The role and function of departmental Chief Scientific Advisers

Institute of Physics submission to a House of Lords Science and Technology Committee Inquiry

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23 September 2011
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Christine Salmon Percival
Clerk to the Science and Technology Committee
House of Lords
London
SW1A 0PW

IOP Institute of Physics

Dear Ms Percival,

The role and function of departmental Chief Scientific Advisers

The Institute of Physics is a leading scientific society promoting physics and bringing physicists together for the benefit of all. It has a worldwide membership of around 40 000 comprising physicists from all sectors, as well as those with an interest in physics. It works to advance physics research, application and education; and engages with policy makers and the public to develop awareness and understanding of physics. Its publishing company, IOP Publishing, is a world leader in professional scientific communications.

This submission was prepared in consultation with the Institute’s Business and Innovation Board, with input from members of the Institute with direct experience of the issues raised.

The Institute welcomes the opportunity to respond to the House of Lords Science and Technology Committee’s inquiry into the role and function of departmental Chief Scientific Advisers.

If you need any further information on the points raised, please do not hesitate to contact us.

Yours sincerely,

Dr Norman Apsley FREng CEng CPhys FInstP
Vice-president, Business and Innovation

John Brindley
Director, Membership and Business
The role and function of departmental Chief Scientific Advisers

The ability of CSAs to provide independent advice to ministers and policy makers within their departments

1. The introduction and development of the roles of departmental Chief Scientific Advisors (DCSA) has proved effective in bringing science to the forefront of government policy decisions. The government Chief Scientific Advisers, and the DCSAs act as a focal point for both science in government, in Westminster and the devolved governments, and also for those outside of government.

2. Any advice that the DCSAs provide must be independent, authoritative, robust and far sighted. This advice must be approached in a dispassionate and thorough way using up-to-date information on a national and international basis. To support this, DCSAs should maintain the ability to consult more widely, for example, by using networks and contacts of leading scientists in each field where advice is being sought. If the information available to base advice on is incomplete and/or contradictory, DCSAs must be able to make sound judgements. We believe that these principles have been adhered to.

3. However, it is clear that the ability of DCSAs to provide this impartial advice to ministers is related to the ‘access’ that DCSAs have to both ministers and senior civil servants within a department, and also access to the early stages of policy development. This ‘access’ varies from one department to another, and also sometimes within different areas of the same department, and is dependent more on the current people and processes in place than an established rule across government.

4. The role of DCSAs seems to have been further marginalised by the budgetary restrictions within departments. As the overall budgets have been reduced in most areas, the perceived value of scientific advice has fallen, with individual directorates and teams focusing on their own ‘bottom line’. In some cases it seems that a DCSA is only consulted on an issue if the subject under consideration is deemed sufficiently ‘scientific’ by those leading the project. This is clearly not ideal; one of the most important, if perhaps intangible, benefits of the DCSA structure is a greater understanding of the pervasiveness of science. Ideally, DCSAs should be able to provide input on all issues, bringing the benefit of the logical and thorough approach of a trained scientist.

5. In some cases, the DCSA is a member of the Departmental Board, giving a full view of the entire range of departmental activities, and we would recommend that this approach be taken up in all government departments. The influence of the DCSAs could be further enhanced by ‘institutionalising’ the role. For example, the DCSAs should be required to sign off departmental business plans and spending review submissions. In this way, all departmental Permanent Secretaries would be required to interact with their DCSA.
The extent of their influence over research spend

6. Departmental R&D budgets have undergone substantial changes over the past decade, with most, if not all, undergoing significant reductions. While it might be too much to ask for the network of DCSAs to reverse this, each DCSA should have a good understanding of the R&D needs of a department, both in terms of policy development and in delivering the functions of the department, and lobby to ensure that these are met efficiently. However, given the differing nature and scope of the DCSA role, and of R&D spending levels, in different departments, it would not be appropriate to assign government-wide rules to this.

7. In addition to holding an influence over departmental R&D spending, DCSAs should have an active involvement in departmental procurement practices. Departmental procurement budgets are typically orders of magnitude greater than dedicated R&D budgets. Through innovative and pre-commercial procurement strategies, departmental budgets can be used both to meet the needs of the government, and also support innovative science-based businesses. For example, the Small Business Research Initiative, while administered by the Technology Strategy Board, requires significant departmental ‘buy in’ if it is to fulfil its potential in supporting innovative small businesses, and the DCSA has a role to play here.

The range of expertise provided by the network of CSAs

8. The network of DCSAs and also the Civil Service science and engineering network have a significant role to play. The ability to coordinate both the use and undertaking of scientific research across government has the potential to provide cost savings, but also to benefit individual departments through collaborations and cross-fertilisation of ideas.

Their role in providing independent challenge and ensuring that departmental policies are evidence-based

9. Clearly, the ability to challenge policies with scientific evidence is essential to the role of the DCSAs. However, it could be argued that if it has got to that point, then it is already too late – the DCSAs and their teams and networks should play a role through the policy development process, including areas which require public consultation. This would include, for example, commissioning further research to expand the evidence base for policy decisions.

10. On this basis, the relationship between ministers and their DCSAs should be open, transparent and mutually trusting. For example, if a decision is made which goes against the DCSA’s advice, the considerations which led to this decision should be made clear to the DCSA, and, if appropriate, included in a public statement.

The extent to which CSAs have authoritative standing within relevant academic, industrial or business communities, including whether they have effective networks within those communities
11. The role of the DCSAs is pivotal and they should aspire to the standing held by, for example, the Chief Medical Officer. Given the range of issues with which the DCSAs may need to, and perhaps should, engage, it is arguable that there should be greater interaction between the DCSAs and representative groups of scientists across all areas (i.e. not just university-based researchers). Currently, the DCSAs have good relationships with the research councils and National Academies, but perhaps weaker links with learned societies and discipline-specific groups, as well as bodies that represent industrial sectors.

The contribution of CSAs in promoting public trust in the independence and authority of science advice to government

12. This is an important aspect of the DCSA role. It is the case currently, that while several DCSAs make themselves available to public events and other engagement activities, others do not.
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