

# THE SCIENCE AND TECHNOLOGY COMMITTEE

## Brief and Suggested Questions

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Meeting in public on 13 March 2018 at 9.30am  
in the Boothroyd Room, Portcullis House

The people at the Committee 'horseshoe' table will change at the same time as the witnesses. The success of the day will depend a lot on how well that changeover is made. When the Chair indicates one set of questions is over, those people at the table should rise and leave in a clock wise direction.

The session will be broadcast live and **unlike Parliamentary proceedings, the contents of this session are not covered by privilege**. This means that questioners should be aware that they will be responsible for what they say and that they have to be careful about statements concerning people and organisations.

The Chair is the ultimate arbiter of anything that takes place at the table. If the Chair decides a line of question is inappropriate or is taking too long then those questions must end. **Failure to comply with rulings from the Chair may result in removal from the table and possibly from the Parliamentary precincts.**

Timings (participants should re-check these on the day):—

**08:45** Private briefing for the participants

**09:30** Welcome by the Rt Hon John Bercow MP Speaker of the House of Commons

**09:40** Sam Gyimah MP Minister of State for Universities, Science, Research and Innovation

**10:10** Chi Onwurah MP Shadow Minister for Business, Energy and Industrial Strategy

**10:40** Rt Hon Norman Lamb MP and fellow Science & Technology Committee members

**11:30** Professor Chris Whitty CB Interim Chief Scientific Adviser to HM Government

**12:00** End



## Panel 1

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Mr Sam Gyimah MP, Minister for Minister for Universities, Science, Research and Innovation; BEIS and Department for Education



Sam Gyimah was appointed as a joint Minister for Higher Education at the Department for Business, Energy and Industrial Strategy and the Department for Education on 9 January 2018. He was elected the Conservative MP for East Surrey in 2010. Before starting a career in politics Sam spent 5 years working for Goldman Sachs and then went on to help build and develop a number of small businesses in the training, recruitment and internet sectors.

### **Political career:**

- Parliamentary Under Secretary of State at the Ministry of Justice from July 2016 to January 2018
- Parliamentary Under Secretary of State at the Department for Education from May 2015 until July 2016
- Parliamentary Secretary at the Cabinet Office from July 2014 until March 2015
- a Government Whip from October 2013 to July 2014
- Parliamentary Private Secretary to Prime Minister David Cameron from 2012 to 2013
- a member of the International Development Select Committee from 2011 to 2012
- a member of the Speaker's Committee on the Electoral Commission 2010 to 2012

### **The minister's Department for Education responsibilities include:**

- universities and higher education reform
- higher education student finance (including the Student Loans Company)
- widening participation and social mobility in higher education
- education exports (including international students, international research)
- review of post-18 education and funding
- tackling extremism in higher education

### **The minister's Department for Business, Energy and Industrial Strategy responsibilities include:**

- industrial strategy
- science and research
- innovation
- intellectual property
- agri-tech
- space
- technology

## Panel 1: Questions

1. What excited you most when you were given your new role? **Wallington High School for Girls**
2. What measures are being proposed to ensure scientists and students can freely move in and out of the UK after Brexit? **Royal Academy of Engineering**
3. In order to halt the spread of preventable diseases, would the Government consider making vaccinations compulsory for children before they attend school? **Queens Park Community School Academy Trust**
4. Women are still hugely underrepresented in science at research-level, in spite of the increasing uptake of STEMM subjects by girls at school. How can we fix this 'leaky pipeline', and ensure that women have not only role models in science, but equal representation at all levels? **Royal Society of Edinburgh**
5. As Science Minister how can you help to promote research integrity in the UK? **Open University**
6. What policies or plans are there to nurture the science and technology sector in northern England? **The Royal Society**
7. The UK has recently placed stringent rules and increased the tier-2 visa fee. Do you think this will have a negative impact on the exchange of ideas and people, particularly within the early career scientific community? **Society for Experimental Biology**
8. The UK has a well invested academic base in universities, but a relatively weak track record of commercialisation. How do we increase economic productivity from our strong science base? **Society of Chemical Industry (SCI)**
9. Gene edited crops have the potential to revolutionise farming. Should the UK Government give the green light, with proper regulation, to gene edited crops? **British Ecological Society**
10. How does the Government plan to facilitate and encourage more UK researchers to make use of collaboration opportunities with academia and industry outside the EU post-Brexit? **Institute of Physics**

