British Council Science from the Past to the Future

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The British Council started in 1934, to make "the life and thought of the British peoples more widely known; and to promote a mutual interchange of knowledge and ideas". Right from the beginning, science played a crucial role in its work.

At the outbreak of war J G Crowther (1899-1983) was appointed the first Director of the Science Department. His view was that scientific knowledge should serve as a transnational *lingua franca* in discussions leading to a narrowing of disparities between rich and poor.

This was an exceptionally far-sighted ideal but it was not always shared. In 1942, the British Government, acting through the British Council, decided to establish a Cultural Scientific Office in Chungking but the idea that British culture might be enriched, as Crowther believed that it would be as a result of a deeper understanding of Asian science and technology, was derided in high places. Who would dispute that today?

Crowther also saw that many academics in Nazi Germany and Austria would eventually be either banished or killed. The work of the Society for Visiting Scientists, another product of Crowther's directorship at the British Council, deserves wider recognition for the hospitality and financial assistance which it extended to scientists from the occupied countries.

From about 1943 onwards the Science Department, represented by Crowther, played an important part in creating the international cultural body which ultimately became UNESCO. The three themes apparent here from the start of our work with scientists – science as an international *lingua franca*, scientific promotion in-country, and the encouragement of networks of visiting researchers – are as important for what we do today as they were in the 1940s.

In 2005, cultural relations are more relevant than ever. Science, engineering and technology help to extend our understanding of the world and develop imaginative solutions to shared problems. Science provides a common platform for collaboration and discussion, bringing people together across deep cultural divides, with a universal language that encourages the mutual understanding essential for a more peaceful, secure and prosperous world. Science is also a central driver for social and cultural change.

A successful science and innovation strategy stressing the achievement of world-class excellence for the UK needs a clear international dimension. As the Treasury's 10-year Framework notes, international competition is rising rapidly, and a supply of new ideas is crucial to British competitiveness in a global economy. This in turn is dependent on securing the UK's reputation internationally. Surveys show that a reputation for economic success based on science and innovation, world beating companies and an international financial trading centre influences people's favourable perceptions of the UK more than any other factor.

Science is increasingly complex, requiring co-operation between laboratories and researchers from a range of institutions around the world and sophisticated information processing and sharing. It cannot be carried out in isolation. 5% of the world"s science is carried out in the UK. 95% is not. This makes effective international networking central to ensuring the UK can capitalise on its ability to invent and innovate. We need to work closely with other countries if we are to be seen as a global hub for scientific and technological innovation and new knowledge.

The British Council, with its presence in 110 countries, is in a unique position to help form the networks necessary to the pursuit of a global knowledge economy. And the UK is well placed to facilitate such networks because it is often viewed as the partner of choice: its scientists are seen to be good research managers.

The UK's reputation in science needs to be advanced in a number of ways:

- By increasing engagement and influence with current and future scientists internationally, through building sustainable networks which facilitate co-operation and enable the UK to position itself as a global hub;
- By ensuring that the "brain gain" of scientific and creative talent is balanced by a commitment to capacity building for education and research institutions in

countries which suffer the loss of academic and research talent;

- By sustaining the high quality reputation of UK education abroad in the face of increasingly aggressive competition from the education sectors of other countries so that it continues to be an attractive destination to high-achieving students from overseas.

Improved, broader acceptance internationally of advances in science, and of their potential application, is critical to the UK. Public perceptions about areas such as genetic engineering and fears generated by globally transmittable diseases in food products are two examples of where adverse economic consequences may flow from uninformed or unbalanced debates in other countries.

There will be an increasing role for trusted bodies such as the British Council, operating at arm's length from government, to facilitate informed and balanced debate between scientists and the public internationally, drawing on a plurality of views. As a non-governmental public body, we are able to do things that other UK stakeholders cannot, working with government and non-government organisations and agencies, the public and private sector, and voluntary bodies.

We currently have science programmes in 62 countries, with a global budget of £8 million. Science activity tends to be greatest in Europe, East Asia, the technologically advanced Commonwealth countries and Latin America, prioritised on the basis of research capacity, demand, potential impact and stakeholder interests. These interests come together through the Global Science and Innovation Forum, a cross-Departmental committee chaired by Sir David King.

The Science team delivers programmes that support the British Council"s purpose: "To build mutually beneficial relationships between people in the UK and other countries and increase appreciation of the creative ideas and achievements of the UK". We have a dual emphasis on professional partnership and social relevance.

The activity is organised under two interdependent areas: "excellence in international science", engaging and influencing scientific communities; and "understanding science in society", spreading awareness and appreciation of the UK with wider international audiences.

The first programme area sustains communications for innovation, stressing engagement and wealth creation, and is targeted at scientific communities, engineers and research managers around the world. The key outputs are scientific collaboration through exchange of ideas and knowledge, and sustained relationships and networks between young scientists. The main mechanism is a scheme to fund bilateral workshops, called "International Networking for Young Scientists".

The second area sustains communications about innovation, stressing cultural relevance and social well-being, and is targeted at the public, media, policymakers and other communities of interest. The key outputs are international awareness of the UK's role in scientific creativity, and collective debate about the impacts on science on people's lives. It includes major campaigns such as ZeroCarbonCity and mechanisms such as *café scientifique* and a web magazine.

ZeroCarbonCity aims to reframe the international climate change debate by exploring the energy challenges facing the world's greatest cities. Cities occupy a pivotal position, as major energy consumers, but also as centres of innovation and new thinking, and international links can be built between cities, even when states cannot agree. ZeroCarbonCity shifts the emphasis away from climate change impacts and inter-governmental negotiations, towards mitigation, adaptation, and practical measures that people can adopt. In so doing, it raises awareness of the UK as a country committed to tackling the problems.

How all this fits together at the policy level is illustrated by looking at the Barcelona 3% target (for EU Member States' percentage spend of GDP on research and development), which, if it is to be met, will require some 700,000 more scientists by 2010. However, the supply of researchers is low in comparison to this demand: the research population is ageing, the dropout rate in science at undergraduate level is high and increasing, and surveys show there is widespread disinterest in science among teenagers.

One solution is to import researchers from other countries to make up the shortfall. But "brain gain" fails to address the root causes: poor career prospects, society's negative perception of scientists and the value it places on them, and the resulting lack of interest in science on the part of young people.

Such an approach is also unsustainable in the longer term because it fails to recognise that foreign governments talk about the need for symmetrical co-operation, where each country has something to learn and gain from the other. Countries want to be part of the global knowledge economy and hold on to their skilled people in the pursuit of new knowledge. It is no longer about a one-way flow of experts or training in pursuit of capacity building, but an agenda based on mutuality.

The Council is working to address different aspects of the problem. One is to help visiting researchers from other countries settle temporarily in the UK and to help internationalise our own young researchers. To this end, we are setting up mobility centres and an online Association of Visiting Researchers, where former, current and prospective "mobile" researchers can help each other by sharing experiences.

Another is to raise awareness of researchers and their work with the public, through open talks and discussions about the impacts of science on society, science in schools, and youth conferences. This will change perceptions and show that researchers make an important contribution to the economic, political and social fabric of Europe and are an important part of culture and society.