see any of those checks and balances in the Bill.

**Aaron Bell** (Newcastle-under-Lyme) (Con): Will the hon. Lady give way?

**Chi Onwurah:** I give way to the hon. Member for Newcastle-under-Lyme.

**Aaron Bell:** I thank the hon. Lady for the other Newcastle for giving way. She draws a comparison with DARPA, but is the more obvious comparison not with UKRI? Like ARIA, UKRI is bound by the code of conduct for board members of public bodies, which includes, for example, the obligation to declare publicly any private financial or non-financial interests that may, or may be perceived to, conflict with one’s public duty. That speaks to the point that my hon. Friend the Member for North Norfolk made: we would not expect the kind of people we will appoint to the board to act in the ways that she seems to think they will.

**Chi Onwurah:** I thank the hon. Member for the second Newcastle for that contribution. I will make a couple of points in response. Let me gently say that Government members of the Committee are trying somewhat to have it both ways, in saying that ARIA will be like UKRI while not putting in place any of the measures, systems or processes of accountability to require it to be like UKRI, building on the fact that ARIA is, as I understand it, meant to fill a gap in our research landscape.

On whether ARIA will follow all the rules that UKRI follows, I am pretty sure that the answer to that is no, because as I understand it, it is not going to follow freedom of information or procurement rules. We have seen over the past few months with the scandal over Greensill—this is what the comments from the Chair of the Liaison Committee were about—that the existing rules and regulations are not sufficient. Finally, for the hon. Member for Newcastle-under-Lyme to say that we can expect these people to behave better because they are going to be better than that—really? Many scandals have been founded on expectations like that and again, we do not want the touch or hint of scandal near our fantastic science base.

**Jerome Mayhew** (Broadland) (Con): Can I have some clarity from the hon. Lady? The point made by my hon. Friend the Member for Newcastle-under-Lyme—the other Newcastle—was that there is already a written requirement for members of these kinds of bodies to make full disclosure. If they are going to ignore that,

[Jerome Mayhew]

why does the hon. Lady think that they would not ignore a regulation from the Secretary of State saying exactly the same thing?

**Chi Onwurah:** I thank the hon. Member for his contribution, which I think was made in a constructive sense.

I think the Chair of the Liaison Committee is making a point about that guidance. Clearly, it was not sufficient for David Cameron and it is clearly not proving to be sufficient in other cases. I hope that, as this amendment sets out, it is not simply about declaring. This is a critical part and I am grateful to the hon. Gentleman for allowing me to emphasise it. The amendment does not say they should declare conflicts of interest; it states that the Secretary of States makes regulations—detailed, I would say—establishing the procedures to deal with conflicts of interest. That is the key thing. This stems from the need to have a close working relationship with the private sector, which will give rise to conflicts of interest that may be quite complex, especially with new and evolving technologies, which may go on to complex and potentially international supply chains. Those conflicts of interest may be complex, involving equity stakes and so on. We need procedures to deal with them that are more detailed than the current general ones and which are specifically targeted at ARIA's unique role.

Dr Regina Dugan, the chief executive officer of Wellcome Leap, effectively supported that proposal:

“The particular way that we work is through contracts; we do not actually do grants. I also think that this position of not taking equity is important, because the non-profit element of it is part of the differentiation, and we have an entire commercial sector that is good at assessing value and figuring out return on investment.”—[*Official Report, Advanced Research and Invention Agency Public Bill Committee*, 14 April 2021; c. 48, Q43.]

What is different with ARIA is that it is, potentially, going to be taking equity, which can raise more complex conflicts of interest.

Professor Pierre Azoulay of the Massachusetts Institute of Technology said that

“the programme managers at DARPA and also at ARPA-E—the Advanced Research Projects Agency-Energy—have a fixed expiration date, which means they will need to go back to academia or to the venture capital firm or large firm that they left, and generally they want to do so with their head held high and their reputation intact. I think that that has created over time a norm of correct behaviour, if you will, and the absence of cronyism.”—[*Official Report, Advanced Research and Invention Agency Public Bill Committee*, 14 April 2021; c. 38, Q30.]

We want to see that norm of correct behaviour established through supporting processes and procedures. I asked Dr Highnam,

“What should we be looking for in the directors and programme managers as the key positive part of the culture that ARIA should seek to build?”

He answered:

“Honour in public service is top of the list.”—[*Official Report, Advanced Research and Invention Agency Public Bill Committee*, 14 April 2021; c. 39, Q32.]

I should say that I have not heard any Government witness or Minister emphasise the importance of honour as a key characteristic of board members. I think it is really important that procedures to deal with conflicts of interest are established. That view is shared by the Chair of the Liaison Committee, who has said

“After the dust settles over the Greensill affair, I suspect that we will find that the lack of judgment over David Cameron's approaches to ministers is less important than the general failure to address what has become a casual approach to conflicts of interests amongst many in government and in politics...All can see now the general inability of the various codes and systems”—to the points made—

“of oversight, such as the toothless advisory committee on business appointments, to provide sufficient transparency and accountability, which is why even its chair, Lord Pickles, wants reform.”

When the Chair of Liaison Committee, who is much respected on the Government Benches, says that, and when we are mired in scandals as a consequence of a lack of appropriate conduct and clear processes and procedures, I urge the Minister to accept the need at the very least for greater detail when it comes to avoidance of conflicts of interest. I urge her to accept the amendment to establish processes and procedures to avoid conflicts of interest in this new body, which is critical to our future economic and scientific prosperity.

**Daniel Zeichner:** It is a pleasure to be part of a Committee that you are chairing, Mrs Cummins. I fully endorse what my hon. Friend has said about the amendment. In fact, she has pretty much said it all, but there are one or two points that I want to add.

We are considering a profound set of issues. The evidence sessions showed some fundamental differences in culture between our country and the Americans, and it is their example on which we are largely modelling our initiative. To some extent it goes to the problem that we are facing as a country at the moment. For a long time, we rather considered ourselves not to be prey to such conflicts; we had a British way of doing it. Procedures were not necessarily written down, but there were understandings and people behaved properly. The sad truth is that over the past 20 to 30 years, somewhere that changed. That is the truth, and that is why we are in the current situation.

In the evidence session with the Americans, I was very struck at one point when we were pressing them on how they avoided conflicts of interest. Their response was a kind of American swelling of patriotic pride, as they said that they would not do that because it would somehow harm the American dream. [*Interruption.*] Exactly. People in Britain are different; it is not that we are not proud of our country or patriotic, but I would say that our patriotism is different from theirs.

**Chi Onwurah:** My hon. Friend makes an important point. Perhaps the fact that DARPA is part of the US defence establishment, with all the military honour and commitment to the defence of the nation, is one of the reasons why honour was held so high by the Americans. Does he agree that the absence of any mission and any departmental ownership of ARIA means that will not be the case in the UK?

**Daniel Zeichner:** My hon. Friend has touched on a very important point. It was something that I tried to draw out in some of the evidence sessions. I would point Members to an excellent book written a few years ago by Lord Sainsbury, an esteemed former science Minister. He talked about the differences in culture between Europe, America and the UK, and warned against just

trying to transpose one system to another, unless one really understood the cultural context. We have not mentioned it so far today, as it has very much been about natural sciences and perhaps, *mea culpa*, engineering at the beginning, but the social sciences may be biggest challenge of all. That was touched on at one point in the evidence sessions when one of the witnesses said it is not just a matter of the technologies, but public acceptance and understanding of them. It will require some really innovative work from social scientists to understand how that will work.

3 pm

Taking the system that works in America as an example, it was originally rooted in the defence establishment—exactly as my hon. Friend says—which gave it very strong principles and values. Again, there was a moment in the evidence session when we could feel people smiling, because in the current context the idea that honour and public duty will protect us against the dangers of conflicts of interest seems slightly fanciful, frankly. Government Members are understandably rallying to their side's cause in the Bill as drafted, but in the current public context, surely we should want to include more safeguards, to make it clearer to everyone what is expected and to give more opportunities to protect ourselves against future problems.