## Panel 2

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Witness: Chi Onwurah MP, Shadow Minister for Industrial Strategy, Science and Innovation



Chi Onwurah is the Labour MP for Newcastle upon Tyne Central and Shadow Minister Department for Business, Energy and Industrial Strategy. The official opposition party appoints MPs and Members of the House of Lords to 'shadow' government ministers, in order to scrutinise the work of government.

Chi was born in Wallsend, Newcastle upon Tyne, in 1965. Onwurah graduated from Imperial College London in 1987 with a degree in Electrical Engineering. She worked in hardware and software development, product management, market development and strategy for a variety of mainly private sector companies in a number of different countries –while studying for an MBA at Manchester Business School.

Prior to becoming an MP, Onwurah was Head of Telecoms Technology at OFCOM, with a focus on broadband provision.

Onwurah supported Ed Miliband in the 2010 Labour Party leadership election, who subsequently appointed her as a junior shadow minister for Business, Innovation and Skills on 10 October 2010. In 2013 she was given the role as a Shadow Minister in the Cabinet Office.

In the 2015 Labour Party leadership election, Onwurah announced her support for Andy Burnham having originally nominated Jeremy Corbyn to "broaden the debate". Onwurah is the only engineer in the post-2015 Parliamentary Labour Party. After Jeremy Corbyn won the leadership election of the Labour party in September 2015, Onwurah was made a Shadow Minister for Business, Innovation and Skills, as well as a Shadow Minister for Culture, Media and Sport. In September 2016 she was elected Shadow Minister Department for Business, Energy and Industrial Strategy (Industrial Strategy).

## Panel 2: Questions

1. What impact do you believe leaving the EU will have on British science and what should be done to prevent any detrimental impacts? **Campaign for Science and Engineering**
2. What steps are in place to encourage children into STEMM careers, for example, through the promotion of interdisciplinary subjects or possibly lowering tuition fees? **Queens Park Community School Academy Trust**
3. With Britain leaving the EU, how can we ensure the UK science industry is not forgotten in policymaking decisions made in Europe? **Institution of Chemical Engineers (IChemE)**
4. We live in a world of 'fake news', digital overload and biased media. How should Government and society ensure they are receiving the most accurate information? **The Royal Society**
5. What should the Government be doing to ensure career progression opportunities are available for people working in science who do not follow an academic route? **Biochemical Society**
6. 8 million tonnes of plastic enter the ocean each year causing damage to marine ecosystems. Is the 25 year environment plan good enough and quick enough to minimise plastic waste and ensure the protection of our oceans? **Royal Society of Chemistry**
7. Early career academics have to take on numerous short term postdoc positions, usually at different institutions in different cities. What support can be given to those with young children and families who are facing this uncertainty? **Institute of Physics**
8. What specific policies should the Government develop to promote the representation of Black, Asian and Minority Ethnic (BAME) academics and students, and those from areas of lower socioeconomic status? **Royal Society of Biology**
9. The Government can be slow to react to new technologies. To ensure technology is not abused, should the Government be trying to improve on this, for example by regulating cryptocurrencies or media editing technology such as 'FakeApp'? **Council for the Mathematical Sciences**
10. What needs to be done to re-address the gender pay-gap in STEMM careers? **Royal Astronomical Society**

## Panel 3

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Name: **Norman Lamb MP** (Chair)  
Party: Liberal Democrat  
Constituency: North Norfolk



