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House of Commons
Science and Technology
Committee

**GOVERNMENT FUNDING OF
THE SCIENTIFIC LEARNED
SOCIETIES:
GOVERNMENT RESPONSE
to the Committee's Fifth Report of
Session 2001-02**

First Special Report of
Session 2002-03

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SCIENCE AND TECHNOLOGY COMMITTEE

The Science and Technology Committee is appointed by the House of Commons to examine the expenditure, administration and policy of the Office of Science and Technology and its associated public bodies.

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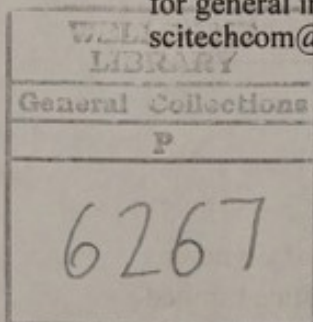
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Publications

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1. The Government's response to the Committee's Report was received on 12 November 2002 and published in a supplementary memorandum. The memoranda are reproduced as Appendixes 1a to 1c to this Special Report.

2. On 22 August 2002, a response was received from the Royal Academy of Engineering. This is reproduced as Appendix 2 to this Special Report.

3. On 15 October 2002, a response was received from the Royal Society. This is reproduced as Appendix 3 to this Special Report.

4. We publish these responses without comment, so that they are publicly available.

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Foreword

The Committee was set up by the Secretary of State for Science and Technology, the powers of which are set out in the Science and Technology Act 1994 (No. 152). These are available on the Internet at www.science.gov.uk.

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FIRST SPECIAL REPORT

The Science and Technology Committee has agreed to the following Special Report:

GOVERNMENT FUNDING OF THE SCIENTIFIC LEARNED SOCIETIES: GOVERNMENT RESPONSE TO THE COMMITTEE'S FIFTH REPORT OF SESSION 2001-02

1. The Science and Technology Committee reported to the House on Government Funding of the Scientific Learned Societies in its Fifth Report of Session 2001-02, published on 1 August 2002 as HC 774-I.

2. The Government's response to the Committee's Report was received on 12 November 2002 in the form of a memorandum to the Committee. A further response was received on 6 December 2002 in the form of a supplementary memorandum. The memoranda are reproduced as Appendices 1 and 1a to this Special Report.

3. On 22 August 2002, a response was received from the Royal Academy of Engineering. This is reproduced as Appendix 2 to this Special Report.

4. On 15 October 2002, a response was received from the Royal Society. This is reproduced as Appendix 3 to this Special Report.

5. We publish these responses without comment, so that they are publicly available.

APPENDIX 1

THE GOVERNMENT'S RESPONSE: PART 1

Introduction

1. The Government warmly welcomes the Committee's timely and helpful inquiry into the Learned Societies. The report is rich in useful detail, and the Government believes that the Committee has done UK science a great service by bringing this information and analysis together in one place.
2. The Government welcomes especially the endorsement that the Committee has given to the valuable work undertaken by the Royal Society and the Royal Academy of Engineering, both generally and with regard to the activities of these bodies which are publicly funded. The Government shares the Committee's view that these academies and the Learned Societies have a key role to play in the scientific life of the nation and are themselves key contributors to the success of the UK's science, engineering and technology enterprise.
3. The Government welcomes the debate that this report has generated, and will continue to generate, about the role of our academies and Learned Societies, and it agrees with many of its recommendations.
4. The Government's responses to almost all of the Committee's specific recommendations addressed to it are set out below. As members of the Committee may be aware the Government has recently invited the British Association for the Advancement of Science to undertake a scoping study on how the Government's needs in this area might best be met. It is the Government's intention to submit a supplementary memorandum to the Committee when this project is complete.¹ That memorandum will, in addition to informing the Committee of the Government's intentions in this area, respond to the recommendations on Copus (paragraphs 19-21) and on public communication work (paragraphs 22 and 23).

International representation

5. **Recommendation:** We consider that those Learned Societies who have accepted responsibility for the membership of these international discipline-based unions should have their proportion of the UK subscription met from OST funds, just as the Royal Society's share is paid from its grant-in-aid (paragraph 16).
6. The Government meets the costs of those international subscriptions which it considers to be in the national interest or where membership is a Governmental obligation. It relies to some extent on the advice of the Royal Society on the matter of which subscriptions meet the first of these criteria and this, as the report makes clear, is reviewed from time to time. The Government notes that the burden of payment to international unions is now shared between the taxpayer and the Learned Societies in more or less equal measure and does not regard this as inequitable.

¹ Appendix 1a, p13

Independence

7. Recommendation: The majority of Learned Societies were happy to remain largely privately funded, fearing that Government funding might interfere with their independence (paragraph 28).

8. Recommendation: We do not think that receipt of Government funds compromises the independence of those societies which benefit from it (paragraph 28).

9. The Government agrees with recommendation 4 and welcomes it. It is of great importance that the public funding of the Royal Society and the Royal Academy of Engineering does not compromise their independence, which is a pre-requisite, among other things, for their capacity to provide unbiased expert advice. The Royal Society, for example, has not shrunk from proposing changes to Government policy when requested to give its opinion on issues of public concern. The Government notes, however, that the absence of a conflict of interest does not of itself make the case for altering the *status quo* in terms of funding.

Funding

10. Recommendation: The relative age of institutions does not seem a sensible basis for determining their funding. Funding should reflect the work they do (paragraph 29).

11. The Government agrees. The relative funding of the Royal Society and the Royal Academy of Engineering reflects a number of factors, not least of which is the wider breadth of coverage across the science, engineering, medicine and technology spectrum that the Royal Society delivers. While it is the case that the Royal Society receives a substantially higher grant in aid than the Royal Academy of Engineering, it is also the case that the latter's grant in aid is growing substantially faster than that of the Royal Society between 2001-02 and 2003-04.