As the shadow Minister and others have said, we know that this is a very delicate and complicated set of relationships between people working in the public sector and in private companies. I represent Cambridge, where we have deliberately sought to put public bodies such as the Laboratory of Molecular Biology adjacent to AstraZeneca, because we know that there is a constant interchange of ideas. That is how innovation works: people meeting each other. We then have to be really careful, however, otherwise we will end up with the charge—rightly made in some cases—that huge amounts of public money go into developing research, and then, lo and behold, the public pay again when they have to buy those products back from the private sector, which has used that public sector-based research to make the product.

I fully and absolutely understand why money is needed to go into research, but there is a real risk that in future we will lose public support, which is why it is so important that we get these things right. I would just caution that, in a few years' time, the Government—not necessarily this Government; hopefully, my Government—might find themselves wanting to deal with dodgy advisers, and I want us to ensure that we have the mechanisms to deal with that. This Government are leaving themselves open to some real risks, because they are putting themselves in a position where they do not have the tools to hold to account people who sometimes may not quite be what they first seemed.

**Amanda Solloway:** On amendment 13, the framework document to be agreed between the Department for Business, Energy and Industrial Strategy and ARIA, which will complement the Bill, will commit ARIA to the code of conduct for board members of public bodies, which sets out the personal and professional standards expected from board members, and forms part of individual members' terms and conditions of appointment.

The code of conduct includes, for example, the obligation to declare publicly any private financial or non-financial interests that may, or may be perceived to, conflict with one's public duty. I believe that that principle-led, non-legislative approach is appropriate. Indeed, it is the standard approach taken by many other arm's length Government bodies, including UKRI. That approach allows ARIA to manage conflict of interest risks in a flexible way that is best suited to its operations.

I agree wholeheartedly with what Dr Peter Highnam said last week about what we should be looking for in the CEO to build the right ARIA culture:

“Honour in public service is top of the list.”—[*Official Report, Advanced Research and Invention Agency Public Bill Committee, 14 April 2021; c. 39, Q32.*]

We will instil that sentiment in ARIA from the outset, starting with the recruitment of the chair and the CEO. We also have an additional assurance, in that the Bill includes a reserved power to introduce additional procedure, in law, should that be necessary once ARIA is operational. I believe that the hon. Member for Newcastle upon Tyne Central should take great comfort in the reserved power set out in paragraph 11, and I ask her to withdraw the amendment.

**Chi Onwurah:** I thank the Minister for her response. I take most comfort from her unequivocal statement that honour in public service is a key characteristic that will be looked for in the chief executive officer of ARIA, because I had not heard such a strong statement about the need for honour, or even for public service, in ARIA's mission. I take more comfort from that than from the confirmation that ARIA board members will be subject to existing rules about conflicts of interest. As we have heard, those rules are not sufficient. For example, in one of the recent scandals it was found that the Secretary of State for Health and Social Care owned shares in a company that had received a significant contract from his Department, and there were questions about whether the requirements for declarations of public interest had been met.

We in the Opposition have said a number of times that ARIA is an organisation that will necessarily give rise to important conflicts of interest, so it needs more detailed procedures and processes. I do not want to detain the Committee, however, and I hope that the Minister will look at the issue in the future. I will not push the matter to a vote, so I beg to ask leave to withdraw the amendment.

*Amendment, by leave, withdrawn.*

**Chi Onwurah:** I beg to move amendment 14, in schedule 1, page 10, line 5, at end insert—

“(3) The report shall contain information regarding—

- (a) the proportion of ARIA's funding in the relevant financial year which has financed activities taking place (in whole or in part) outside the United Kingdom, and
- (b) the national and regional distribution of activities in the United Kingdom supported by ARIA's funding in the relevant financial year.”

*This amendment would require ARIA's annual report to contain details of the geographical distribution of activities funded by ARIA.*

**The Chair:** With this it will be convenient to discuss the following:

Amendment 30, in schedule 1, page 10, line 5, at end insert—

“(3) This report must include statistics regarding the percentage of its funding disbursed in each region of the UK.”  
*This amendment is intended to provide greater transparency about the destination of ARIA’s funding disbursements within the UK.*

Amendment 16, in clause 2, page 2, line 10, leave out “in” and insert “across”.

*This amendment would require ARIA to have regard for the benefits of its activities across the nations and regions of the UK in exercising its functions.*

Amendment 17, in clause 2, page 2, line 12, leave out “in” and insert “across”.

*See the explanatory statement for Amendment 16.*

Amendment 18, in clause 2, page 2, line 14, leave out the first “in” and insert “across”.

*See the explanatory statement for Amendment 16.*

**Chi Onwurah:** These amendments are all concerned with ensuring that the benefits of ARIA are spread across our country and contribute to a more equal and prosperous country. Amendment 14 would insert a new sub-paragraph requiring ARIA’s annual report, for which there is provision elsewhere, to contain details of the geographical distribution of activities funded by ARIA, while amendments 16, 17 and 18, which relate to clause 2, would require ARIA to have regard for the benefits of its activities across the nations and regions of the UK in exercising its functions.

We tabled these amendments in a constructive spirit, to improve the Bill in line with the Government’s own aims, as we understand them. During and since the general election, there has been significant discussion about the importance of ensuring that our whole country benefits from economic prosperity and from the transformational impact of ARIA.

**Stephen Metcalfe** (South Basildon and East Thurrock) (Con): I accept what the hon. Lady says about geographical spread and making sure that we are treating the country fairly and levelling up, but we have to accept that while £800 million over a four-year period is a lot, £200 million a year is not a huge amount. We know that we are focusing ARIA on a small number of projects. The danger is that we dilute the impact that ARIA could have using that money by trying to demonstrate that we are spreading it equally across the country. The danger with that is that we do not achieve what we set out to achieve in the first place.

**Chi Onwurah:** There are two challenges here. ARIA’s funding is between 1% and 2% of the UK’s science spend, depending on whether the aims of the current Government are actually met, so in some respects it is considered too small to be subject to reporting requirements. Yet we also hear of how it is expected—indeed, required—to have a transformational impact on all our lives. If that impact is going to be transformational, surely it is critical that it should be as equitable as possible.

We have tried very hard to reflect those slightly conflicting aims. Amendment 14 is a reporting requirement; amendments 16, 17 and 18 are to “have regard to”. We have not set targets. We have not said that it has to be a certain proportion, but particularly with regard to amendment 14 there can surely be no objection to reporting how the funding has been spent. That is a basic requirement of transparency.

The hon. Member is right to infer that people may draw conclusions from that reporting, but I tend to feel that information is empowering, regardless of what the conclusions are, so the amendment takes a reasonable line between requiring that the spend be in some respects regionally distributed, which it does not do, and ensuring that the information is there to assess the extent to which ARIA is living up to its overriding goal—again, we do not have a mission, so let us say goal—of transforming our society.

The Opposition believe that that goal is possible. We believe that science and research, as I have said, can be the engines of progress for our society, but it needs to be for and by everyone, not simply for the few. It is essential, as I have said, that each region of the UK benefits from the creation of ARIA. The Secretary of State told the Science and Technology Committee that the Government wanted ARIA

“to reflect the wide talent and geographical spread of the United Kingdom”,

but there is nothing in the Bill to measure the extent to which it does that. As we have seen, the Bill fails to mention the devolved nations and does not outline any reflection of the geographical realities of the United Kingdom.

Amendment 14 is simply about requiring reporting so that the Government—whichever Government we have—can measure the impact that ARIA is having on the very important desire to reduce the regional inequalities in our country. It does not tie the hands of ARIA’s leadership; it just imposes reporting requirements. That is really important when we reflect that the Campaign for Science and Engineering found that for every £1 invested by the Government on research and development we receive 20p to 30p back each and every year. Surely we have a right to know where that money is going geographically, as well as which areas it is going to.

