

ROYAL SOCIETY PAIRING SCHEME



Professor Ruth Aylett
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Every year the Royal Society arranges partners between parliamentarians and civil servants with scientists. Its annual Pairing Scheme starts with the 'Week in Westminster' in late November, a programme of activities for the scientists including seminars, workshops, shadowing opportunities and a tour of Westminster. The week gives the scientists a taste, not only of the approach to science policy, but of Parliament and the Civil Service in general.

As a researcher in artificial intelligence and robotics, and a Professor of Computer Science at Heriot-Watt University in Edinburgh, I am often frustrated by public perceptions of my area. These seem often driven by wildly sensationalist media publicity for ideas such as 'robots will take over the world' or The Singularity, after which artificial intelligences will keep humans as pets, if we are lucky.

I was paired with Ian Murray, the Labour MP for Edinburgh South, who went into Parliament at the last election after working in a variety of small businesses. He is part of the shadow BIS team, the new name for what I remember being the DTI at one point, and thus the department responsible among other things for research funding, higher education, and technology-transfer programmes.

politician's timescales. Ian gets 700 emails a day, and though he now has a clerical assistant helping him to deal with them, it is clear he doesn't have very much time for mastering new materials. Moreover there is zero training for MPs, so picking things up as they go along seems very much the rule.

Ian was very committed to the pairing exercise and took me everywhere he went, though understandably there were a couple of private meetings I couldn't attend. I did however witness an informal meeting with a couple of managers from the Post Office in the Portcullis House canteen. Ian is concerned that the Royal Mail sell-off could result in total destabilisation of the Post Office, which was not part of that sell-off, and along with the managers, was examining new activities that might help Post Offices succeed.

Prime Minister's question time was just as much a circus from

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This was one motivation for applying to the Royal Society Pairing Scheme, in which scientists are linked to MPs or civil servants. What if policy was made on the back of such inaccurate ideas? What if real issues of privacy and security already visible in the use of AI technologies on the web were to be ignored in favour of these improbable fantasies? And so in November 2014 I watched the Northumbrian coast go by as my train took me to London for a week in Westminster.

If you are used to the Scottish parliament in its nice new building with electronic voting and high-tech desks for MSPs to sit at in the debating chamber, Westminster makes you think of a museum. Of course it is also a workplace.

I met Ian on the Tuesday of my week in Westminster outside the Millbank Tower, where he was deputising for a colleague at a technology transfer event. This was a conference run by a North-East-based tech transfer company called CPI (Centre for Process Innovation), who as their name suggests, specialise in process industry technology. Ian took this on at short notice

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and as a result was presenting a speech written by his colleague, who'd been called away from London unexpectedly.

This need to react and perform off-the-top-of-the-head seems not untypical of an MP's life, and underlines how hard it is to mesh the academic's and the

the Visitor's Gallery as it looks on television. Ian felt that, oddly, all the MPs know how bad this looks to the general public, but it goes on anyway. He was down to ask a question in the session, which moved with bewildering speed, like much parliamentary activity.

The Commons Select Committee on Science was more tractable an event for an academic, as MPs interviewed witnesses in some depth, in this case on biometric technologies. I wondered how they managed to ask sensible questions – remember, no training – but the MPs at this session seemed very conscientious and did a reasonable job. Acting as an

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expert at a select committee is certainly one way of bringing science into the decision-making processes, though it was less clear how one would get to be called as an expert. Opportunities are apparently advertised somewhere, but

maybe one has to follow some page on the Government website to see them.

On our final day, GO Science – the Government Office for Science – presented their mechanisms for scientific advice in crisis situations. We worked through a group-based exercise around the floods of early this year, and with my IT hat on I was astonished – and not in a

good way – that they had been using photocopied maps as a way of representing key data. But lessons can be learned just as quickly as everything else it seems, since now there is a quite reasonable GIS system for use in the next such crisis.

A fascinating week, and a lot learned. Whether I can put any of this to practical use remains to be seen: for an individual scientist to have much effect on the political dramas of Westminster seems about as easy as jumping through a door in a fast moving train. Still, one of the things I learned was that as well as GO Science, and the select committees of the two Houses, there is also a Parliamentary Office of Science and Technology – POST – that serves the parliamentarians at large. They produce POST Notes on specific topics, and so I emailed them suggesting one on AI and Robotics.

A few weeks later one of their team gave me a ring – it turns

out that their Board meeting early next year will indeed consider such a POST Note as one of various possibilities. We had a long chat about what such a Note might cover, and if it does happen then I would be able to feel I had some small effect on the process. My pair Ian Murray will come and see our Robotics Labs in February, and hopefully this will build a longer-term relationship: assuming that is, he is re-elected in May. Time horizons look very different for an MP than for a scientist – and that is the challenge for more lasting meetings of minds.



Ian Murray
Member of Parliament for
Edinburgh South and Labour's
Shadow Minister for Trade and
Investment

This is the third year I have participated in the Royal Society's Pairing Scheme and, yet again, it was a hugely rewarding experience. It's a very important scheme and one that I would encourage my colleagues to take up in the future. Indeed, it's incumbent on all elected representative to be better informed about science issues and to encourage scientists to understand how they can influence science policy.

This time, I had the pleasure of pairing with Ruth Aylett,

Professor of Computer Science at Heriot Watt University in Edinburgh. I have to admit that I didn't know much about Ruth's area of expertise prior to meeting her. The extent of my engagement with robots and artificial intelligence was only on the cinema screen so it was excellent to be able to learn more about her area.

Science usually meanders low under the national politics radar. We must recognise that it should be placed at the centre of our debates. We need to understand that the decisions government and elected representatives make in the lobbies of the House of Commons have a direct impact on the development of our science sector, and in turn the things those scientists and researchers can contribute to the lives of our constituents.

Nothing encapsulates that more than the story of Alan Turing and his team, and the pivotal part they played in the war effort. This saw the application of science hand in hand with the

shocking realities of geopolitical realities of the time to break the "unbreakable" enigma code. It is said that their work contributed to the shortening of the war by two years, possibly saving millions of lives. A mathematician, logician, computer scientist and Royal Society fellow whose influence came to bear far beyond the realm of his fellow scientists. Just think – where would be today without 'Turing's Machines'?

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or the field of artificial intelligence? The debt of gratitude he is owed makes it all the more horrifying that he was treated so inhumanely.

My involvement in the scheme over recent years has made me value the link between science and politics. But we need to make it stronger. MPs and scientists have a responsibility to engage with each other to get the best possible scientific advice into public policy making.

We both have the responsibility to promote dialogue, engagement and – hopefully – respect and understanding between politicians and scientists.

As an MP who represents the University of Edinburgh King's Buildings and the Research Centres at Little France I take a close interest in the Pairing Scheme. It is thoroughly enjoyable and increased my knowledge of key scientific areas

in the last three years from Carbon Capture and Storage to artificial intelligence. As a Shadow Business Minister it has also been very useful to see the contribution science makes to the UK economy and why it should be supported by Government.

I hope to visit Ruth at Heriot Watt in the near future so that I can get further insight into her work – I'm sure there will be a lot to learn.