12. Recommendation: Government should provide a central fund to which Learned Societies could bid, but they would need to be prepared to submit financial plans and be aware that such funding would require demonstrable outcomes and accountability (paragraph 31).

13. Recommendation: The present funding of scientific Learned Societies appears to be haphazard rather than the product of strategic thinking on the part of the OST. The Government must consider how funding could be distributed more effectively and rationally (paragraph 32).

14. The Royal Society and the Royal Academy of Engineering – the UK's two national science and engineering academies – are funded to deliver a specific range of activities and outcomes, mainly in the arena of nurturing young talent and bringing to the UK the finest researchers from around the world. This investment ties in very strongly with the Government's strategic thinking and complements the range of investments in research which are made through the Research Councils and the Funding Councils. Like the Committee, we believe that these bodies deliver very good value for money for UK science and for the economy and society. Together, these bodies can act across the complete spectrum of science, engineering and technology.

15. In the Government's view, the challenge to the Learned Societies is to work effectively with the Royal Society, the Royal Academy of Engineering and the Research Councils and

others to ensure that the interests of the disciplines they represent are properly reflected in the work of the publicly-funded bodies. The Government is not persuaded of the case for diverting funds from front-line research into providing funding for Learned Societies. It is not clear what aspect of the Government's strategy such funding would fulfil that is not already being addressed effectively.

Research Fellowships and awards: features

16. Recommendation: We suggest that the Research Councils should consider introducing into their Research Fellowships those features of the Royal Society and the Royal Academy of Engineering's awards which are seen as praiseworthy, such as extending their Fellowships beyond five years on a regular basis and being willing to fund more blue skies thinking. It would also be of benefit if they were to develop a mentoring scheme to support Research Fellows (paragraph 36).

17. Research Councils have a broad mission covering the support of high-quality basic, strategic and applied research in areas within their remit as well as the training of skilled personnel for a wide variety of stakeholders. Funding for Fellowships has to be considered alongside funding for other ways of supporting research and research careers. All Research Councils keep their Fellowship schemes under regular review to ensure that they meet their objectives in a cost-effective manner. Several Research Council Fellowship schemes (e.g. BBSRC David Phillips Fellowships, ESRC Junior and Postdoctoral Fellowships) already incorporate mentoring schemes.

18. Recently, the Government's response to the Roberts' Review announced, as part of the settlement in the Spending Review, funds for 1000 new academic Fellowships (200 a year, for five years). In its response the Government stated that these new Fellowships were to be developed by the Research Councils in collaboration with organisers of existing Fellowships, and would expect that consideration is given to this recommendation during any discussions.

19. Recommendation: We urge the Royal Society, the Royal Academy of Engineering and the Research Councils to ensure that all their Research Fellowships and other awards contain family friendly features (paragraph 39).

20. The Government notes the substantial efforts that these bodies already make in this regard, as the report acknowledges, but agrees with the Committee that they should always endeavour to do more, where possible, so that their various schemes are attractive to the widest possible pool of talent.

21. With this issue in mind, the Government has asked Baroness Greenfield for advice on the development of a stronger and more strategic approach to increasing the participation of women in science, engineering and technology. An important facet of this is removing the career progression barriers faced by those who wish to devote time to bringing up a family. We expect the report to be published later this year.

Research Fellowships and awards: representation

22. Recommendation: We recommend that all awarding bodies should make an effort to publicise those aspects of their awards which may appeal to female researchers, in an attempt to increase the number of female applicants for all research awards. They should undertake a reassessment of selection procedures, in order to identify possible obstacles to the success of female applicants (paragraph 40).

23. The Government agrees with this and will be asking the Royal Society and Royal Academy of Engineering to consider any further steps they may need to take to ensure that they are publicising such aspects to potential female applicants and to keep under review their selection procedures, with the needs of female applicants in mind.

24. The Royal Society must ensure that its research awards represent the whole scientific community, without undue weight in any one area.

25. The Government agrees with the thrust of this recommendation, save, firstly, that the guiding principle at all times must be that funding should follow the most excellent – or most promising – science and scientists, and secondly that, occasionally, there may be good reasons for wishing to concentrate funding in some areas for a limited period of time.

Research Fellowships and awards: funding

26. Recommendation: We would like to see more effort made by those awarding publicly-funded grants and awards to isolate administration costs in order to identify the cost efficiency of their schemes (paragraph 43).

27. The Government acknowledges the difficulties that the Committee has had in getting comparable data on the costs of managing Research Fellowships. It proposes to address this through revising its performance management arrangements with the Research Councils and other funded bodies.

28. Recommendation: In our view, the Government funding of grant and award programmes managed by the Royal Society and the Royal Academy of Engineering should be maintained (paragraph 44.)

29. The Government welcomes the Committee's endorsement of its funding of Research Fellowships for young researchers through the Royal Society and the Royal Academy of Engineering. As the report acknowledges, the product that these bodies deliver is distinct and different from the Fellowships delivered by the Research Councils. The Government believes that this diversity, and the plurality of the funding streams, are strengths of the present system.

30. Recommendation: Most scientific Learned Societies do not have the administration capability or review processes in place to operate their own research awards. The effort required would divert them from their primary purpose, to serve their scientific communities through support for the discipline and the dissemination of knowledge (paragraph 46).

31. The Government agrees that the primary purpose of the Learned Societies is to serve their scientific communities through support for the discipline and the dissemination of knowledge. The Royal Society does, however, provide some pump-priming funding for cutting-edge research where other research funding is not available.