As a northern MP, I know that the north receives less than half of the life sciences investment per head that the south of England does, despite having great teaching hospitals and significant health inequalities that truly need to be transformed. We heard an important contribution from Tabitha Goldstaub of CognitionX, who said that

“ARIA has to be independent, but it also needs to ensure that it works really closely with central Government and with regional and local government. Local government spends about £1 billion on procurement, and cities are key investors in infrastructure, so finding a good link with local government, as well as with central Government, is important...Regional strengths deliver benefits to actual localities.”—[*Official Report, Advanced Research and Invention Public Bill Committee*, 14 April 2021; c. 56, Q54.]

We also heard from John Kingman, the chair of UKRI, that its structures involve regular consultation with the devolved Administrations. It is important that we see how well ARIA is able to benefit also from that engagement, whether indirectly through the UKRI or through its competitions and other means of funding.

3.15 pm

I will comment briefly on amendments 16, 17 and 18, which would require ARIA to have regard for the benefits of activities across the nations and regions. ARIA presents an opportunity to drive innovation across the country, and this is about ensuring that it does not deploy a business-as-usual approach, which would risk

undermining the shared benefit that it should provide. Research and development is a vital driver of growth, both nationally and at regional level. In its current form the Bill requires ARIA to promote scientific innovation and invention “in” the United Kingdom. The amendments suggest simply changing that word to “across”, so that the benefits accrue to all constituencies, towns and villages. As I have said previously, the Government have made many promises over the past 18 months to level up all of the UK’s regions. We would like to see those promises translated into institutional reality, and that is what these three amendments seek to achieve.

**Daniel Zeichner:** I feel passionately about this issue because I represent a part of the country that often comes in for criticism, in the sense that some people, even some of my colleagues, say to me, “You’ve already got everything—you shouldn’t be getting any more.” This is a complex argument. If some areas have a long tradition of doing well and competing internationally, we can hardly deny them the resources to carry on with their work. However, we are painfully aware that there is a danger of overheating in some parts of the country.

I chair the all-party parliamentary group for the UK’s innovation corridor, which is, essentially, London-Stanstead-Cambridge, and there is much discussion at the moment about the Cambridge-Milton Keynes-Oxford arc—the so-called golden triangle. The discussion seems to have been going on for years and years—certainly for as long as I have been in this place, and long before that. There is this hope that through the clustering effects we can do much better than we already do, and we look to examples in other parts of the world to see how it is done.

The reason I support this amendment is that this is not simple or easy. There have been many attempts to spread the Cambridge cluster effect. In fact, ironically, it often seems to cluster more and more in particular bits of Cambridge. It is very hard to get people to go to other places, but that is what we want to try to encourage. One of the ways in which we will do that is by having the data and the information. This is a great opportunity for ARIA to be mindful of that in its report. It is not a difficult thing to do. It should tell people what is going on and where it is putting its resources. If it is not working in the first few years, that would give us the opportunity to intervene and make a change.

**Chi Onwurah:** Once again, my hon. Friend has reminded me in his excellent contribution of an important point that I should have made, which was that the regional development agencies, abolished by the Conservative coalition in 2010, did report on regional innovation and science spend. Whenever I speak to the North East England chamber of commerce, I am told that one of the difficulties in making the knowledge exchange framework accessible or understandable is the lack of data on regional science spend. Part of the point of this amendment is to help restore some of that data.

**Daniel Zeichner:** That is absolutely right. One of the many tragedies of the last 10 or 15 years has been the fact that strong attempts by the last Labour Government to have a positive regional policy were swept away. Vince Cable, I think, described the destruction of the regional structures in 2010 as positively Maoist. Astonishingly,

Lord Heseltine later came to Cambridge to bang the drum for regionalism outside the very offices that had been shut by his own Government a few months earlier.

We do not have a good record on regional policy in this country. We need to do better in future, for everybody’s benefit. Frankly, my city can do without the overheated house prices and the problems that come with everything being clustered in one place. It would be good for us, but also for everybody else, to get more balanced economic growth across the country.

We could do one small thing today—and I really do not see how it would be difficult for the Government to concede. I do not know how many Bill Committees I have been on—I have never yet had any success, although I live in hope. I make this plea, however, because I really do not see how the concession could be that painful.

**Stephen Flynn (Aberdeen South) (SNP):** I rise, obviously, to speak in favour of SNP amendment 30, which almost ties in with what is proposed by the shadow Minister. It is about providing greater transparency on the destination of ARIA’s funding disbursements within the UK.

I just want to pick up on a couple of things that have been said already. The shadow Minister reflected on the fact that the Bill makes no mention of the devolved nations. She almost seemed surprised, but that took me a bit aback because I am not surprised at that in any way, shape or form. I do not think anyone even on the Government Benches is over-surprised that they forgot to mention Scotland, Wales and Northern Ireland.

The hon. Member for South Basildon and East Thurrock mentioned his concerns about drawing conclusions. Yeah, I will be drawing conclusions about where that money goes and I am sure that every single person in Scotland will.

**Stephen Metcalfe:** If we were discussing how the Government aim to spend our £22 billion a year on science and research, there would be a much better argument for the amendment. But we are talking about high-risk, high-reward science, where a focus on a particular technology has the transformational effect that we are after. That might be the University of Strathclyde and its quantum technology research—I have no objection to that being the area of funding. But if the area happens to be Cornwall, Cambridge, London or somewhere else, I do not think we should hamper ourselves on this particular aspect of a new agency by trying to set targets. We know that if we set a target, someone tries to meet it.

**Stephen Flynn:** I understand the point that the hon. Gentleman is making, although I would caution that, when speaking to an MP from Aberdeen, people do not tend to mention a Glasgow university—it doesn’t go down too well, that’s for sure.

I understand the purpose of the hon. Gentleman’s point, but he must understand our concerns about making sure that Scotland receives its fair share of funding and investment from the UK Government while we remain a part of the United Kingdom. That ties into the wider narrative from this UK Government since the 2019 election. The views and will of the people of Scotland have been completely disregarded.

What we are seeing from the UK Government are attempts to impose their will on Scotland. We saw that with clause 46 of the Internal Market Bill and with the

[Stephen Flynn]

levelling-up fund that bypasses devolution but does not deliver for the communities in Scotland that it is needed for. This fits into our wider concern about the direction of funding from the UK Government.

As I said earlier, £800 million is involved. While Scotland is still a part of the UK we will take an interest and argue Scotland's case for getting that funding into Scotland. It should, of course, be at the Barnett level. I would welcome assurances from the Minister that we will see investment in Scotland—not necessarily in Glasgow or at the University of Strathclyde, but perhaps in Aberdeen: that would be much more beneficial. I hope that we will see that level of investment in Scotland and I hope that she will provide that commitment, in which case I will be able to withdraw my amendment.

**Kirsty Blackman:** Does my colleague agree that what we saw happening in relation to Northern Ireland—the money funnelled there and the fact that we did not get our Barnett amount of that cash—increases our worry about the fact that we might not see the Barnett amount for ARIA either?

**Stephen Flynn:** Absolutely; my colleague is spot on. As I said, this is not new, and the example she has provided is another clear indication of this UK Government's failure to take cognisance of Scotland's needs. If the Minister wishes to stand up and tell me that Scotland will get its fair share and we will get a Barnett sum spent in Scotland, I will be more than happy to withdraw my amendment; otherwise, I will push it to a vote to ensure that Scotland's needs are met.

**Amanda Solloway:** I shall turn first to amendments 14 and 30. The objective behind them is really important; we have spoken extensively about the need for ARIA's funding to reach beyond the usual suspects. In my view, that applies to where that funding goes as much as to the formality of the research setting. That also reflects the wider Government priority. The R&D places strategy, due to be published this summer, represents a key part of our ambitions for R&D and innovation. It builds on the approach set out in the R&D roadmap.

The purpose of the places strategy is to ensure that R&D benefits the economy and society in the nations, regions and local areas across the United Kingdom, contributing to the Government's wider levelling-up ambitions. I would like to make one key point about ARIA: as discussed previously, many of the details of ARIA's operation will be set out more fully in a future framework document. I suggest that that document is the appropriate place for stipulations on the content of ARIA's annual report.

