

Science without borders: lecture and Q&A session with the European Commissioner for Research, Science and Innovation, Carlos Moedas

Commissioner Carlos Moedas delivered his first public lecture in the UK, followed by a Q&A session on 23 March 2015. His lecture focused on the topic of 'science without borders' and, along with the subsequent Q&A, covered a number of broad themes, including funding for research and innovation, scientific advice and the overall research vision of the Commission. This note represents a combined overview of the points made during his lecture and the Q&A session.

Science across boundaries

In his address, the Commissioner noted that the continued acceleration of progress in research and innovation means that, now more than ever, researchers need to break down barriers – be they disciplinary, institutional or international. By building on this founding principle of openness, the EU can make itself the home for new methods and ideas, which can in turn drive growth and prosperity.

When considering science without borders, the Commissioner highlighted the value of research in building bridges across political divides and recognising excellence in all contexts. He noted examples such as a recent agreement to provide Ukrainian scientists with access to Horizon 2020, the European Union's research and innovation programme, and the SESAME (Synchrotron-light for Experimental Science and Applications in the Middle East) project which is bringing together researchers in the Middle East, supported in part by European Union funding and expertise. Such projects, the Commissioner argued, demonstrate the unifying force of curiosity and he is keen to develop further open and meaningful partnerships, as indicated by a recent joint call with Brazil.

Commissioner Moedas stressed that innovation comes from the amplification of diversity in all forms, and that the spectrum of talent within the European Union represents a huge asset. He drew attention to the role played by the European Research Council in supporting research excellence and the development of new ideas, from which the UK has benefited substantially. He noted that the UK's involvement in international collaborations was a sign of openness and a continuing beacon for the success of this approach.

There is also a need for greater cross-disciplinary collaboration, the Commissioner noted, so that the entire spectrum of academic disciplines can contribute in an evolving landscape. Embedding the humanities and the social sciences within the Horizon 2020 programme was a statement of the recognition of these fields, which had a contribution to make across all areas of investigation.

He noted that the Commission needs to capture feedback from the community to ensure that the systems in place are open to new people and new fields, and that continuing efforts to simplify application processes encourage the removal of barriers. The Commissioner stated that decisions have to be made on how best to balance the need for political oversight, including accountability to taxpayers, with independent research decisions driven by the community itself.

Expert Advice

During the Q&A session, the Commissioner reflected on recent changes to the provision of scientific advice within the European Union. He noted that Professor Anne Glover's appointment had been the first step of a process which acknowledged the importance of scientific advice to the Commission's decision-making. The Commissioner spoke about a request he had received from Commission President, Jean-Claude Juncker, to reflect on mechanisms which could match supply and demand for advice within the European Union. He explained that he would be presenting several possible options to the President, which drew inspiration from experience across Member States and more broadly at an international level. He noted that, although the exact model used within any particular national government could not be duplicated within the Commission, independent scientific advice was valued and would be present in some form.

The Commissioner stressed the importance of this kind of advice when dealing with challenging and controversial topics, such as genetically modified organisms. Responding to audience questions, he reflected on his perception that politics was becoming increasingly technical, and that he hoped for a future in which technical knowledge and political expertise would increasingly be represented alongside each other within the body of elected officials.

Funding

Commissioner Moedas mentioned the tough decisions made by the Commission to substantially increase research funding during past framework programme renewals, even in the context of a declining overall EU budget. This was done in recognition that research and innovation are an investment which can deliver growth and prosperity.

He argued that this political vision is being extended by the European Fund for Strategic Investments (EFSI), a new funding instrument, which will identify and fund high-risk projects that will potentially offer high returns. The Commissioner reported that this fundamental approach was a good opportunity for the kind of high-risk, high-return projects often put forward by the science community. These funds will be awarded by a panel of experts, predominantly individuals who have experience of working with investments, such as venture capitalists.

The Commissioner stressed that political commitment to long-term investment in research was critical, highlighting the example of a US supercollider project that was cancelled despite the investment of more than \$2 billion. In comparison, the Large Hadron Collider built in Europe draws on the input of over 10,000 scientists from across 100 nations, and means the discovery of the Higgs boson was made in Europe. These projects can have far-reaching benefits, with history showing that the creation of the World Wide Web, as a way for physicists to share data, ended up transforming the lives of people across the planet.

Agility

The Commissioner felt that the response to the recent Ebola crisis demonstrated the ability of the Commission to react rapidly to developing challenges, unlocking €200 million in two months. He noted the importance of agility, and reported on further examples of beneficial cooperation such as the European & Developing Countries Clinical Trials Partnership (EDCTP). The Commissioner felt

this type of work was essential for mounting future rapid responses, and stressed his willingness to fight for this flexibility.

Away from these acute scenarios, the Commissioner noted the need to maintain agility in order to embrace new drivers for research. In particular, he drew on the example of consumer-driven innovation, including a case where a successful heart valve had been designed by a cardiac patient who was a trained engineer. The benefits of creating this feedback loop between consumers and producers promises benefits across many fields.

UK research and innovation

The Commissioner said that the UK is a highly valued member of the European Union, and that he believes the UK itself derives great value from this membership. The principles of mobility and funding based on excellence mean that the UK ranked first for the number of applicants to Framework Programme 7 (FP7), and in the last two years of FP7 had received more funding than any other Member State.

He noted that the majority of the UK's top research partners are other European states, and that UK universities benefit from this association. He concluded by stressing that the UK played an important role in delivering the scale and ambition of the Horizon 2020 programme, and that its principles reflected the UK vision for research.

Further resources

A transcript of the Commissioner's speech is currently available.¹ In addition, a video recording of the lecture and debate is now available online.²

Disclaimer: this note reflects the view expressed by the Commissioner during his lecture and the subsequent debate, but do not necessarily represent the views of the Academies listed above.

¹ http://europa.eu/rapid/press-release_SPEECH-15-4658_en.htm

² <https://www.youtube.com/watch?v=pGH8l4-JX-Q&feature=youtu.be>