British Association

32. Recommendation: We are not clear why some of the British Association's government funding is routed through the Royal Society. We recommend that, in the interests of clarity OST should give funding directly to the British Association (paragraph 52).

33. The Government accepts this recommendation, having itself already concluded that the present arrangements are not ideal. From 2003-04, Government core funding for the

British Association will come directly from OST. The Government nevertheless encourages the Royal Society to maintain a close working relationship with the British Association and to continue to fund specific activities or projects with the British Association which match the objectives it agrees with Government in relation to the uses to be made of public funds.

Public communication work

34. Recommendation: Those Learned Societies which carry out public communication work are to be commended for what they undertake with such limited funding (paragraph 54).

35. The Government agrees. There is a large number of scientific organisations and individuals who are involved in science communication, only some of which receive direct funding from Government. The Government will address this issue in the supplementary memorandum² it proposed to submit, as mentioned in the introduction to this response.

Scientific advice to Government

36. Recommendation: Government departments make regrettably little use of the expertise of the Learned Societies, despite repeated offers of assistance from those organisations. We recommend that Government consider using Learned Societies instead of commercial consultancies if they could carry out research in the same areas (paragraph 68).

37. Recommendation: We repeat the recommendation made in our predecessor Committee's Report on the Scientific Advisory System that Government look more towards the Learned Societies when soliciting expert scientific advice. We think it right that all Learned Societies have equal opportunity to provide that advice and that there be financial compensation for those who produce substantial and extensive pieces of advice. Learned Societies should be able to bid for funding to provide scientific advice work they feel competent to do (paragraph 69).

38. Many departments already make use of the expertise of Learned Societies, and this is being encouraged. Guidelines 2000 on Scientific Advice and Policy Making recommended that, in seeking expert advice, departments should draw on a range of sources including, amongst others, the Learned Societies. The recent Royal Society Inquiry and Report on Infectious Diseases in Livestock, carried out at the invitation of Government, was an example of the Government seeking advice from a learned society, and providing financial assistance towards the cost of the extra burden involved.

39. Learned societies can, and do, initiate scientific research or study on their own initiative, and the reports can provide a valuable source of information for Government policy makers. The Royal Society, in particular, prepares independent reports on scientific issues of public interest, for example, on nuclear waste and depleted uranium.

40. As to whether Learned Societies can bid for Government-funded research, most departments let a proportion of their research contracts through a process of competitive tender. There is nothing to prevent Learned Societies from bidding for such work, if they believe they have the capacity to do it. However, given that such processes are intended to be an open competition, the Government does not believe that Learned Societies should be given preference over other groups of potential bidders.

² Appendix 1a, p13

41. The Government also recognises that the Learned Societies have a role to play in helping departments to select people for their scientific advisory committees. Although many departments already consult relevant Learned Societies when seeking members for their committees, the Government believes that this should now be put on a more formal basis. In future, when setting up a new committee or replacing members on an existing one, departments will be expected to consult the relevant Learned Societies about the breadth of expertise needed for the committee to fulfil its remit, and also to seek the societies' help in identifying where the best expertise might lie. Appropriate guidance will be circulated shortly to departments in the form of a CSA letter.

Accommodation: The Royal Society

42. Recommendation: As the UK's 'Academy of Sciences', the Royal Society should have a prestigious site in the centre of London, and we believe that Government funding is appropriate (para 73).

43. The Government welcomes the Committee's view that the Royal Society should have a prestigious site in the centre of London. Accordingly, the funding it provides to the Royal Society is intended to cover the Society's accommodation costs. However, no direct payments are made by the Government to third parties for such costs, which are wholly the responsibility of the Royal Society as leaseholder.

The Fellowship: gender

44. We do not think that the present low level of female Fellows in the Royal Society and Royal Academy of Engineering represents any discrimination against women. We urge both bodies to extend their efforts to encourage women to continue with scientific research and engineering careers.

45. The Government welcomes the Committee's findings that neither the Royal Society nor the Royal Academy discriminates against women. It supports the recommendations that both these Learned Societies need to extend their efforts to encourage women to continue with scientific research and SET careers.

The Fellowship: ethnicity

46. Recommendation: The Royal Society and the Royal Academy of Engineering should think strategically about programmes to increase ethnic minority participation in science (paragraph 91).

47. The Government agrees with this recommendation, and is pleased that the Royal Society and Royal Academy accept the need highlighted by the Committee. The Royal Society is beginning a project to examine the factors that influence the number of scientists from ethnic minorities. This will include participation and contributions from representatives with experience in this area, and major funding bodies such as the Research Councils, the Learned Societies and other UK Academies, including the Royal Academy of Engineering.

Learned Societies

48. Recommendation: While it would be unrealistic to suggest that the Government fund the work of all scientific Learned Societies, we have suggested that a mechanism be established through which Learned Societies could have access to centralised

Government funding. We recommend that OST evaluate the work done by these societies with a view to identifying and funding some core activities (paragraph 98).

49. As the response to recommendation 6 makes clear, the Government is unclear about the need for, and purpose of, providing a funding mechanism for the Learned Societies. It is nevertheless willing to consider this issue in its preparations for the next Spending Review, in partnership with the sector and its representative bodies. The Government will also consider any funding implications for Learned Societies active in the Science and Society arena when it responds to the British Association study mentioned in the introduction.

50. Recommendation: Raising the profile of the scientific Learned Societies can only be a positive thing for the enthusiasm for, and knowledge of, science in the general public. Government should make every effort to assist (paragraph 99).