Name: **Stephen Metcalfe MP**  
Party: Conservative  
Constituency: South Basildon and East Thurrock



Name: **Vicky Ford MP**  
Party: Conservative  
Constituency: Chelmsford



Name: **Darren Jones MP**  
Party: Labour  
Constituency: Bristol North West



Name: **Martin Whitfield MP**  
Party: Labour  
Constituency: East Lothian



Name: **Carol Monaghan MP**  
Party: SNP  
Constituency: Glasgow North West



Name: **Graham Stringer MP**  
 Party: Labour  
 Constituency: Blackley and Broughton



Name: **Bill Grant MP**  
 Party: Conservative  
 Constituency: Ayr, Carrick and Cumnock



Name: **Neil O'Brien MP**  
 Party: Conservative  
 Constituency: Harborough



Name: **Damien Moore MP**  
 Party: Conservative  
 Constituency: Southport

### **Background on the S&T Committee**

The House of Lords and the House of Commons each have a Science and Technology Select Committee comprising Members from different political parties. These Committees exist to scrutinise Government policies relating to science and technology. Both committees also employ specialists who are able to provide additional insight and scientific advice as needed. The main function of the House of Commons Science and Technology Committee is to scrutinise the work of the Government Office for Science (GO-Science), the body responsible for ensuring that government policy is based on good scientific advice. However, the Committee has a broad remit and can examine the activities of any part of Government if it relates to science, engineering, technology or research. The main way in which the Committee scrutinises government activity is by conducting several detailed inquiries each year. Topics span the fields of science and technology. The typical output of an inquiry is a detailed report presenting the Committee's findings and conclusions, which the Government is required to respond to within two months (although the Government does not have to accept the Committee's recommendations).

### **Current inquiries include:**

- Research integrity
- E-cigarettes



- Genomics and Genome Editing in the NHS
- Impact of social media and screen-use on young people's health

### Panel 3: Questions

1. Scientific discovery relies upon critical thinking and creativity. Is the education system doing enough to equip the next generation of scientists with these skills?  
**Royal Society of Biology**
2. The UK is one of the largest recipients of research funding from the EU. How should the UK plan to maintain science funding in co-operation with Europe after Brexit? **Society for Experimental Biology**
3. Very few MPs hold a science degree. Do you think more science graduates should be encouraged to enter politics and is it important that members of the Science and Technology select committee have a science background? **The Physiological Society**
4. How best can we harness the potential of big data without encountering data protection problems and encroaching on individual liberties? **Council for the Mathematical Sciences**
5. How can MPs actively support diversity in science and help those scientists with mental and physical illnesses, caring responsibilities and other disabilities? **British Pharmacological Society**
6. Genetic technologies have the potential to revolutionise healthcare as we know it. What are your main hopes and concerns about using genetic technologies in healthcare? **Biochemical Society**
7. How do you plan to get a diverse range of people involved in technology development so that future systems are not built in favour of a single type of person? For example, in the development and use of algorithms and machine learning. **Institution of Chemical Engineers (IChemE)**
8. Biohackers have started to perform DIY gene-editing experiments on themselves. Do you think people should be able to edit their own genes as they wish? **Society for Applied Microbiology**
9. How do the Government, politicians, and policymakers plan to increase public understanding of how mental health can impact long term conditions? **The Nutrition Society**

10. Do you think there is a need to better educate people on the subject of scientific literacy to counteract 'fake news' and the misuse of statistics in conventional and social media? **Campaign for Science and Engineering**
11. Advances in Artificial Intelligence technology present new ethical challenges. How do we protect citizens from potential harms without hindering innovation and progress? **Royal Academy of Engineering**
12. Self-driving vehicles are becoming more and more sophisticated. How do you think the implementation of this technology will affect us? **Society of Chemical Industry (SCI)**
13. How would you react, and how would the world react, if we ever found proof of life elsewhere in the universe? **Wallington High School for Girls**
14. Who is your favourite scientist, past or present, and why? **The Geological Society**

## Panel 4

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Witness: Professor Chris Whitty CB FMedSci, Interim Chief Scientific Adviser to HM Government

The Government Chief Scientific Adviser (GCSA) ensures that all levels of government, including the Prime Minister and Cabinet, receive the best possible scientific advice to support policy development and delivery.



