

DINNER/DISCUSSION SUMMARY

Building strong European research partnerships

Held at The Royal Society on 17th November, 2010

The Foundation is grateful for the support for this meeting from the French Embassy,
The Kohn Foundation, Research Councils UK and The Technology Strategy Board

Chair: **The Earl of Selborne KBE FRS**
Chairman, The Foundation for Science and Technology

Speakers: **Sir Leszek Borysiewicz FRS FRCP FMedSci**
Vice-Chancellor, University of Cambridge
Professor Bernard Belloc
Higher Education and Research Adviser to the President of France
Seán O'Reagain
Acting Head of Unit, Co-ordination of National Research Programmes – Joint Programming and
Major European Initiatives, Directorate-General for Research, European Commission

SIR LESZEK BORYSIEWICZ urged UK researchers to participate actively in the development of European research partnerships. This would be good for Europe and it would also enhance their world-wide reputation. He described recent developments in the EU and in particular the EU 2020 Strategy with its three pillars of Smart Growth, Sustainable Growth and Inclusive Growth. He reminded the meeting that the European Research Area was now enshrined in European law through the Lisbon Treaty. The structures were now in place for Europe to develop its research capability on a collaborative basis. Major research opportunities existed for UK higher education institutions but for these to be realised the UK needed to engage and to participate. His involvement with medical research had shown him that a growing number of medical researchers were now seeking to collaborate with European partners rather than with US partners. He noted that the 3 per cent of GDP target for EU research and development expenditure still stood and that there was now a target of 40 per cent participation in EU higher education. Progress towards these targets would be monitored by the European Commission. He did not underestimate the extent of the problems which would need to be overcome (e.g. elimination of bureaucracy, simplification of procedures, charging of university overheads) but it was essential that the UK joined in the task of resolving them in a way which would enhance the scope for increased cross-border collaboration.

PROFESSOR BERNARD BELLOC described in some detail the major reform programme on which France was now embarked in order to enable its universities and research institutes to compete effectively against the fast-growing capability of countries like China, Brazil and India. A key element in the reform programme was decentralisation so that institutions had greater independence and that key decisions were no longer in the hands of Ministers and civil servants. He reminded the meeting that as regards academic and research excellence Europe led the world but that Europe had been unable to match the achievement of other countries in ensuring that this excellence was exploited in ways to benefit European employment and economic development. The recent recession and the

unacceptably high levels of unemployment in many European countries made it imperative that Europe succeeded in achieving the economic benefits, which could flow from the quality of its brainpower. He commented: "Europe produces the brains but other countries use them". He noted that 85 per cent of European public research and development expenditure was devoted to national research programmes. Much greater co-ordination of the European research effort was needed to ensure that the full potential of that expenditure was realised.

MR SEÁN O'REAGAIN pointed to three current major factors pointing to the need for action: the growing globalisation of knowledge with Europe's share of knowledge creation on the decline, the financial constraints resulting from the recent economic and financial crisis and the fragmentation of European research activity resulting in wasteful duplication. The scale and nature of the societal challenges facing European countries were such that uncoordinated national research programmes were no longer able to yield the desired solutions. He acknowledged that there had been a number of fruitful partnerships in Europe in the past 50 years (e.g. the Airbus project or the European Space Agency) but modern conditions and developments required a step change with more emphasis on top down than on bottom up because only in this way could there be the necessary political commitment to ensure that results were achieved. He stressed that the Commission was not seeking either more power or more money. It saw its role as a facilitator, catalyser and monitor. The plan was for Ministers in the Research Council to determine, on the advice of high level expert representatives, a number of key areas on which research programmes both at the national level and multilateral level would be focussed – areas which reflected recognition of the major societal challenges facing EU Member States. He believed that this approach would provide benefits for Member States (common solutions, shared burdens and reduction of wasteful duplication) benefits for scientists (increased mobility, enhanced impact and a pooling of data and expertise), for enterprises and for research managers (achievement of the critical mass necessary for tackling the scale of the challenges).

In the subsequent discussion periods it was made clear that the scope for European research partnerships was intended to embrace social science and the humanities. In order to solve a nation's problems an understanding of that nation's culture and history was essential. When assessing research impacts it was important to remember that much of the beneficial impact of humanities research could not be measured in monetary terms.