51. The Government agrees with the Committee that a higher profile for the scientific Learned Societies can help to raise public knowledge of, and engagement with, science. It is for individual societies to consider how best to raise their own profile. Government, through financial support of science communication conferences and workshops, assists and encourages them to share experience and best practice.

52. Recommendation: We recommend that OST give thought to what it would like the Learned Societies it funds to achieve and how best to ensure this. Not enough attention has been paid to the publicly-funded activities of these bodies. OST should ensure that they are held properly accountable. Learned Societies receive funds not just from the OST but also from other Departments. The Government needs to think strategically about the money it is giving out to Learned Societies through its various funding streams in the form of one-off grants and whether this money could be used more efficiently (paragraph 100).

53. The Government welcomes the Committee's recognition of the achievements of the Royal Society, the Royal Academy of Engineering and the Learned Societies. The Government is clear about the purposes for which it provides funding, and believes that it pays sufficient attention to the publicly-funded activities of these bodies. However, in revising the performance management arrangements for the expenditure of the Science Budget, it plans, from the 2002 Spending Review onwards, to cascade objectives to these bodies more explicitly alongside the funding they receive.

APPENDIX 1a

THE GOVERNMENT'S RESPONSE: SUPPLEMENTARY MEMORANDUM

Introduction

1. In the Government response to this report in November 2002 we said that we would submit a supplementary memorandum to the Committee covering the recommendations on Copus and on public communication work: funding and strategy, once we had received the British Association (BA) report to OST on science in society. This paper forms the supplementary response.

British Association report

2. We have now received the BA report, have distributed it to members of the Committee and have published it on the OST website.

3. The BA Science in Society report recommends a cyclic process by which OST can obtain an overview of the wide range of science communication activities across the UK and assess whether they meet the interests and needs of the public.

4. The main recommendations in the BA report are that:

- a detailed and ongoing mapping of science in society activities should be undertaken, in parallel with a nationally representative survey of the public and specific research into public engagement, awareness and interests, to provide high quality, comprehensive up to date information to the OST and others;
- a range of activities should be evaluated to explore which are the most engaging, given that different types of activities will engage different groups of people;
- an annual conference should be organised for stakeholders to review, discuss and respond to the mapping and survey results, to share practice and to identify areas for co-operation and collaboration;
- a networking fund should be established to facilitate all year round networking for collaboration and co-operation between providers and funders; and,
- the OST should consult periodically on its objectives and workplan in the science in society area, commission work and offer calls for proposals based on the information gathered through the recommended process above, and evaluate the whole process to inform the next cycle of activity.

5. We are studying the report and its recommendations carefully and intend to consult on a detailed implementation plan early in the new year, to ensure that our planned activities to gain an overview of science communication in the UK are widely useful and achieve the support and co-operation of the science communication community. We would welcome feedback on the report from the Committee.

Public communication of science: response to the select committee's recommendations

6. **Recommendation:** A strategic body is badly needed in the field of public communication of science. Copus, if reformed as has been suggested by Lord Sainsbury, the Jamieson Report and the House of Lords Science and Technology Committee, would serve this purpose admirably. We call on the OST to make every effort to ensure that this happens (paragraph 62).

7. We believe that Copus should be made entirely independent of the Royal Society, the Royal Institution and the British Association, receive its funding directly from OST and that it should find new premises as soon as possible (paragraph 62).

8. Response: Copus's founders - The Royal Society, the Royal Institution and the British Association have decided recently to disband the Copus Council, having concluded that the top down approach which Copus exemplified is no longer appropriate to the wider agenda which the science communications community is now addressing. Our own soundings have not revealed much support for a strategic body to replace Copus, and indeed we have encountered strong opposition in some quarters to the top down co-ordination of public communication of science.

9. We believe that OST's role through providing both funding and leadership is to identify and promote good practice in science communication, to undertake periodic studies such as public attitude surveys that assist the science communication community to better understand their audiences and target their activities, and to assist the diverse science communication community to develop collaborations, networks and partnerships. We require those bodies and projects that we fund directly through our science in society programme to collaborate with others where relevant. We also look to the British Association, which has around 130 affiliate members representing much of the community, to continue to develop its leadership role in science communication in the UK.

10. Recommendation: We believe that the system of grants to Learned Societies for their public understanding work should be formalised, in order both to monitor better the total spending on public communication projects and to ensure that each society has an opportunity to benefit from these funds. We recommend that OST create a central fund for public understanding work administered by a single organisation, to which Learned Societies could bid for funding for specific projects (paragraph 63).

11. Response: The Government agrees that many Learned Societies carry out useful work in this area. While we do not propose to earmark specific funding for Learned Societies' public communication work, they are eligible to apply for funds through the Copus grant scheme, which continues to be run by the Royal Society.

12. Recommendation: We recommend that OST, or a body set up to co-ordinate public communication work, assess the work carried out by those to whom the Government gives funding, to identify the success stories and the outright failures, and to apply the lessons learned to future activities (paragraph 64).

13. Response: We agree with the Committee that there is a need for assessment, evaluation and dissemination of lessons learned. The BA report recommends a cyclic process for obtaining and sharing this information. We will be consulting on an implementation plan early in 2003.

APPENDIX 2

RESPONSE OF THE ROYAL ACADEMY OF ENGINEERING

We welcome the Report's support for many of our schemes and programmes. We also take careful note of its comments on areas of our activities that can be strengthened.

In addition to commenting on the principal recommendations directed towards the Academy, this response also touches on one or two matters raised in your report that are of interest to the Academy in its role as a member of the wider scientific and engineering community.

Finance

On financial matters, we were pleased to see the Committee's recommendation that the Government should maintain its funding for our activities. We also welcome the Committee's recognition of our success in raising private funds on top of our grant-in-aid at a rate of roughly £2 for every £1 of public funds that we receive.