It is extremely likely that ARIA will be required to provide in that report the type of geographical information sought in the amendments, but it would be beneficial to consider that in the round, alongside the other information that we might require ARIA to include in the report. The most appropriate and helpful information for ARIA, or Government bodies generally, to provide may also change in the future. To include specifics on the face of the Bill is impractical in that respect, as that would be inflexible.

On amendments 16, 17 and 18, ARIA will seek transformative scientific and technological breakthroughs, the outputs of which will have benefits across the United Kingdom. For example, a leap forward to driverless technology could create economic benefit to improve the quality of life across the UK. The attraction of the ARPA model is that its funding is laser-focused on achieving transformative outcomes. While £800 million up to 2024-25 is a meaningful amount of funding, it is a small proportion of the R&D spend. For those reasons, I urge the hon. Member for Newcastle upon Tyne Central to withdraw her amendment.

**Chi Onwurah:** I thank the Minister for her response. I am pleased to hear that she believes that the information requested in amendment 14 is likely to be included in the reporting requirements of ARIA. On that basis, I am—well, “happy” is not the right word, but I will withdraw amendment 14. I do so also on the basis that she understands its importance.

I feel, however, that in her response to amendments 16, 17 and 18, the Minister has had it both ways: she is saying that the benefits will be felt across the nation but that a requirement to have regard for the benefits across the nations and regions of the UK is too much. Its borders may move, but the geographical reality of our United Kingdom as a country of nations and regions will, I hope, remain, and so a requirement to have regard to the benefit across the nations and regions seems eminently sensible—indeed, it is a minimal requirement. I would like to press amendment 16 to a vote later, but I beg to ask leave to withdraw amendment 14.

*Amendment, by leave, withdrawn.*

3.30 pm

**Kirsty Blackman:** I beg to move amendment 29, in schedule 1, page 10, line 5, at end insert—

“(3) The report must include—

- (a) statistics on the gender balance of—
  - (i) executive board members
  - (ii) non-executive board members
  - (iii) senior staff; and
- (b) financial information on the gender pay gap among ARIA employees and appointees.”

*This amendment is intended to ensure that this public body may be held accountable for its gender representation.*

The Minister just made a helpful comment about the memorandum of understanding that will happen between BEIS and ARIA, but her comment was not quite strong enough for me. She said it was likely to include these things—perhaps very likely. Will the Minister tell us that it will include the geographical disbursement covered in the previous amendment, and the gender balance of the board members and senior staff and the gender pay gap, as covered in amendment 29? If we are asking companies to report on the gender pay gap in their annual reports, as we are and should be doing, it is not out of the question to ask ARIA to do the same.

The measure is particularly important because the Government are absolutely intent on excluding ARIA from freedom of information; if ARIA is excluded from FOI, we are not able to see that information. We will not have the level of scrutiny that we normally have over a public body. We have talked at some length—the shadow Minister spoke at some length—about the

importance of gender balance, diversity and having women in senior roles. It is also important that we do not have a gender pay gap within ARIA. We know that the glass ceiling in areas such as engineering is very significant. We want to ensure that women are promoted to all levels within the organisation, that women are paid fairly within it and that we are able to scrutinise the information.

I would really appreciate it if the Minister stood up and said, “Yes, absolutely—we will be negotiating that as part of the MOU.” That would be massively appreciated because it is incredibly important.

**Chi Onwurah:** I rise briefly to speak in support of the amendment. As the Bill stands, ARIA will not be subject to freedom of information requests. If there is no requirement to report on gender balance and the gender pay gap, will we have any understanding of the way in which ARIA is reflecting the gender diversity that we hope to see in the organisation?

**Amanda Solloway:** Again, I draw hon. Members’ attention to the existing obligations under the public sector equality duty and the Equality Act 2010, to which ARIA will be subject. Under the public sector equality duty, ARIA must, in carrying out all its functions, have due regard to the need to eliminate discrimination, harassment, victimisation and any other conduct; advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it; and foster good relations between persons who share a relevant protected characteristic and persons who do not share it.

This is a strong statutory duty that will apply to the recruitment and remuneration of ARIA staff. Should ARIA have 250 employees, there would also be a requirement to publish its gender pay gap information, based on the point at which the data becomes statistically significant and supports a good analysis.

I believe this specific duty is sufficient for ARIA, as indeed it is for all other employers. I do not think that any further provision in the Bill is required and I hope the hon. Member will withdraw the amendment.

**Kirsty Blackman:** I understand that there are public sector duties in relation to this issue, but ARIA could easily fulfil all those by employing only men—it could just pay them all at whatever level because they would all be men. It would fulfil its duties in that regard because there would be no gender pay gap, but it would be incredibly important for us to know that ARIA had only fulfilled its duties by taking that step, because it is public money that is being spent.

While Scotland is still part of the Union we want to be able to scrutinise how the money is spent. It is important that we have information on whether there is a gender pay gap in ARIA, whether or not it has 250 employees. Again, it is a public sector organisation spending public money but exempt from public procurement regulations and exempt from FOI. That means we are not able to adequately scrutinise the money spent, to ensure that there is diversity and fairness, making sure that women are not only in the lower roles in the organisations, but are starting at or being promoted to higher roles.

What the Minister said was not strong enough for me; I would like for her to have reassured us that the MOU will have that duty written into it. I would like to push the amendment to a vote.

*Question put, That the amendment be made.*

*The Committee divided: Ayes 6, Noes 8.*

#### Division No. 9]

##### AYES

Blackman, Kirsty  
Butler, Dawn  
Flynn, Stephen

Furniss, Gill  
Onwurah, Chi  
Zeichner, Daniel

##### NOES

Baker, Duncan  
Bell, Aaron  
Fletcher, Mark  
Mayhew, Jerome

Metcalf, Stephen  
Richardson, Angela  
Solloway, Amanda  
Tomlinson, Michael

*Question accordingly negated.*

*Amendment proposed: 30, in schedule 1, page 10, line 5, at end insert—*

“(3) This report must include statistics regarding the percentage of its funding disbursed in each region of the UK.”—(Stephen Flynn.)

*This amendment is intended to provide greater transparency about the destination of ARIA’s funding disbursements within the UK.*

*Question put, That the amendment be made.*

*The Committee divided: Ayes 6, Noes 8.*

#### Division No. 10]

##### AYES

Blackman, Kirsty  
Butler, Dawn  
Flynn, Stephen

Furniss, Gill  
Onwurah, Chi  
Zeichner, Daniel

##### NOES

Baker, Duncan  
Bell, Aaron  
Fletcher, Mark  
Mayhew, Jerome

Metcalf, Stephen  
Richardson, Angela  
Solloway, Amanda  
Tomlinson, Michael

*Question accordingly negated.*

*Question proposed, That the schedule be the First schedule to the Bill.*

**Amanda Solloway:** I welcome the detailed discussion that schedule 1 has attracted. It is to be expected since the schedule sets out ARIA’s governance arrangements, including the make-up of the board and how members and staff are appointed and removed. There are elements of schedule 1 that are standard to most statutory corporations and that mirror the measures on UKRI in the Higher Education and Research Act 2017. Those include the paragraphs about ARIA determining its own procedures, the delegation of functions by ARIA, and the preparation and laying before Parliament of audited accounts and annual reports.

I reiterate that ARIA will be subject to parliamentary scrutiny in the same way as other statutory corporations, both by Select Committees, including the Science and Technology Committee—I am sure that my hon. Friend the Member for Newcastle-under-Lyme and the hon.

[Amanda Solloway]

Member for Brent Central will contribute to that fully—and by the National Audit Office, which is expected to report in detail on ARIA for discussion at the Public Accounts Committee. With reference to this morning's discussion, it is therefore clearly the case that ARIA will be held to account.

As with the rest of the Bill, in schedule 1 I have been very mindful of the need to strike a balance between providing ARIA with the independence to operate freely and ensuring sufficient Government and parliamentary oversight to protect the use of public funds. I also emphasise that the creation of ARIA has been welcomed by the UK research and innovation community, and I again point to the integrity of that community.