A key theme was the relative merits of a top down and a bottom up approach to collaboration. There was general agreement that the bottom up approach had yielded significant benefits. Considerable concern was, however, expressed that emphasis on a top down approach in the future would result in unacceptable political interference with too much emphasis being given to political imperatives and concerns to the detriment of the required focus on speedy progress towards the desired research objectives. It was pointed out that the success of some promising bottom up initiatives had been delayed by the need to cope with pressure from other countries to participate. The current French programme of reform to devolve decision-making away from Ministers and civil servants and to increase the autonomy of individual institutions was significant. The point was also made that there could be no effective partnership unless there were clear positive returns to each of the participants. On the other hand it was argued that effective implementation and the achievement of the desired critical mass for major programmes of research would be impossible without a firm commitment from the highest political levels. Only with such commitment could bureaucratic obstacles be removed and the desired rapidity of movement and simplification of procedures be achieved.

Questions were raised about ways to foster greater industrial exploitation of new research. It was argued that the EU needed more jobs and companies better able to compete in the world and therefore EU researchers needed to work closely with EU companies. Reference was made to the European Innovation Union as possibly providing help with initiatives to overcome problems relating to patenting. Partnerships between public bodies and private enterprises could also help and one speaker felt that more engagement by UK small and medium enterprises was needed. Greater mobility of researchers could also help. An important factor was the industrial capacity of European Member States. Without a strong industrial base in Europe there would be inadequate exploitation of the output from European research programmes. EU structural funds were available to assist but individual Member States were free to choose to devote those funds to purposes other than the development of a strong industrial base. If they made such a choice they could not expect to receive additional funding. But there were clearly problems for some of the newer EU Member States whose infrastructure was less well developed than that of the older Member States. One speaker warned that public programmes of infrastructure development, particularly on a multi-national basis, would be wasteful if the capacity to maintain and operate new facilities was lacking and if it was impossible to close them once they had fulfilled their purpose.

A number of voices expressed concern that an emphasis on European collaboration could be against Europe's best interests and that it was important for Europe to avoid being inward-looking. Researchers in Europe wanted to work with the best in the world not just with the best in Europe. If European companies were not willing or able to

maximise the returns available from European research endeavours, it would be foolish to prevent them from seeking outlets in other parts of the world. However, it was pointed out that the Commission was not placing obstacles in the way of collaboration between European researchers and researchers outside the Member States. And it was also argued that it was in the EU's best interests to ensure that researchers in China, for example, looked to the EU and not just to the USA for partnerships.

Sir John Caines KCB

Useful web links:

British Academy
www.britac.ac.uk

Department for Business, Innovation and Skills
EU Framework Programme (FP8) - Call for Evidence
www.bis.gov.uk/fp8-call-for-evidence

European Commission
www.ec.europa.eu/index_en.htm

Europe 2020
http://ec.europa.eu/europe2020/index_en.htm

The Foundation for Science and Technology
www.foundation.org.uk

French National Research and Innovation Strategy
www.ambafrance-uk.org/National-Research-and-Innovation.html

Kohn Foundation
www.thekohnfoundation.org

Research Councils UK
www.rcuk.ac.uk

The Royal Society of Edinburgh
www.rse.org.uk

The Technology Strategy Board
www.innovateuk.org

University of Cambridge
www.cam.ac.uk

A round-table discussion was held the afternoon on the same theme – the report is on the next page.

The Foundation for Science and Technology
A Company Limited by Guarantee
Registered in England No: 1327814
Registered Charity No: 274727

ROUND-TABLE DISCUSSION SUMMARY

Building stronger European research partnerships

Held at The Royal Society on 17th November, 2010

The Foundation is grateful for the support for this meeting from the French Embassy,
The Kohn Foundation, Research Councils UK and The Technology Strategy Board

Chair: **The Earl of Selborne KBE FRS**
Chairman, The Foundation for Science and Technology

Speakers: **Seán O'Reagain**
Acting Head of Unit, Co-ordination of National Research Programmes – Joint Programming and
Major European Initiatives, Directorate-General for Research, European Commission
Professor Bernard Belloc
Higher Education and Research Adviser to the President of France