The Committee calls on OST to adopt a more strategic approach to funding of the scientific Learned Societies, with a view to introducing a system that would invite bids for allocations from a central fund. Although the Academy is not seeking a change in the current funding structure, we would not see such a change as a threat. In fact, we would welcome the opportunity to bid for more funds. We do, however, have some additional cautionary comments which appear below under 'Advice to Government'.

Women

Although we were pleased to see the Committee's acknowledgement that the Academy does not discriminate against women in its procedures for electing Fellows, we share the Committee's justified concern about the disappointing number of women Fellows. The under-representation of women in engineering is a matter that we take very seriously indeed.

The Academy is working hard to tackle the root of the problem, principally by encouraging more women onto engineering courses at undergraduate level. Our best educational schemes are successful in promoting interest in engineering among female students at secondary school and undergraduate level. 27 per cent of participants are women. We will continue to expand these initiatives wherever possible.

We also recognise the importance of helping women who wish to return to academia following a career break. We already support two Daphne Jackson Fellowships as Senior Research Fellows and we could do more with greater resources.

You will be interested to know that the Academy has recently elected its two youngest ever Fellows both women.

Election of Fellows

As you will know, we agree with the Committee's view that our selection procedures for new Fellows must be seen to be fair and transparent. We will keep our procedures under review.

Ethnic monitoring

We have taken very careful note of the Committee's recommendation that we introduce ethnic monitoring of Fellows and that we also 'think strategically about programmes to increase ethnic minority participation in science'.

As the Committee will know, our primary objective is always to identify the most distinguished engineers. Although we are confident that we do so regardless of ethnic background, we acknowledge the importance of being seen to do so. As a consequence of your report, we are reviewing our procedures in this area and will seek advice.

Advice to Government

We were delighted to see the Committee's recommendation that Government departments should make greater use of the expertise at the Academy's disposal. As you will know, we are always looking for opportunities to work more closely with Government. The multi-disciplinary nature of the Academy puts us in a particularly strong position to assist Government departments. For example, the Academy is currently finalising a paper requested by the Minister for Energy that will provide an engineering appraisal of the PIU's energy review. This will feed directly into the drafting of the forthcoming Energy White Paper.

It is, perhaps, appropriate to add that in preparing our views on the PIU Energy Review we have done so without special funding but using the general resources for policy work provided by our Grant-in-Aid. This ensures our independence, constrained only by our own demanding peer review process, and allows us to publicise our advice more generally, without hindrance. Our limited experience of accepting specific Government contracts has, in contrast, been less satisfactory. Once a contract is established, the Academy becomes a 'contractor' in the eyes of a Department and relationships change. Independence can be a potential early casualty. If the Committee's recommendations in this area were to be taken up by Government, care would be needed to ensure that the principal virtue of a learned society, its independence of thought, is not lost in apparently attractive commercial relationships. In short, from the perspective of an Academy in receipt of general funds via Grant-in-Aid we share the Committee's conclusion that receipt of Government funds does not compromise the independence of those who benefit from it. However, project funding under contract would, we suggest, need to be handled under a carefully devised Code of Conduct.

Cost-efficiency

The Committee recommended that we should make greater efforts to demonstrate the cost-efficiency of our schemes. The Academy has always aimed to achieve maximum cost efficiency in the running of its affairs and has given full disclosure in the annual Management Plan of its cost structure, both in terms of the management of the programmes as well as administrative overheads.

The Academy will, of course, maintain tight control over its cost base and will endeavour to bring greater clarity to the reporting of: output performance indicators, programme running costs, and administrative overhead costs. The Academy would respond with alacrity to any specific requests from the Committee for information on any aspect of our programme.

The Academy considers its success in raising 'third-party' income (mentioned above under 'Finance') a key example of the cost-efficiency of its operations.

Research Fellowships

We were pleased that the Committee chose to single out our post-doctoral Research Fellowships as examples of best practice that could serve as models for the schemes run by the Research Councils. We certainly regard these schemes as an important part of our work. They offer a number of distinctive features such as mentoring by a Fellow of the Academy that make them attractive to the country's best young engineering talent.

The Academy was pleased to see in the Comprehensive Spending Review announcements that HM Treasury recognises the importance of raising salary levels for post-doctoral researchers. We will be taking account of these announcements for the purposes of our own schemes.

Selection for awards

We note that your report urges both this Academy and the Royal Society to consult academics other than their own Fellows during the peer review process, where there is insufficient expertise within our own ranks. We are always looking to ensure that our peer review processes are as authoritative as possible and we are giving this recommendation careful consideration.

Disciplines

We were pleased to see that the Committee noted our efforts to increase the number of Fellows in under-represented areas. Clearly, we have further progress to make, but we are confident that we are on the right track.

COPUS

The Committee recommended that COPUS be made independent of the Royal Society, the Royal Institution and the British Association, and should receive its funding direct from the OST. The Academy supports this recommendation in principle, although we do urge those involved not to act without very careful re-definition of the rationale for the successor body. COPUS has an important role to play, but has been unable to fulfil it in recent times. A fresh start is the best way forward.

The Select Committee inquiry

The Committee's inquiry has been a valuable process for the Academy. It has helped to raise our profile in Westminster and has given us a renewed incentive to review our own programmes and procedures to see where they can be strengthened.

The Academy was pleased to have the opportunity to brief the Committee when you and your colleagues visited our offices on 7th March and when we gave oral evidence on 8th May. We look forward to continuing to work closely with the Committee over coming months.