I will explain the rationale behind the key paragraphs that are specific to ARIA and that have not yet been discussed in relation to the amendments proposed to schedule 1, starting with those on membership. Paragraph 2 sets out ARIA's membership. Its executive members must include the chief executive officer and chief financial officer, and between two and five other members. As we heard from Professor Philip Bond last week, that number reflects the need for ARIA to be a nimble agency, with agile decision-making structures.

ARIA's non-executive members must include the chair, the Government chief scientific adviser and other members appointed by the Secretary of State. The Government chief scientific adviser will provide technical expertise and a helpful and effective link between ARIA's activities and those of Government, while limiting any direct interference from Ministers. Non-executive members must comprise the majority of ARIA's board, which is a matter of good governance.

Paragraph 3 sets out that the first chief executive officer will be appointed by the Secretary of State, ensuring that the initial leadership sets the right foundation for ARIA. Thereafter, executive appointments will be made by the chair, such that ARIA can maintain its independence from Government.

Paragraph 4 sets out that the chief executive officer must be appointed for a fixed term for a maximum of five years, and that a person cannot be appointed as CEO more than twice. That approach will ensure strong leadership, energy and renewal at CEO level, and we have seen that successful approach produce results for DARPA.

As is standard for statutory corporations, paragraph 14 states that ARIA must prepare annual accounts that must be sent to the Secretary of State and the Comptroller and Auditor General. The CAG must examine, certify and report on statements of accounts and send a copy of the report and certified statement to the Secretary of State, who in turn must lay copies before Parliament. As the Committee will be aware, the NAO is also able to conduct value-for-money examinations of ARIA, as per the National Audit Act 1983. The laying of annual accounts and reports before Parliament, combined with the NAO examination represent an opportunity to scrutinise ARIA's activity and its use of public funds, as is standard for public bodies.

I would like to take this opportunity to address a point raised by the Secretary of State on Second Reading which left some ambiguity. He said that there was a

commitment in the Bill to audit ARIA's procurement activities. Any procurement spending will of course be included in ARIA's accounts and be subject to audit in the normal way, according to paragraph 14, but we have made a further non-legislative commitment to explore how ARIA's procurement activities specifically might be audited and reported on as a counterbalance to the exemption that the Bill gives ARIA from obligations on a "contracting authority" under the public contracts regulations. That is not within the Bill, as the Secretary of State's comment could be taken to imply, but will none the less be an additional commitment to transparency and good governance for ARIA.

Schedule 1 contains provisions where necessary for ARIA to be able to operate as a statutory corporation and it is therefore essential that it remains part of the Bill.

3.45 pm

**Chi Onwurah:** I thank the Minister for her comments on schedule 1. While I necessarily disagree with her assessment that the schedule contains all the checks and balances, accountability and oversight that are required, I will not oppose it.

The National Audit Office audit to which the Minister referred is a very limited safeguard against some aspects of conflict of interest and the misuse of public money, and the wider concerns that we have. It is limited to providing a true and fair opinion about whether the public body's financial statement is free from material misstatement, whether caused by fraud or error, and therefore does not address our concerns about accountability. The National Audit Office conducts 400 such audits annually and it would not necessarily prevent the mismanagement of public funds in ARIA or other bodies. I hope that the Minister will reflect on the importance of improving accountability as the Bill proceeds.

*Question put and agreed to.*

*Schedule 1 accordingly agreed to.*

## Clause 2

### ARIA'S FUNCTIONS

**Chi Onwurah:** I beg to move amendment 15, in clause 2, page 1, line 7, at end insert—

"(1) In exercising its functions, ARIA must have regard to its core mission.

(2) In this section, 'core mission' means—

- (a) for the period of ten years after the date on which this Act is passed, undertaking activities which support the achievement of the target established in section 1 of the Climate Change Act 2008;
- (b) thereafter, that mission or missions which the Secretary of State establishes by regulations every five years.
- (c) regulations under this section—
  - (i) shall be made by statutory instrument, and
  - (ii) may not be made unless a draft has been laid before and approved by resolution of each House of Parliament."

*This amendment would require ARIA to consider its core mission in exercising its functions. For the ten years following the Act passing, that core mission would be undertaking activities to support the achievement of net zero. Thereafter, its mission will be established by statutory instrument subject to the draft affirmative procedure.*



**The Chair:** With this it will be convenient to discuss amendment 35, in clause 2, page 1, line 8, at end insert—

“(A1) ARIA’s primary mission will be to support the development of technologies and research that support the UK’s transition to net zero carbon emissions or reduce the harmful effects of climate change.”

*This amendment sets the primary mission for ARIA to support the development of technologies and research that support the UK’s transition to net zero carbon emissions or reduce the harmful effects of climate change.*

**Chi Onwurah:** It has been a long day and we have had lively debates covering many important themes set out in this admittedly short Bill. We now come to one of the critical themes: the mission of ARIA. What is ARIA for?

Amendment 15 would require ARIA to consider its core mission in exercising its functions. Under the amendment, for the 10 years following the passing of the Act, that core mission would be to undertake activities to support the achievement of net zero. Thereafter, its mission would be established by statutory instrument, subject to the draft affirmative procedure.

I am surprised that I find myself in the position of needing to argue that ARIA—the Advanced Research and Invention Agency—requires a mission and that that mission should be net zero, which is the greatest existential challenge facing our country and the world right now.

We welcome ARIA, as we have said. We recognise that there is a gap in the UK’s research capability, which ARIA can and should fill, but we believe strongly that ARIA will succeed only if it is given a well-defined mission, which the Government must play a significant role in setting. As we heard in the evidence sessions—and as is, I believe, the opinion of the Minister—ARIA should not try to replace either blue skies research institutions or translational institutions, but should bring the two together to focus on the transformative effects that science and technology can have on society. I am sure that we are all united in the view that ARIA can have a transformative impact.

This is an opportunity for the Government to establish a mission-led funding agency that can benefit us all. With no mission and the whole of the realm of science—the whole of the unknown and the less understood—to choose from, the risk is that ARIA will be directionless, providing no societal return for taxpayer investment, or that it will be prey to vanity projects, providing return only for a few.

In evidence to the Science and Technology Committee, Dominic Cummings—I am mentioning him once again as the original inspiration and architect of ARIA—held up some sort of a diagram and said that general UK research was one bit and that ARIA should look at all the rest. That gave the impression that it would be like the SS Enterprise going off in search of new areas, but even the SS Enterprise—I know that “Star Trek” fans are present—had a mission, which was to seek out new civilisations. It was not a mission to—

**Stephen Metcalfe:** Will the hon. Lady give way?

**Chi Onwurah:** I am speaking about “Star Trek”, so let me finish my point and then I will give way. It was not a general mission to go around the universe and galaxies.

It was not a mission to look at mining new minerals or whatever. It was a mission to seek out new civilisations, yet here we have ARIA being proposed as an agency without any mission whatever.

**Stephen Metcalfe:** Just to clarify, I think it was the USS Enterprise. I believe that ARIA has a mission, which is to boldly go to areas of science that we have not gone into before. A focus on impact, high risk and high reward is not what we currently have, and we should not hamper it at this early stage. I would not for one moment deny that climate change is a huge threat that needs to be addressed, but that is not necessarily where the agency should focus. Why would we want to tie its hands before it has even started to look at the transformational science out there?

I also have great concerns, because the hon. Lady said she felt that the Government should have huge input into the mission of ARIA. That would potentially breach the Haldane principle, which Government after Government have applied and stuck to in order to make sure that politicians are not influencing scientists in what areas that they research.

**Chi Onwurah:** I accept that it is indeed the USS Enterprise, and I thank the hon. Member for that correction. On the rest of his contribution, I will say once again that I have a great deal of respect for the hon. Member, but to boldly go where no one has gone before is not a mission. It is not even a direction—it is explicitly not a direction. As I said, the USS Enterprise’s mission was to seek out new civilisations, so it was anthropological rather than another domain of science. ARIA has no mission.