Professor Chris Whitty was appointed interim Government Chief Scientific Adviser in September 2017. He was appointed Deputy Government Chief Scientific Adviser in April 2017. He has been the Chief Scientific Adviser for the Department of Health since January 2016. He is currently the Professor of Public and International Health at the London School of Hygiene & Tropical Medicine and a Consultant Physician in acute medicine and infectious diseases at University College London Hospitals and the Hospital for Tropical Diseases. He is also Visiting Gresham Professor of Public Health at Gresham College. He was previously Chief Scientific Adviser and Director of Research and Evidence at the Department for International Development. Chris is an epidemiologist and physician. Prior to joining DH he was Chair of the Department of Health National Expert Panel on New and Emerging Infections (NEPNEI) and the Advisory Committee on Dangerous Pathogens (ACDP).

**The interim Government Chief Scientific Adviser (GCSA) is responsible for:**

- providing scientific advice to the Prime Minister and members of cabinet
- advising the government on aspects of policy on science and technology
- ensuring and improving the quality and use of scientific evidence and advice in government

**The Government Office for Science are responsible for:**

- giving scientific advice to the Prime Minister and members of the Cabinet, through a programme of projects that reflect the priorities of the Government Chief Scientific Adviser
- ensuring and improving the quality and use of scientific evidence and advice in government (through advice and projects and by creating and supporting connections between officials and the scientific community)
- providing the best scientific advice in the case of emergencies, through the Scientific Advisory Group for Emergencies (SAGE)
- helping the independent Council for Science and Technology provide high level advice to the Prime Minister

**The role of Chief Scientific Advisers**

Every major government department now has a Chief Scientific Adviser (CSA). The guidance Chief Scientific Advisers and their officials: an introduction states that “CSAs work alongside other analytical disciplines and with departmental boards and Ministers,

to ensure robust, joined-up evidence is at the core of decisions within departments and across government”.

#### Panel 4: Questions

1. What is the Government doing about the urgent problem of antibiotic resistance in bacteria found in hospitals, agriculture and the environment? **Society for Applied Microbiology**
2. How will UKRI encourage research councils to work together and fund interdisciplinary areas, such as chemical biology and synthetic biology? **Royal Society of Chemistry**
3. There is a growing global demand for rare Earth metals, for example, for use in mobile phones. How is the UK Government going to address supply bottlenecks and guarantee the extraction and disposal of these metals does not exploit the environment and local communities? **The Geological Society**
4. Recent studies have shown that around one-third of early career researchers' show signs of clinical depression. What new resources and efforts can be deployed to help us fully understand and address this important issue? **British Pharmacological Society**
5. How does the Government make evidence-based policy decisions in instances where public opinion may not necessarily be aligned with the science? **Open University**
6. How can the Government improve the nation's diet? **The Nutrition Society**
7. Given the recent attention to plastic waste and microbeads in our oceans, what can the UK do to co-operate internationally to reduce oceanic pollution levels? **British Ecological Society**
8. The Relocation of the European Medicines Agency to Amsterdam following Brexit will likely result in reduced investment from major pharmaceutical companies in the UK. What is likely to happen as a result? **The Physiological Society**
9. How is science policy coordinated across the UK, given the existence of the devolved administrations? **Royal Society of Edinburgh**
10. The public and politicians are now more aware of the urgent action required on air pollution and plastic waste. What established problem would you like to see enter the spotlight next? **Royal Astronomical Society**