MR SEÁN O'REAGAIN said that the challenges facing EU countries included such issues as the achievement of sustainable development, security of energy supply, health and global competition. In many fields of research expenditure by EU countries more than matched that of the USA but EU countries were much less successful in translating that research into positive benefits for society. Only 15 per cent of EU public research and development expenditure was devoted to cross-border projects. Only on a cross-border basis could the required scale, scope and depth of research to deal with current societal challenges be achieved. Currently there was too much fragmentation and duplication. Europe's successes in CERN, Eureka and the ESA showed that progress could be made when there was full commitment at the highest level. But a piecemeal bottom up approach was no longer likely to lead to the desired results. A top down approach was now needed with joint programming within a framework of strategic priorities agreed at Council of Ministers level. The Commission was not seeking to eliminate national programmes but was seeking to have these conducted within an agreed framework and vision and to see an increase in the proportion of cross-border programmes. The Commission was not seeking new funds but to ensure that existing funds were better used. The scale of the areas requiring research effort was beyond the scope of any one country. The more countries were involved in the creation of new knowledge, the greater the scope for that knowledge to be reflected in new policy developments.

PROFESSOR BERNARD BELLOC expressed dismay that 85 per cent of Europe's public expenditure on research and development was not subjected to any co-ordination despite fact that a quarter of a century had passed since the EU embarked on its first framework programme. Europe's academic excellence needed to be translated into industrial excellence. For that to occur there needed to be strong European companies and these needed to be brought together with centres of European research. Europe needed to define new objectives for its

collaborative initiatives and then devise the appropriate means of achieving them;

The following points were made in discussion:

1. A top down approach was not the best way of bringing about effective partnerships. Successful collaboration depended on each participant perceiving a direct benefit flowing from that collaboration;
2. It was not self evident that successful partnerships depended on the involvement of the European Commission. CERN, the Airbus and the Ariane rocket were all examples of successful cross-border co-operation and none of these had any Commission input;
3. Cross-border collaboration could delay progress and impede delivery of outcomes. Commission programmes tended to be too slow and too bureaucratic. Labelling a project "European" resulted in the application of various cumbersome rules (e.g. on procurement). It was pointed out that the Commission recognised that for research programmes the lower risks of fraud (as compared with some other EU programmes) needed to be matched by simplified procedures but the Commission needed to persuade the EU Parliament of that before any positive action could be taken;
4. Success in a research programme depended on there being one clear leader responsible for delivery. Unfortunately in collaborative programmes there rarely was such clear leadership;
5. In taking forward research collaboration initiatives it was important to bear in mind the interests of industry both as a potential partner and also as the means whereby the application of new knowledge would be achieved;
6. It took about 5 years to bring together a really effective research group. However EU initiatives

which seemed to proliferate did not seem to have a commensurate time-scale;

7. Experience suggested that setting clear targets for a research programme (e.g. zero energy buildings) were desirable as a means of getting things started and also in achieving subsequent effective application;
8. The idea of "European" companies seemed to be misconceived. In a globalised world global companies were needed. For there to successful application of new knowledge there needed to be collaboration between global companies and European academics. Europe needed to avoid being too inward-looking;
9. Collaboration between industry and Higher Education Institutions was being impeded by the drive by the latter to implement full economic costing which meant that collaborative projects proved too costly;
10. UK Ministers had not yet reached a decision whether to support the next European Research Framework Agreement. A consultation exercise was under way. Ministers would want to reflect carefully on the results of that before deciding.

Sir John Caines KCB

Useful web links:

British Academy
www.britac.ac.uk

Department for Business, Innovation and Skills
EU Framework Programme (FP8) - Call for Evidence
www.bis.gov.uk/fp8-call-for-evidence

Europe 2020
http://ec.europa.eu/europe2020/index_en.htm

European Commission
www.ec.europa.eu/index_en.htm

The Foundation for Science and Technology
www.foundation.org.uk

French National Research and Innovation Strategy
www.ambafrance-uk.org/National-Research-and-Innovation.html

Kohn Foundation
www.thekohnfoundation.org

Research Councils UK
www.rcuk.ac.uk

The Royal Society of Edinburgh
www.rse.org.uk

The Technology Strategy Board
www.innovateuk.org

University of Cambridge
www.cam.ac.uk

The Foundation for Science and Technology
A Company Limited by Guarantee
Registered in England No: 1327814
Registered Charity No: 274727