We do think we have to talk about the Haldane principle, given that we have seen the acceptance of mission-oriented research, including the grand challenges that were discussed during the evidence sessions. That makes it clear that we can ascribe a mission to ARIA without breaching the Haldane principle. The Government should not outsource their responsibility to direct the transformative change that ARIA can bring to our greatest challenge, which is one that—the hon. Member is familiar with this—inspires so many young people and that can get public buy-in: climate change and the need to address the impact it will have on our planet.

**Dawn Butler:** Should we not be proud as a Committee to say that ARIA will achieve net zero in whatever project it pursues? That is essentially working on the edge of the edge—looking at forward technology, ensuring that we save the planet and ensuring that we do not add to the erosion of the ozone layer—so is it not progressive and transformative to set a parameter around net zero?

**Chi Onwurah:** I absolutely agree with my hon. Friend; I think that it is progressive, transformative and very necessary. We heard today that the Prime Minister has decided to set another target for our emissions—I think that it is to slash UK emissions by 78% by 2035—undaunted by the fact that he has not met any of the targets that he has set previously.

This issue is not about setting targets; it is about changing the way in which our economy and our society work, to reduce our emissions. Just think of the role

[Chi Onwurah]

that ARIA could play in that process. My hon. Friend suggested that achieving net zero is not a narrow mission; it is a broad mission, because net zero impacts every aspect of our life. An ARIA CEO would have plenty of discretion in choosing which aspects of the climate and environmental emergency to address.

**Aaron Bell:** That is potentially a worthy mission, but the point is that the hon. Lady said there is no direction. Well, going boldly is going to the frontier—even “The Final Frontier”, if we go to “Star Trek V”. [Laughter.] The edge of the edge is not in one direction. The edge is a circle, or even a sphere—all the areas that we do not know about. Trying to focus on one narrow point, as she is doing with the amendment, misses the point of ARIA and the potential for its transformative effect across a wide range of disciplines and lots of areas of science, technology, engineering and, indeed, perhaps even mathematics.

**Chi Onwurah:** I thank the hon. Gentleman for that contribution. Envisaging the edge of the edge, whether it is a circle or an ellipse—whatever it is, it is obviously broad. It is too broad. I think it could be anything. I think this Committee believes that ARIA must have a transformative impact on society, otherwise why are we here? The area where we need a transformative change is in climate change, which is a hugely broad area.

The UK, under this Government, is off track to meet current targets. The Government have no ambitious green recovery plan, they have axed the vital housing retrofit scheme and they have cut subsidies for electric vehicles. They are desperately in need of focusing our activities on the impact of climate change.

We know that two of the great challenges in reducing our emissions are transport and the existing housing stock. Think what impact an inspired programme director in ARIA could have on that great challenge of effectively insulating and reducing the emissions from our 20 million or so homes, or ensuring that transport, which the Government have said will be included in their emissions targets, is green. That is not a narrow mission. Net zero is not a narrow mission; it is as broad and as big as our planet, and it is certainly where we desperately need to focus our attention.

In response to the point about the Government choosing the mission, I would say that only the Government have the democratic mandate—they won the election—to choose the mission, while allowing ARIA’s leadership the operational independence to implement that mission. It is critical that the mission reflects public concerns, to establish buy-in as well as the tolerance for failure. Without a clear mandate from the Secretary of State, ARIA’s leadership will be put in the unenviable position of having to decide which Government Departments and policies to prioritise, and who will have the ear of the ARIA CEO. I say again that the Government cannot outsource this responsibility as they have chosen to outsource so many other responsibilities.

We are at the beginning of the decisive decade, in which the world must avert the worst impacts of climate change, and ARIA could provide much-needed research to help advance the solutions that are necessary to decarbonise our economy rapidly and fairly. In addition, this year the UK will host the critical COP26 UN

climate summit. Would it not be a fantastic message to say that our leading high-risk, high-reward agency is focused on climate change? Would it not provide a model for other countries to follow?

4 pm

On the clearly defined mission, I ask the Minister to consider the specific risk that ARIA could finance research into new oil exploration, for example, or new methods of extraction. The Government must ensure that ARIA’s funding is not directed towards activities that are incompatible with or contradictory to the wider public objectives.

Many of the witnesses in our evidence sessions stressed the importance of a customer for ARIA’s work, but without a mission set by Government there is a risk that the private and public sectors will lack the confidence in ARIA’s credibility to become customers; a customer needs to know what they are buying. In addition, ARIA needs to have a direction, and only the Government can really set that, as many witnesses said. Professor James Wilsdon, the digital science professor of research policy at the University of Sheffield said:

“The one thing that many of us have been calling for since this idea was floated as an option for the UK system is more clarity on its purpose—its mission...It is regrettable, in a way, that it has reached the stage of a Bill without that question having yet been properly answered.”—[*Official Report, Advanced Research and Invention Agency Public Bill Committee*, 14 April 2021; c. 18, Q16.]

Philip Bond, addressing the point made by the hon. Member for Newcastle-under-Lyme, said:

“It is rather obvious that there are many interesting and important problems societally. It is obvious that there are many, many ways in which somebody could look to do things, whether with education and helping kids to learn better, or with the NHS or anything else.”—[*Official Report, Advanced Research and Invention Agency Public Bill Committee*, 14 April 2021; c. 24, Q5.]

He was making the point that it should be left to the director of ARIA. In return, I would make the point that, given there are so many things to be done and so many ways in which this money could be spent, should not the Government have some input into the direction?

Tris Dyson, managing director of Nesta Challenges, underlined that the mission was important for the culture, saying:

“The ARIA team will have to establish a culture where they trial things out, set targets and objectives and have constant reviews where they get together and decide whether to kill things off. That is clearer when you have defined missions or objectives that you are working towards. It is much harder when you are fostering lots and lots of different things.”—[*Official Report, Advanced Research and Invention Agency Public Bill Committee*, 14 April 2021; c. 12, Q7.]

Mariana Mazzucato, a professor in the economics of innovation and public value who has worked with Government, particularly in setting the grand challenges, pointed out that

“it has always been linked with a vision or mission of what is to be done. Again, in the wartime scenario, it is clear that the DARPA model was mainly about military goals, but the Advanced Research Projects Agency – Energy, or ARPA-E, is about renewable energy and a green transition.”—[*Official Report, Advanced Research and Invention Agency Public Bill Committee*, 14 April 2021; c. 18, Q16.]

Adrian Smith, the president of the Royal Society, said:

“If we are aiming for £22 billion by 2024-25, £800 million is not a large sum of money, so if we have a plethora of missions, then I think we will go wrong. ARIA has to have focus of mission

and a commitment to the model over the long-term.”—[*Official Report, Advanced Research and Invention Agency Public Bill Committee*, 14 April 2021; c. 63, Q62.]

Again, only the Government can provide that. David Cleevely agreed. He said:

“I think it is for the Government to set the priorities where they feel that there are specific challenges. We have talked about climate change, for example. That is one, and there may be others that one would want to address, either in health or in other topics.”—[*Official Report, Advanced Research and Invention Agency Public Bill Committee*, 14 April 2021; c. 75, Q78.]

The hon. Member for Newcastle-under-Lyme raised the example of the vaccine taskforce—an example that has been raised a number of times. The statement of policy intent says that

“our Vaccines Taskforce and Rapid Response Funds, have illustrated the importance of agility in funding and decision-making. This policy is one of many across the landscape of public science funding which will learn lessons from those successes.”

The vaccines taskforce had a mission—a very clear mission. If that is something we have to learn from, surely one of the learnings is that the new agency must also have a mission. The statement of policy intent talks about the new research funding body being based on the principles of DARPA, and we heard repeatedly in the evidence sessions that one of the key, critical principles of DARPA was to have a mission.