APPENDIX 3

RESPONSE OF THE ROYAL SOCIETY

We broadly welcome the Select Committee's report and particularly its overall conclusion that we achieve a great deal with the funding we receive from the Office of Science and Technology and other sources. We hope that the Government will note this endorsement of our work, and will look favourably on our bid for extra funds through the increase in the Science Budget outlined in the Spending Review. We have generally only responded to the recommendations directly addressed to us, or that have a bearing on our work, and these are quoted with our response. We have combined our responses to several recommendations where they cover the same subject.

We urge the Royal Society to investigate more streams of funding, using its prestige and grant-in-aid as leverage

We welcome the Select Committee's support for additional fundraising efforts. We launched a major fundraising campaign in 1996, "Project Science", with the aim of systematically raising additional funds from non-Governmental sources to fund our work. To date over £36.6m has been pledged from private companies, corporations, trusts, foundations and Fellows of the Royal Society.

The figures in the Report are somewhat misleading in the comparisons between the Royal Society and the Royal Academy of Engineering. The figures quoted for the Royal Academy of Engineering are total income whereas, in our case, only some of the income is included. Moreover, the Royal Academy figures include "third party income" i.e. income which does not pass through their accounts but through other organisations' accounts. The Royal Society figures do not include third party income. The comparable figures for the two organisations for 2001/02 are:

	PGA	Private	Total	Private as % of total
Royal Academy of Engineering	£4.27m	£2.71m	£6.98m	38%
Royal Society	£25.9m	£13.2m	£39.1m	34%

Thus, last year the Royal Society raised over £13 million from non-Governmental sources: a very substantial sum.

We do not think that receipt of Government funds compromises the independence of those societies which benefit from it

We very much welcome the conclusion from the Select Committee that they 'see no evidence of pro-Government bias' in our activities.

Funding: (recommendations 5, 6 and 7)

The Committee calls on OST to adopt a more strategic approach to funding for Learned Societies and to set up a new fund for bids. We believe the current spending review arrangements work well but would welcome an additional fund to which we could bid for special projects.

We suggest that the Research Councils should consider introducing into their Research Fellowships those features of the Royal Society and the Royal Academy of Engineering's awards which are seen as praiseworthy, such as extending their Fellowships beyond five years on a regular basis and being willing to fund more 'blue skies' thinking. It would also be of benefit if they were to develop a mentoring scheme to support Research Fellows

We welcome the strong support of the Select Committee for our Fellowship schemes, which reinforces that already given in the Roberts report in April. We would be pleased to see the Research Councils adopt some of the features of our schemes but they may not be in a position fully to do so. As the UK's national academy, the Royal Society has a diverse portfolio of activities, often privately funded. Participation by Research Fellows in activities such as science advice working groups, Science in Society public dialogue events and the development of educational resources provides them with valuable experience. In addition, since our remit encompasses the whole range of the natural sciences (including maths and computing), engineering and technology, we also fund the type of interdisciplinary research projects that may fall between the remits of the individual Research Councils. Our schemes, which concentrate on supporting excellent individuals (rather than projects) to pursue their science free from major administrative or teaching commitments, are particularly attractive to those pursuing blue skies research.

We have recently asked OST to increase our funding to allow us to support 40 new University Research Fellows (URFs) and 35 new Dorothy Hodgkins Fellowships. Given its strong support for our Fellowship schemes we trust that the Select Committee will support this bid for additional money.

We call upon the Royal Society and the Royal Academy of Engineering to consult academics other than their own Fellows during the peer review process, where there is not sufficient expertise within their own bodies

The Select Committee's comments about the Royal Society are based on a misconception. As is clear in our evidence we already do this. All our peer review activities and policy advisory committees draw upon the best scientists and engineers from across the entire spectrum of disciplines and do not only rely on Fellows of the Royal Society. For example, only one third of the members of our recent policy groups were Fellows. We also draw heavily on referees from outside Britain to ensure the work we are supporting is of international standard. We believe that the very high quality of the individuals who receive our research awards and the scientific papers that are published in our journals are testimony to the rigour of our peer review processes.

We urge the Royal Society, the Royal Academy of Engineering and the Research Councils to ensure that all their Research Fellowships and other awards contain 'family friendly' features

We welcome this recommendation and already try to do it. We have pioneered several new approaches and will keep our schemes under review to ensure they are family friendly. We will also continue to explore and promote programmes and policies that encourage female scientists and engineers, at every stage of their careers, to realise their full potential. The existing 'family-friendly' features of our awards include: avoiding age limits and focusing on years of research experience for eligibility for funding (i.e. not disadvantaging those applicants who have had a break in their career to raise a family); offering flexible working conditions to all our Research Fellows (maternity leave, part-time working, up to 2 years working abroad) and additional support for women, if required (e.g. a contribution to childcare costs during field trips away from home); allowing conference grant holders to claim for childcare costs during the conference. In addition, we are currently seeking

funding from OST for a new scheme to promote career mobility in science for people who have to relocate their research to accommodate career moves by their spouse/partner. This scheme is open to both men and women but expected particularly to benefit women, as they are more likely to be the 'following partner'. We believe the funding of this bid to be in line with the Select Committee's recommendation.

We recommend that all awarding bodies make an effort to publicise those aspects of their awards which may appeal to female researchers, in an attempt to increase the numbers of female applicants for all research awards. They should undertake a reassessment of selection procedures, in order to identify possible obstacles to the success of female applicants

We will continue to examine ways in which we can increase the numbers of female applicants for all our schemes. It is particularly gratifying that 26% of applicants for our University Research Fellowship schemes are from women. We introduced our Dorothy Hodgkin Fellowships to provide flexible funding and a mentor at the early stage of a researcher's career with the aim of keeping, particularly female, researchers in science. The calibre of applicants for this scheme is extremely high and success rates exceptionally low at 5%. We have recently asked OST to increase our funding progressively to allow us to support 35 new Dorothy Hodgkin Fellowships.

