

DINNER/DISCUSSION SUMMARY

**Changes to the machinery of government:
the creation of the
Department for Business, Enterprise and Regulatory Reform (DBERR)
and the
Department for Innovation, Universities and Skills (DIUS)**

Held at The Royal Society on 10th July 2007

We are grateful to
The Royal Society for supporting this meeting

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

Speakers: **Sir Keith O'Nions FRS**
Director General for Science and Innovation, Department for Innovation, Universities and Skills
Phil Willis MP
Chairman, House of Commons Select Committee on Science and Technology and MP for Harrogate and Knaresborough
Lord Broers FRS FREng
Chairman, House of Lords Select Committee on Science and Technology

SIR KEITH O'NIONS outlined the objectives of the Department for Innovation, Universities and Skills (DIUS). They were to ensure that the UK maintained and exploited its world class research base; to increase and widen participation in Higher Education (HE) and Further Education (FE); to tackle the skills gap in adults post 19 (importantly in basic numeracy and literacy); and to increase the number of students in Science, Technology, Engineering and Mathematics (STEM). The Science and innovation Division (ex DTI) was responsible for the budget for the Research Councils and Academies; for the HE Innovation Fund and Science Research Investment Fund (with HEFCE); the British National Space Centre; and NESTA. The total DIUS budget was £18.3bn - Science £3.4bn; Innovation £0.3bn; HE £9.4bn; FE and Skills post 19 £5.2bn. The new structure gave an opportunity to bring together HE and FE and to realign science, skills and innovation. But it was possible that science and innovation might become less connected with the business agenda. He would work to minimize that danger.

MR WILLIS noted the frequent changes in Departments responsible for science. No reorganization would command universal assent, but the present changes were not a response to failure; had not been made to capture a political advantage; and had met with approval from the CBI and Universities UK. But it was disappointing that Science was not in the title of the Department, and might not be seen as central to the Department's purposes and interests as it had been in DTI. There were clear issues to be settled about the allocation of resources; he was concerned that basic research might be given less importance than translation research; and he echoed Sir Keith's concern about a possible disconnect between the business responsibilities of DBERR and DIUS interests. But there were benefits in bringing Universities and the Research councils together and there could be advantages in streamlining the

dual funding system - although he noted that the Minister had ruled out merging them. The coordination of DIUS and Department for Children, Schools and Families was crucial; DCSF had the 14-19 year old responsibility, and DIUS could only meet its STEM target through response from that age group. 1 in 6 school leavers were illiterate or innumerate. He was also concerned about the proposal to fund FE colleges through local authorities; and the reluctance to make employers' obligation to train mandatory. Finally, there was a danger that his Select Committee's remit to consider science across all Government would be lost if it were replaced by a Committee looking only at DIUS.

LORD BROERS question was whether and how government Departments, however structured, could help UK industry innovate and perform. He emphasized the complex nature of innovation in modern global circumstances. It depended on large teams of people working on technologies and developing and commercialising those technologies over time and in different countries - hybrid cars and high speed trains were examples. There needed to be an unbroken effort and series of links from basic science to the end product and its successful penetration of the market. If the UK was to be successful it not only needed brilliant basic researchers (we had them) but we needed them to work in industry not only to bring back the knowledge of what further developments in technology are needed, but to work in industry themselves to deliver those improvements. It was more difficult to harness bright ideas to industrial application than to think up the ideas. Applied science was as important as pure science; and the UK record in it was not good. DIUS and DBERR must work together on this; did they understand the links between innovation, product development and markets; that science cannot be divorced from application? The UK cannot be top in every sphere, so we must choose where to excel;

and ensure that the research, development and application in those areas - whether done by SMEs or large companies - was done in the UK.