We agree that ARIA can play a significant and transformative role in our future scientific and research landscape. We agree also that ARIA must focus on a small number of specific missions or challenges if it is to make an impact. We heard so much confusion about what ARIA was for during the evidence sessions, because of a lack of clarity from the Government. If the Government do not set the mission so that the £800 million is spent in a focused way that makes a significant impact, and so that the Government are accountable and take responsibility for the success of the agency and can command the buy-in of all Departments across Government, as well as of the public more generally, ARIA will be subject to the whim or influence of an individual chief executive or chair or those who have their ear, and the agency will not be set for success, which is what we want to see.

**Daniel Zeichner:** It is a pleasure to follow my hon. Friend, who has made a strong case. This issue goes to the heart of the discussion we have been having all day and goes back to some of the comments I made in my opening remarks.

We were castigated earlier for talking too much about Mr Cummings. I say that we must cast off the curse of Cummings. I thought the Government had moved on—they got rid of him—but the Bill still has all his hallmarks. The chaos and confusion that he espouses—his *raison d’être*—will make this agency fail. That is the problem. I encourage the Government to move past it. The evidence from the witnesses all the way through was about the confusion. I understand Marina Mazzucato is advising the Government. She made it ever so clear that ARIA will only work if there is a clear mission. The Americans made it absolutely clear that if we want to do something like they have, that is the way to do it.

The Government seem to be completely confused about whether they want to learn from examples elsewhere, or do something very different—although they are offering

no evidence as to why that should work; sadly, we have seen examples in the past of attempts to do this kind of thing that have not worked. If we are going to learn from the examples elsewhere, surely we have to listen to the people who know how they work. I am at a loss to understand why the Government are not listening to the advice.

The first point to make about the amendment is whether to have a mission or not. Do we do it in the way that might work? It is clear that we have to. The second point, which follows, is that if we are to choose something, what should we choose? Witnesses pointed out that there a number of choices. Unsurprisingly, climate change came up on a number of occasions, as it is obvious we should seek to address it. My hon. Friend the Member for Newcastle upon Tyne Central has made all the points on that.

We have an extraordinary situation in that we have COP26 coming up in a few months. Would it not be wonderful if we had this new agency established to address those huge challenges? I fear we are not going to have it, though. We might have the agency and someone sitting around scratching their head saying, “What shall we do today?” when it is entirely obvious what they should be doing.

As I said earlier, we could have some social science challenges. A big one is: how is an advanced country like ours not able to lag a few lofts? We have had 10 years of failure in these schemes, with one scheme under the coalition, and the latest scheme from the Government collapsing a few months ago. It is extraordinary when we know that one of the biggest problems is the state of our housing stock, yet we cannot seem to find a way to run a scheme to improve it. That challenge would fall very much within the scope of our amendment. We want this to succeed.

Finally, I cannot help but refer to the extraordinary document that Dominic Cummings waved at the Committee. I could not see it on the TV screens, so I went and printed it off. I will hold it up. I do not know if anyone has seen it, but this is primary school standard. I want to put in a word for taxi drivers, actually, because what was said earlier was slightly unfair. I am quite happy that taxi drivers are scrutinised—and members of the ARIA board. I also do not want to be in any way disrespectful to primary schools, but really? Do not place the future of the agency in the hands of the legacy of Dominic Cummings.

**Aaron Bell:** I just wanted to say that that document has been entered into evidence and is available on the Science and Technology Committee website.

**Daniel Zeichner:** And I am eternally grateful, because that is where I found it. I must say that I was still surprised, because it looks to me more like something that came out of “Star Trek” many years ago.

**Stephen Flynn:** It is a pleasure to follow the hon. Member for Cambridge. I am not quite sure whether lagging roofs is necessarily within the remit of what I would expect ARIA to be doing. I like to think that the Government could do that notwithstanding any new technologies, but I appreciate the point he was making. I assure members of the Committee that there will be

[Stephen Flynn]

no “Star Trek” references coming from my mouth whatsoever—[*Interruption.*] Or “Star Wars”. We have had quite enough of that. I rise to speak in support of amendment 35, tabled by the SNP, which again is directly related to climate change and the drive towards net zero.

If ARIA is to have a mission—I think it should, and the majority of witnesses last week seemed to be in favour of that—there can be only one focus. I understand the premise of the Government’s not wanting ARIA to be constrained. I think the hon. Member for South Basildon and East Thurrock said that he did not want to hamper ARIA, but I disagree, and I think it is an honest disagreement to have. I do not see how instructing an agency to try to combat climate change and allow us to meet our net zero aims is hampering it. I think that provides not only the focus that the agency needs but the focus that we should all want it to have, because it is the biggest existential crisis facing us.

**Stephen Metcalfe:** I do not deny that climate change is the biggest issue that we need to address, but a huge amount of research is already going on in that area across UKRI and its £8.8 billion-plus budget. To focus all £200 million a year for ARIA on climate change could miss the point of what we are trying to set up. To me—it may just be me—it is blindingly clear what the mission is: to find areas of research for which funding currently cannot be accessed because it is too risky, and fund that. We talk about high risk, high reward, and that is the mission: to find science that is worthy of research but cannot get funding or support now. If we do that, we might find the next global positioning system, the next computed axial tomography scanner or the next hadron collider—something really inspirational and transformational.

**Stephen Flynn:** I certainly understand the hon. Member’s point, and, to his credit, he is persuasive in his arguments. None the less, hon. Members will be unsurprised to hear that he has not quite persuaded me, and I do not think his argument would necessarily persuade the witnesses—the likes of Professor Mazzucato and Professor Wilsdon—from whom we heard last week. It is right that we have this discussion, and it is good that we are having it in a positive and constructive fashion, but ultimately I believe there still should be a mission for ARIA. Without it, we are not doing all that we possibly can. DARPA is the clearest example of why a mission is important in this regard. We spoke about it on Second Reading, and we heard from the horse’s mouth just last week about the importance of the mission to DARPA.

4.15 pm

If we are not willing to learn the lessons of something that has been so unbelievably successful—not just for the United States, but for the entire planet—what are we doing? What is the purpose? I would like to hear from the Minister that there will be a change afoot in this regard. I suspect that there will not be one, despite the fact that the Prime Minister has changed his climate change commitments to 2035, as has been mentioned. It is a very noble aim, but we do not just need words. We need action, and the Minister could take the lead on that today.

**Kirsty Blackman:** I just want to add a couple of things. The hon. Member for South Basildon and East Thurrock gave us what he thinks the mission for ARIA is. Unfortunately, everybody I have heard speak has a different idea of what the mission for ARIA is.

I thought the statement of policy intent was really useful in telling us the mechanics of how ARIA will work. It is really useful in saying why it is set up in a particular way, but it does not actually tell us what the point of it is. Reading through the Bill, I realised not just that ARIA does not have a mission, but that it does not have a direction. Is ARIA about funding scientific things that are not otherwise funded? Is it about increasing productivity, which is mentioned too? Is it about economic growth? Is it about improving the lives of people who live in the UK or elsewhere? Is it about solving scientific problems? I do not know which of those things it is about.

Even if the Government are unwilling to accept the amendments that we have tabled—they should accept them, because, as I have explained, £200 million a year on solving climate change is not a bad thing, even though I think we should be spending significantly more than that—they should be clear about the point of ARIA. How are we measuring performance? How do we know whether it has succeeded? Do we know that it has succeeded if it has spent lots of money? Do we know that it has succeeded if it has funded lots of projects? Do we know that it has succeeded if it has made a difference to the level of productivity within science, research and development in the UK, or to productivity in the UK in general? Is it succeeding if it is coming up with technologies that will improve lives?

We do not know what we are measuring ARIA against, so the Government will presumably—as they do with most things, and as most Governments do—say that ARIA is a success, whatever happens. However, I want to know what criteria it is being measured against, so that we can actually judge it. If it is what the hon. Member for South Basildon and East Thurrock suggested—if ARIA is to fund scientific projects on the edge, regardless of whether that is of an ellipse or a circle—that is fine, because then we can judge it against that. However, I am not clear that that is the Government’s intention.

