

Scientific research and Scottish independence

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There's no getting away from the Scottish independence debate. Unless you've been living in a media exclusion zone, you'll be aware that the country is preparing for a referendum in Scotland in September 2014.

Of the many and varied ramifications of a 'yes' vote, the effect on the science research base is one which, understandably, hasn't received much media attention. But the implications could be far-reaching and the scientific community is starting to take notice.

The Scottish Science Advisory Council (SSAC) recently conducted a consultation investigating the possible implications for science and engineering in Scotland in the independence debate¹, to which the Society of Biology submitted a response². A number of editorials and opinion pieces³ are also beginning to emerge, and these will no doubt continue to increase in terms of both frequency and fervency as the September due date approaches. The prospect of independence raises a range of questions and issues for the science community, for both those within and beyond Scotland's borders.

At the moment, teaching in Scottish universities is provided for by the Scottish Funding Council (SFC) while the research base is funded by the seven UK Research Councils (RCUK) and from major research charities, most notably the Wellcome Trust. Scotland has approximately 8.5% of the UK's population but gains, on a competitive basis, approximately 15% of the public and charitable research funding allocated throughout the UK⁴. So it may appear that Scotland does rather well out of the current arrangement.



It is not yet known whether researchers in Scotland would continue to have access to funding from the RCUK, and if not, what kind of structure would replace it. However, if the SFC took over the RCUK function, there may be an opportunity for more joined up thinking on teaching and research. This could also allow for better alignment of Scottish university research with Scottish priorities, such as public health, forestry and fisheries, and renewable and offshore energy. Other possibilities could be considered, such as forming research funding liaisons with the Nordic institutions. However, in the case of a transition to an alternative system, it would be vital for the Scottish Government to be able to ensure continuity of funding.

Questions also exist around research and studentship funding from charities, many of which are registered south of the border. Then, of course, there's the EU issue; if Scotland's membership should be subject to negotiation, the eligibility of Scottish researchers to European funding streams such as Horizon 2020 could be endangered. However, should the rest of the UK vote to leave the EU and Scotland stays within the Union or agrees to accession, independence could be considered advantageous in this respect.

Collaborative research and the sharing of facilities feature heavily in the Government's vision for the future of science in the UK. Scotland possesses a number of centres of scientific excellence that are used by research teams from across the UK as well as from overseas. Negotiations between Westminster and Holyrood may be required to ensure that access to facilities across the border remain readily accessible. There is the concern that Scottish independence could serve to create a barrier to researcher mobility and collaboration within the British Isles at a time when much effort is being devoted to developing a research culture founded on these very principles. Or, alternatively, could a separate Scotland result in strengthened links with the European research community?

In certain areas of science, particularly the biosciences, regulatory bodies and licensing frameworks are crucial. Many of these act under legislation set by the UK government, such as the Medicines and Healthcare Products Regulatory Agency, the Human Tissue Authority and the Human Fertilisation and Embryology Authority. The debate is open as to whether equivalent organizations

would need to be established in Scotland. Animal research is also of vital importance to many who work in the biosciences. Arrangements would need to be made for the licensing of animal research in an independent Scotland, and – here, the EU issue raises its head again – how the EU directive on the protection of animals used for scientific purposes would be transposed.

These are only a few of the options and questions that need to be addressed as we draw ever nearer to the big vote. There are additional implications for UK science which require further investigation such as the impact on students at Scottish universities, immigration and the effect on science and engineering in business and industry.

Time will tell just how real these speculations and postulations will be. ■

References

1. Scottish Science Advisory Council Consultation 'Possible Implications for Science and Engineering in Scotland in the Independence Debate', 2013
2. Possible Implications for Science and Engineering in Scotland in the Independence Debate, Consultation Response, Society of Biology, May 2013
3. Examples include: Nature 2013, **493**, 579; <http://www.guardian.co.uk/science/political-science/2013/feb/12/scottish-independence-science-scotland>; http://www.researchresearch.com/index.php?option=com_news&template=rr_2col&view=article&articleid=1158378
4. Possible Implications for Science and Engineering in Scotland in the Independence: a response to the Scottish Science Advisory Council, Royal Society of Edinburgh, May 2013

Parliamentary Links Day

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The biggest science event in the parliamentary calendar certainly lived up to its billing – it was standing room only at this year's Parliamentary Links Day. Organized by the Society of Biology on behalf of the whole science and engineering community and supported by a wide range of scientific societies and organisations including the Biochemical Society, this year's event was held on 25 June 2013 in Portcullis House, Westminster.

The theme was Science and Diversity and the day explored the ways in which the scientific community contributes to the diversity of science and engineering and the major issues of diversity within the sector. Orchestrated by Stephen Benn, Director of Parliamentary Affairs at the Society of Biology, and attended by a number of MPs and Lords as well as representatives from the science and engineering community, the day focused around several scientific panel presentations and discussions as well as keynote addresses from Rt Hon David Willetts MP, Minister for Universities and Science, and Shabana Mahmood MP, Shadow Minister for Universities and Science.

The event began with a welcome from Rt Hon John Bercow MP, Speaker of the House of Commons. Continuing the Parliamentary-style, the event was chaired by Andrew Miller MP, Chair of the Commons Science and Technology Select Committee, and the various morning sessions were co-chaired by Dr Julian Huppert MP and Stephen Metcalfe MP.

An all-woman panel, including Professor Alice Brown (Royal Society of Edinburgh), Dr Heather Williams (Science Grrl), Dr Cathy Hobbs (Council for the Mathematical Sciences), Beck Smith (Campaign for Science and Engineering) and Professor Lesley Yellowlees (the first female president of the Royal Society of Chemistry) discussed the loss of talent and opportunities from women leaving science



Shabana Mahmood delivers her speech to a packed audience



It was standing room only as members of the panel answered questions from the audience



The first panel of the day: (L to R) Dr Heather Williams, Dr Cathy Mobbs, Stephen Metcalfe MP, Beck Smith and Professor Alice Brown

and called for more ‘policy-muscle’ to speed up improvements in diversity in science. All felt that the will exists to change the male-dominated cultures that are prevalent in science and engineering, but the rate of change is frustratingly slow.

Science and Universities minister David Willetts, in his keynote address, supported the idea that universities should take students with general science qualifications rather than pressuring students to decide what discipline they want to study at 16 – the age when many girls drop physics.

During the proceedings, Andrew Miller announced that an inquiry will be launched to look at women in STEM careers. He discussed what the Government can do to prevent the drop-off in women from academia, and the fact that only 9% of top-level jobs in natural science are held by women.

Other panellists and speakers included Professor Sir Peter Knight (Institute of Physics), Professor Dame Julia Higgins (The Royal Society), Anne Foster (House of Commons Diversity and Inclusion Unit), Dr John Conway (STEM Disability Committee and jokingly referred to as the ‘token male’ panellist), Roma Agrawal (WSP Group) and Professor Amrita Ahluwalia (British Pharmacological Society). Care was taken by all the panellists to emphasize that diversity in science doesn’t just refer to gender, but also disability, ethnicity, socio-economic status and age.

The event ended with a lunch, either in the House of Commons or in the House of Lords, where further discussions could take place. All in all it was a successful event and hopefully served to highlight the issue of diversity in science and engineering to parliamentarians and policymakers alike. ■

Information about the enquiry can be found at:
www.parliament.uk/business/committees-a-z/commons-select/science-and-technology-committee/inquiries/parliament-2010/women-in-stem-careers/