

## **Cross Party Group on Science and Technology Meeting**

### **Minute of Meeting, 20 March 2018 at 1830**

#### **1. Attendance**

**MSPs:** Iain Gray (chaired the meeting), Clare Adamson and Finlay Carson.

**Non MSPs:** Lesley Yellowlees, Ian Wall, Fred Young, Alison McLure, Sylvia McKay, Morag Campbell, Gordon Doig, Rebecca MacLennan, Tracey Bowden, Lis Bardell and William Hardie (secretariat).

**Apologies received from:** Liam McArthur

#### **2. Minute of 12 December 2017 Meeting**

In the absence of Bristow Muldoon, CPG secretariat, the CPG held over consideration of the minute of the 12 December meeting until the next meeting.

#### **3. Women & STEM**

Professor Lesley Yellowlees, Chair of the RSE's 2018 review of women in the STEM workplace, provided a short presentation on the aims and activities of the review. The presentation slides are attached. The review will consider the progress that has been made since the RSE published *Tapping All Our Talents* (TAOT) in 2012, and what further action is required. While the 2012 review focused on women in academia, the current review has a broader remit, including schools and colleges. More information about the current review and the call for evidence is available at:

<https://www.rse.org.uk/inquiries/womeninstem-2018/>

The RSE working group is expecting to report in the autumn 2018.

Professor Ian Wall, Chair of the STEM Education Committee (STEMEC), which reported to Scottish Government in 2016 on STEM education issues for Scotland, was invited to offer his reflections, with the following being noted:

- In response to TAOT, the Scottish Government established three groups to provide national leadership and to take forward the recommendations made by RSE. A key issue will be determining what progress has been made since the RSE reported in 2012.
- Unconscious bias is a societal problem that needs to be addressed. He referred to research conducted at Yale University<sup>1</sup> that demonstrates that there is bias against women in science academia in Physics, Biology and Chemistry. Briefly, identical job applications different only in the gender of the applicant were sent to senior academics in physics, biology and chemistry, who were not aware that this was an experiment. The outcome expressed itself in decisions to hire fewer female scientists. This leads to the conclusion that it was not the best candidates that were to be appointed but that men were chosen solely because they are men.
- Less than 10% of FTSE 100 companies are led by women.
- Athena Swan, particularly the link with research funding, has helped to stimulate progress in the university sector.

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<sup>1</sup> <http://www.pnas.org/content/109/41/16474.full>

Iain Gray acknowledged that TAOT is the point of reference in the Parliament on women in STEM, and it is frequently referred to by Parliamentarians. The follow-up review will be very important in terms of evaluating the progress that has been made over the last six years.

The following 'around the room' discussion points were noted:

- In addressing gender stereotypes at school, the way in which this is undertaken is more important than the gender of the teacher/role model.
- While progress is being made, a key issue relates to the support required to address unconscious bias. The IoP's *Improving Gender Balance* work has developed several tests to highlight unconscious bias.
- In relation to schools, it was recognised that it is important that STEM is delivered in a gender-neutral way.
- Reference was made to the perception that it is more difficult to achieve a high pass in a STEM qualification compared to other subject areas. This could have implications for the number of girls choosing to study STEM at school, as females tend to be more risk averse than males.
- There are disciplinary areas in which there are too few men. This highlights the need to address gender imbalance more generally.
- The need to take account of the views of young people themselves.
- It was suggested that if, as part of the HMIE inspection process, school inspectors were tasked with evaluating the extent to which careers advice was supporting equality and diversity, this would help to raise the prominence of the need to address gender imbalances in career options.
- There was a debate on the extent to which people should be compelled to act to address gender imbalances as opposed to tackling the issue through influencing and changing behaviours in a way that gets societal buy-in.
- Gender stereotypes can become ingrained from the very early years. This highlights the importance of addressing this as early as possible in a child's development. The role of family influences cannot be overstated, with 'nurture' being more important than 'nature'.
- Reference was made to the book by psychologist Cordelia Fine, *Testosterone Rex: Myths of Sex, Science and Society*, which seeks to disprove ingrained myths.

**Meeting close 2000**