In addition, we will continue to monitor our selection procedures to ensure we are doing as much as we can to identify and overcome any obstacles to the success of female applicants. Referees and selection panels for our awards are specifically reminded of the importance of supporting outstanding scientists with non-traditional backgrounds. This includes women whose progress has been interrupted by career breaks (e.g. to bring up a family), relocation (as women are most often the 'following partner') or late starting. See also paragraph 19 below.

We urge the Royal Society to encourage applications for its University Research Fellowships from all institutions

We already do this.

The Royal Society must ensure that its research awards represent the whole scientific community, without undue weight in any one area

The primary criterion that we use in making our research awards is excellence and we do not operate strict quotas based on disciplines. As successive Research Assessment Exercises have illustrated, and as the Select Committee itself recognised in a recent report, excellence is not evenly distributed across all institutions and disciplines.

We would like to see more effort made by those awarding publicly-funded grants and awards to isolate administration costs in order to identify the cost efficiency of their schemes

We strive to ensure we conduct our work as cost efficiently as possible. Our administrative costs are separately identified in our accounts and in our bid to OST for public funds. We are particularly concerned to ensure value for money and are presently working on output and outcome measures for our work.

In our view, the Government funding of grant and award programmes managed by the Royal Society and the Royal Academy of Engineering should be maintained

This is a very positive statement and we very much welcome the Select Committee's support for the activities that we undertake with our public funding, particularly its support of our Fellowship schemes.

We are not clear why some of the British Association's Government funding is routed through the Royal Society. We recommend that, in the interests of clarity, the OST should give funding directly to the British Association

We have been a conduit for funding for the British Association for very many years. Nevertheless, we fully understand the Select Committee's wish for clarity and now that OST provides funds directly to the BA we are content that our grant is channelled directly. Equally, we remain comfortable with the current arrangement if that is OST's preference.

COPUS (recommendations 19-23)

COPUS, which is "owned" by three organisations, the British Association, Royal Institution and Royal Society, has done much good work in the past and its grants scheme continues to make a major contribution. All three organisations share the Select Committee's disappointment that the reforms put in place under its chairman, Dame Bridget Ogilvie, two years ago have not been successful. The Royal Society welcomes the study which has been commissioned by OST from the British Association in this area and we await the outcome. For the record, Dame Bridget did explore COPUS moving to South Kensington but her proposal was turned down by the Science Museum.

We believe that the Royal Society's confidence in its all-round expertise may be misplaced. We urge the Royal Society to consider carefully when producing policy and advice whether it really has adequate in-house expertise in all fields of scientific knowledge, and to consult other Learned Societies as a matter of course

This seems to be based on a misapprehension. The Select Committee will be reassured to hear that we do routinely use the expertise of non-Fellows in our science policy work. Of the working groups that prepared the last six major policy reports, two thirds of the members were drawn from outside the Fellowship. In addition, it is already our standard practice to issue an open call for evidence at the start of a major self-initiated study to ensure that we have access to the widest range of expertise both in the UK and, where appropriate, internationally. We are increasingly working with the larger Learned Societies and with bodies such as the Science Council to ensure that these calls for evidence are disseminated to the many Learned Societies and other scientific bodies that are affiliated to them. We would also like to take this opportunity to correct the misunderstanding that our report on genetically modified food took four years to produce. In the last 20 years, none of our projects has taken four years. Our most recent report on GM plants (examining concerns about their impact on human health) was completed in approximately eight months and took both written and oral evidence.

We acknowledge that the Royal Society's premises in Carlton House Terrace provide facilities for other Learned Societies. Given that these societies may not have prestigious offices of their own or large budgets, we hope that the Royal Society will provide these facilities at cost price to Learned Societies

We are naturally pleased that the Select Committee commends our important role of providing facilities for other Learned Societies. We already offer our facilities at a reduced cost to non-commercial bodies such as Learned Societies.

As the UK's 'academy of sciences', the Royal Society should have a prestigious site in the centre of London and we believe that Government funding is appropriate

We very much welcome the Select Committee's support for the original Government decision (Hansard written answers 28 November 1963) to pay the rent on our premises.

The Royal Society and Royal Academy of Engineering should ensure that their selection procedures are fair and transparent, so as to ensure good representation in their Fellowships and confidence that they are not an 'old boys' network'

We keep our procedures regularly under review. For example, over the past 12 months we made changes to the nomination and selection procedure, consulting more widely outside the Fellowship and simplifying the process itself. We have reduced the number of signatures required on a certificate of proposal from six Fellows to two because it was felt that the larger number of signatures might discriminate against women, or those in minority subjects or those in places with few existing Fellows. In addition, the President now writes to Vice-Chancellors and Heads of Research Councils to encourage them to put forward names, especially of women, and the Society undertakes to find a nominator and seconder. Furthermore, the Society has broadened eligibility to encourage nomination and election of scientists, technologists and engineers whose major contribution to their subject has been other than through original research, for example by association, leadership or furtherance of science in a senior managerial or administrative capacity, or through science communication.