Much of the subsequent discussion focussed on the linked issues of the deficit in skills in the workforce; the low priority given to FE colleges; the concern about the declining numbers of STEM students, and how to make best use of graduate scientists. It was noted that the neither of the new Departments had improved teaching as an objective. Unless students were inspired by teachers both in school and at university, they would head off to easier non STEM subjects. It was too easy to say that the schools problem would be solved when more good science graduates came out of universities and taught in schools. It was a chicken and egg situation - poor school teaching meant fewer STEM students, which meant fewer STEM school teachers. Where was the drive - and the Departmental responsibility - to drive STEM teaching in both schools and universities simultaneously? A problem in schools was the drop in practical science teaching, which, given sufficient priority could be remedied.

In universities the full economic costs of teaching laboratory subjects - e.g. chemistry - had still not been recognized. Teaching and research must be brought closer together and Research Assessment Exercise equivalent for teaching developed. Further Education colleges should be a fundamental tool in building up vocational skills in the workforce and in providing pathways for those who, perhaps belatedly, wanted to pursue further academic study. It was alarming that most of their funding would now be in the hands of local authorities who would be unlikely to have the foresight to understand the priority for courses and teaching which industry needed. The FE funding proposals had not been thought through, and it would need two to three years before solutions could be seen to be satisfactory. The concerns about the changes could be summarised as: where was the one Secretary of State who would be responsible for ensuring an adequate supply of STEM teachers; for preserving and enhancing university science departments; for ensuring technical colleges provided the vocational skills industry needed; and for understanding the nature of technological change, and how to respond to it. Dispersal of these responsibilities between Ministers was worrying.

But some speakers saw gain in the changes. Politicians would always see the issues of school performance, children's health and safety and local matters as being of higher electoral importance than universities and science. There was, therefore advantage, in having two separate departments, one of which could give full attention to science and HE issues.

A number of speakers echoed Lord Broers' concerns about the understanding within Government of the relationship between science, innovation, and manufacturing new products and creating new services. There was still acceptance of a linear model - innovation, development, consumer demand. But, in reality, it was the reverse, understanding consumer demand led to innovation which then led to development. Certainly blue skies science has a role, but research and innovation will only become adequately funded when it leads to profit coming from market satisfaction. There was also concern that innovation and research was seen as something limited to manufacturing industry, or pharmaceuticals or energy industries. That was far too narrow. It was the financial and retail sectors which showed the most striking innovation and market led re-

search and they should be taken as exemplars and supported.

Four further issues were raised. First, the Prime Minister emphasized Britishness; but how did this fit in with a Department of whose £18.3bn budget, only £3.4 was UK, the rest was England.? How could Scotland be sure that the UK segment of the budget would be seen as important as the England segments?

Second, it was worrying that these significant changes had been made, as it were, on the hoof, without detailed consideration of the costs and benefits. For example, there must be frictional costs of change and loss of impetus.

Third, there was real concern about Mr. Willis's suggestion that the House of Commons Select Committee on Science and Technology might be replaced by a Departmental DIUS Select Committee which would not be able to monitor the effectiveness of science across Whitehall. It was not enough that there was a House of Lords Select Committee; the Commons committee should continue.

Fourth, there was concern that the Government Chief Scientist was to be in DIUS, and not in the Cabinet Office or in the Treasury. He should be independent of any Department and free to range over all science problems and issues within Government.

Sir Geoffrey Chipperfield KCB

The presentations are on the Foundation website.

Useful web links:

10 Downing Street: Machinery of Government:
www.number-10.gov.uk/output/Page12181.asp

Department for Business, Enterprise and Regulatory Reform (DBERR):
www.dberr.gov.uk

Department for Innovation, Universities and Skills (DIUS):
www.dius.gov.uk

Higher Education Council for England (HEFCE):
www.hefce.ac.uk

House of Commons Debate on Science Evidence and Policy Making:
www.publications.parliament.uk/pa/cm200607/cmhansrd/cm070709/debtext/707090006.htm#0707095000001

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

RCUK:
www.rcuk.ac.uk

The Royal Society:
www.royalsoc.ac.uk