**Amanda Solloway:** We heard from some incredibly experienced witnesses last week, with much discussion focused on the question of prescribing ARIA a research focus. Inevitably, cases were made both for and against such an approach. The case made for the approach often referred to DARPA and DARPA-like agencies, but I remind the Committee that ARIA is not DARPA, ARPA-E or ARPA-H. Although we have learned some incredibly valuable things from those agencies, my primary consideration as we develop ARIA has been that it is the right approach for the UK’s R&D system.

Professor Dame Ottoline Leyser said to us last week—  
[*Interruption.*]

4.19 pm

*Sitting suspended for a Division in the House.*

4.35 pm

*On resuming—*

**Amanda Solloway:** Professor Dame Ottoline Leyser said to us last week:

“The needs of the country—the priorities that the Government and Ministers set to solve particular challenges for the nation—fall very much within the UKRI remit”.—[*Official Report, Advanced Research and Invention Agency Public Bill Committee*, 14 April 2021; c. 8, Q4.]

Achieving net zero remains one of this Government’s top priorities—demonstrated by the Prime Minister’s 10-point plan—as it is for parties across the House. However, we should continue to successfully mobilise the structures we have in place to respond to the Government’s priorities, including through the industrial strategy challenge fund’s eight clean growth challenges.

We should use ARIA to do something different. Otherwise, I believe we are at risk of causing confusion and duplication of responsibilities. A key difference will be creating a space in the R&D funding system to give autonomy to visionary people. ARIA’s leaders will invite and scrutinise a range of proposals, each of which is defined by a single cohesive and coherent programme objective. That could be a measure towards achieving net zero, or it could be in any other field. ARIA will select the most talented programme managers with the most exceptional idea, and give them the opportunity to discover the next transformational breakthrough.

As we heard in evidence from Nesta and UKRI last week, ARIA is about conducting research in a different way, through new funding mechanisms and giving autonomy to experts. It is not about research in any one field. I agree that is the right approach. It is for that reason that I cannot accept the amendments. I hope the hon. Members will withdraw their amendments. Finally, if ARIA is successful, who knows: we could be saying, “Beam me up, Scotty!”

**Chi Onwurah:** I thank the Minister for her comments, particularly for that final reference, the spirit of which I wholeheartedly agree with. However, I do not find her arguments against the amendment compelling, and I would like to push it to a vote.

*Question put*, That the amendment be made.

*The Committee divided:* Ayes 6, Noes 8.

#### Division No. 11]

##### AYES

|                  |                  |
|------------------|------------------|
| Blackman, Kirsty | Furniss, Gill    |
| Butler, Dawn     | Onwurah, Chi     |
| Flynn, Stephen   | Zeichner, Daniel |

##### NOES

|                |                    |
|----------------|--------------------|
| Bell, Aaron    | Metcalf, Stephen   |
| Fletcher, Mark | Richardson, Angela |
| Hunt, Jane     | Solloway, Amanda   |
| Mayhew, Jerome | Tomlinson, Michael |

*Question accordingly negated.*

*Amendment proposed:* 35, in clause 2, page 1, line 8, at end insert—

“(A1) ARIA’s primary mission will be to support the development of technologies and research that support the UK’s transition to net zero carbon emissions or reduce the harmful effects of climate change.”—(*Stephen Flynn.*)

*This amendment sets the primary mission for ARIA to support the development of technologies and research that support the UK’s transition to net zero carbon emissions or reduce the harmful effects of climate change.*

*Question put*, That the amendment be made.

*The Committee divided:* Ayes 6, Noes 8.

#### Division No. 12]

##### AYES

|                  |                  |
|------------------|------------------|
| Blackman, Kirsty | Furniss, Gill    |
| Butler, Dawn     | Onwurah, Chi     |
| Flynn, Stephen   | Zeichner, Daniel |

##### NOES

|                |                    |
|----------------|--------------------|
| Bell, Aaron    | Metcalf, Stephen   |
| Fletcher, Mark | Richardson, Angela |
| Hunt, Jane     | Solloway, Amanda   |
| Mayhew, Jerome | Tomlinson, Michael |

*Question accordingly negated.*

*Amendment proposed:* 16, in clause 2, page 2, line 10, leave out “in” and insert “across”.—(*Chi Onwurah.*)

*This amendment would require ARIA to have regard for the benefits of its activities across the nations and regions of the UK in exercising its functions.*

*Question put*, That the amendment be made.

*The Committee divided:* Ayes 6, Noes 8.

#### Division No. 13]

##### AYES

|                  |                  |
|------------------|------------------|
| Blackman, Kirsty | Furniss, Gill    |
| Butler, Dawn     | Onwurah, Chi     |
| Flynn, Stephen   | Zeichner, Daniel |

##### NOES

|                |                    |
|----------------|--------------------|
| Bell, Aaron    | Metcalf, Stephen   |
| Fletcher, Mark | Richardson, Angela |
| Hunt, Jane     | Solloway, Amanda   |
| Mayhew, Jerome | Tomlinson, Michael |

*Question accordingly negated.*

*Question proposed*, That the clause stand part of the Bill.

**Amanda Solloway:** Clause 2 sets out ARIA’s functions. As described in the policy statement published on 19 March, ARIA is expected to facilitate a programme manager model. Programme managers lead research programmes designed around highly ambitious scientific or technological visions. Within their overarching programme, programme managers will distribute funding across a range of projects. Individual projects might vary in size, length and scientific discipline, and may be conducted by different institutions or collaborative groups. The projects are not stand-alone, but rather contribute to the overall aims of the programme.

An important feature of clause 2 is ARIA’s power to commission or support others to conduct research, to develop and exploit scientific knowledge, or to collect, share, publish and advance scientific knowledge. While ARIA is expected to perform some research in-house, a significant proportion of its activities are likely to take place externally. For example, programme managers are expected to commission individual research projects from experts across the public and private sectors.

It is vital that ARIA is able to support others contributing to its ambitious programme goals in a flexible way. Subsections (2) and (4) set out the ways in which in exercising its functions ARIA may support others. They should be read in conjunction with supplementary powers, which are set out in paragraph 17 of schedule 1. For

[Amanda Solloway]

example, ARIA may provide financial support through a range of innovative funding mechanisms. That may include making grants, loans and investments in companies or other entities, or any other payment, such as prizes.

A diversity of funding approaches has been integral to the ARPA model's success in the US—we heard from Dr Peter Highnam—and it will encourage ARIA to experiment even more. However, we will balance experimentation with the need to safeguard public funding. The provision of financial support by ARIA is subject to any conditions that are attached to grant funding given by the Secretary of State to ARIA in clause 4, to which I am sure we will return shortly.

Finally, science is an international endeavour. Accordingly, ARIA will be able to fund, conduct, commission and support research internationally. Sir Adrian Smith and Sir Jim McDonald were clear about the importance of ARIA participating in international research in last week's evidence session. Clause 2(5) and (6) state that ARIA's activities are not restricted to the United Kingdom, but in exercising its functions ARIA must have regard to the desirability of doing so for the

benefit of the United Kingdom, through economic growth or a benefit promoting scientific innovation and invention, or improving quality of life.

Clause 2 and the functions really get to the heart of the value that ARIA will add to our UK research and development system, and equip it for the exciting role that it will play. I recommend that it stand part of the Bill.

**Chi Onwurah:** I thank the Minister for her comments. It is clear from this afternoon's debate that clause 2 does not set out what ARIA will do or achieve, or what its real function will be, but we will not oppose it standing part.

*Question put and agreed to.*

*Clause 2 accordingly ordered to stand part of the Bill.*

*Ordered,* That further consideration be now adjourned.  
—(Michael Tomlinson.)

4.46 pm

*Adjourned till Thursday 22 April at half-past Eleven o'clock.*

**Written evidence reported to the House**

ARIAB01 Professor Mariana Mazzucato, Founding  
Director, UCL Institute for Innovation and Public Purpose

ARIAB02 Don Braben, Honorary Professor, Office of  
the Vice-Provost (Research), UCL

ARIAB03 BioIndustry Association