We do not think that the present low level of female Fellows in the Royal Society and Royal Academy of Engineering represents any discrimination against women. We urge both bodies to extend their efforts to encourage women to continue with scientific research and engineering careers

We are very pleased indeed that the Select Committee has recognised that there is no evidence of discrimination in the election of women to the Fellowship. The Royal Society is not complacent about the challenges facing the whole of the science and engineering communities, and indeed most professions, to improve the representation of women at all levels. We will continue to promote programmes and policies that encourage female scientists and engineers, at every stage of their careers, to realise their full potential. Our activities include:

- avoiding age limits and focusing on years of research experience for eligibility for funding;
- encouraging more women to apply for research appointments and grants;
- offering flexible working conditions to all its Research Fellows and additional support in, for example, childcare costs during field trips away from home;
- allowing conference grant holders to claim for childcare costs;
- running a mentoring scheme for the Dorothy Hodgkin Fellows;
- providing individual career guidance to research appointees (also available to male research appointees) and opportunities to network with other people in SET;
- continuing to promote the implementation of the 1995 Concordat on contract research careers;
- working closely with other organisations such as WISE, AWiSE, WES, OST's SET for Women Unit, the Athena Project to promote the interests of women in SET;

- seeking funding for a new scheme to promote career mobility in science for people who have to relocate their research to accommodate career moves by their spouse/partner (open to men and women but expected to benefit women as they are more likely to be the 'following partner');
- seeking funding for an expansion of the Dorothy Hodgkin Fellowship scheme;
- drawing attention to women's achievements in science;
- broadening and simplifying the nominations process for election to the Fellowship to encourage more women candidates;
- wherever possible ensuring that women are represented in Royal Society activities;
- setting up means of keeping up-to-date records of women's participation in our activities and tracking progress;
- appointing a part-time senior member of staff in September 2000 to co-ordinate the Society's efforts in this area.

We will continue to review our existing schemes to see if they can be improved as well as investigating new activities.

Ethnicity (recommendations 33, 34 and 35)

The Royal Society Council considered most carefully the Committee's recommendations on ethnicity and science in Britain. As the Committee knows we already undertake comprehensive equal opportunities monitoring for all our Research Fellowship schemes and are in the process of extending this to other research support schemes. We have not monitored the ethnicity of Fellows of the Royal Society since election to the Fellowship is on the basis of scientific excellence. However, we recognise, as the Select Committee has said, that we lay ourselves open to criticism if we do not do so. The Council has, therefore, agreed to survey the Fellowship to collect this data. Moreover, we share the Select Committee's concern about ethnic minority participation in UK science and welcome their suggestion that we should think strategically about the issue. We have decided to undertake a review to establish the facts of the situation and, if possible, identify how the Royal Society could most usefully become involved. Work on these matters will begin shortly.

We commend the Royal Society's effort to encourage Fellowship nominations from under-represented institutions but urge it to guard against unquestioning complacency that the "Golden Triangle" really holds all the best academics in the UK

We welcome the Select Committee's approval of our efforts to encourage Fellowship nominations from under-represented institutions but strongly reject the unsubstantiated suggestion that we believe the "Golden Triangle" holds all the best academics in the UK.

We are glad to note that the Royal Society is making positive efforts to improve representation across its Fellowship. We believe however that more could be done in areas which have specific cause for concern. It would be a welcome signal of change if the Royal Society were to establish a committee specifically for computing science

We are pleased that the Select Committee recognises the efforts that we have made to ensure appropriate representation of the disciplines among the Fellowship. With respect to computing science, we have two sectional committees that consider nominations from fields that include the computer sciences. Both committees are chaired by Professors of Computer Science. We believe that these arrangements ensure equitable consideration of computer science candidates for the Fellowship.

We wrote to the British Computing Society at the beginning of July about their concerns and discussions continue. The interesting analysis provided by BCS is flawed; for a younger discipline like computer science it is the current rate of election of new Fellows that should be looked at in relation to its overall representation in the research assessment exercise not its representation within the whole Fellowship. This latter statistic is simply a reflection of what happened historically over 40 or more years.

Raising the profile of the scientific Learned Societies can only be a positive thing for the enthusiasm for, and knowledge of, science in the general public. Government should make every effort to assist

We very much support this recommendation. The Society's privately-funded Science in Society programme, which includes an MP pairing scheme, makes a major contribution to profile raising with the general public as does the COPUS grants scheme, the Society's programme of events for the general public and the major Summer Science Exhibition which the Society runs in July.

The Royal Society Council considered most carefully the Committee's recommendations on scientific and science in Britain. The Council is pleased to see that the Committee has identified a number of areas where the Society's activities could be improved. The Council has agreed to extend the period of the Fellowship since election to the Fellowship is on the basis of scientific excellence. However, we recognise that the Committee has said that we are currently open to criticism. It is not our intention to do so. The Council has decided to survey the Fellowship to collect this data. Moreover, we have the Secretary's concern about ethnic minority participation in UK science and welcome their suggestion that we should think strategically about the issue. We have decided to undertake a review to establish the facts of the situation and, if possible, identify how the Royal Society might best improve its situation. We will be in contact with the relevant bodies and the relevant government departments to discuss this situation and to ensure agreement to work with them to ensure that we can do this. We commend the Royal Society's effort to encourage Fellowship nominations from other recommended institutions but urge it to guard against nepotism. We agree that the Golden Triangle really holds all the best scientists in the UK. We welcome the Sector Committee's approval of our efforts to encourage Fellowship nominations from other recommended institutions but strongly reject the recommendation that we believe the Golden Triangle holds all the best scientists in the UK.

We are glad to note that the Royal Society is making positive efforts to improve representation across its Fellowship. We believe however that more could be done in areas which have specific cases for concern. It would be a welcome sign if the Royal Society were to establish a committee specifically for considering applications for Fellowship. We are pleased that the Sector Committee recognises the effort that we have made to ensure appropriate representation of the disciplines within the Fellowship. In respect of computing science, we have the national committee that oversees nominations from fields that include the computer science disciplines. We believe that these arrangements ensure appropriate representation of computing science in the Fellowship.

