

From: Sir George Porter, P.R.S.

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CBG



The Royal Society

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Our ref: PRS/CM

Dear Prime Minister,

When we spoke on 29 May I promised to provide a note on the Society's recent submission to the House of Lords proposing a National Science Advisory Council. I am sorry about the delay but I wanted to consult my colleagues on several points.

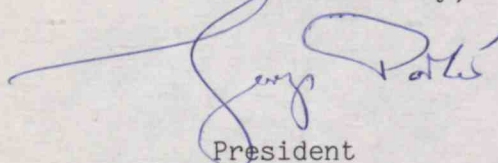
As a scientist yourself you appreciate the critical importance for our future of the UK's response to scientific advance, but this message has yet to be perceived by enough people in senior positions in Britain. Our proposal aims to generate well-informed debate and understanding between government, industry and the scientific and engineering community and hence to provide a focus of broadly-conceived advice to Ministers. I enclose a brief paper 'National Science Advisory Council' which outlines the proposal.

I also promised to write further about a possible means of discouraging the loss of some of our best scientists to other countries, particularly the USA. Although a number of factors contribute to this one cannot avoid the conclusion that the very high salaries which some other countries are prepared to pay for top brains and the virtual absence of differentials in the UK universities is a major incentive to emigration. My suggestion was that a merit award scheme for university scientists and technologists, somewhat similar to that already operated for consultants in the national health service, be introduced. I have in mind a relatively small number of university teachers and a merit award of up to 50% of salary for five years.

As you said, the total money involved is 'peanuts' and I was encouraged by your response. Such a scheme would of course be quite separate from general salary scale improvements at present being considered.

The follow up on the merit award scheme is something that we can pursue with the University Grants Committee and the Department of Education and Science. The follow up on the National Science Advisory Council would, of course, be a matter for Government, though I would of course be happy to discuss it with you further.

Yours sincerely,


President

The Rt Hon. Margaret Thatcher, M.P., F.R.S.
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NATIONAL SCIENCE ADVISORY COUNCIL

1. Science and technology are the major engine for change in the world today. New knowledge raises new social expectations and, conversely, may call into question existing public policies. New opportunities are created for improving standards of living and social welfare. Science is an expanding resource through which new markets can be identified and satisfied through the application of science and technology in engineering.
2. Successful nations in future will be those that best harness the power of that engine. The process is complex and the timeframe in which science and technology are translated into wealth is highly variable. A large number of decisions by diverse parties in industry, academia and government are involved. It is a necessary but not sufficient condition that individuals and organizations recognize and respond to the challenge; but governments too need to help create the pre-conditions and climate for the successful exploitation of scientific and technical advance.
3. Two things follow. First, that the people at large at all levels and in all capacities must be aware of the impact and importance of science and technology and have some understanding of its role in a modern society. This issue of the public understanding of science is one to which the Royal Society is applying increasing attention and resources, we believe in the national interest.
4. Second, to us it follows that a coherent national approach is needed in the exploitation of S & T and to its impact upon policies for industry, trade, environment, health, agriculture and defense; an approach comparable to that in determining public expenditure. Many of our competitors have recognized this. They have adopted a strategic approach which aims to achieve added value for the nation from individual and corporate effort by recognizing the different timeframes of the responsibilities, duties, incentives and constraints for individuals, corporations and the nation as a whole.
5. This is the background to our proposal to the House of Lords Select Committee on Science and Technology that in still further strengthening the consideration of these matters at the centre of Government, there would be substantial merit in creating a National Science Advisory Council. We have been supportive of the work of ACARD and welcomed the decision of your administration to implement an Annual Review of Government-funded R & D. As our Supplementary Evidence to their Lordships points out (copy at Annex) these could, with great advantage, be further built on.
6. First, the Prime Minister or a Senior Cabinet colleague without allegiance to one particular department chairing the Council would help put into proper perspective the dependence of the nation's prosperity upon its response to the advance of S & T. Second, the development of a relatively open forum for advice would elicit a wider spectrum of views than those present reaching Ministers on the areas likely to give the best return from private or public investment. Third, by taking a longer-term view than can either private companies or Government Departments, the Council would be a powerful tool in assisting Ministers to identify the essential requirements for successful national performance.

Finally, the Council should help foster the growing appreciation among industrialists and financiers of the significance of scientific and technological advance and should also help ensure that the UK science and engineering base has the capacity to respond to national demand.

7. We would see the Council composed of about twelve ad hominem members representing fundamental and applied science; industry, commerce and finance, and science education. The chief scientific adviser would attend as would Departmental ministers, as appropriate.
8. The proposal does not involve any immediate changes in existing advisory bodies and therefore the Council could easily be established for a trial period of, say, five years.

THE ROYAL SOCIETY

SUPPLEMENTARY EVIDENCE TO THE HOUSE OF LORDS SELECT COMMITTEE ON SCIENCE AND TECHNOLOGY

1. Since giving oral evidence to your Lordships on 26 March in connexion with your study on civil science and technology we have given further thought to a number of the issues raised. Most importantly, we have looked again at the case for a high-level advisory council.
2. There have, in the past 40 years, been a number of broadly-based science policy advisory bodies, notably the Advisory Council on Scientific Policy (ACSP) (1947-64) and the Central Advisory Council on Science and Technology (CACST) (1967-70). In your Lordships' own report in 1981 on Science and Government a Council on Science and Technology (CST) was proposed but the Government, in response, argued that greater individual strength and greater coordination of ABRC and ACARD met the needs identified as the basis for the CST. In our view this has not been the case. There is a need to develop, more comprehensively, a capacity for simultaneously bringing into focus both the scientific aspects of national policies and the implications for those policies of the nation's present and future scientific and technological capability and output. This is an altogether broader concept than ACARD and ABRC together embrace.
3. Science is all pervasive and we fully recognize the arguments for a sectoral system of Government support for science and technology. In this system it is the responsibility of each Department to consider the relevance of scientific developments to its own activities and the need for the Department to support research to underpin its own policies or the welfare of the bodies for which it has a sponsoring role, and to play proxy customer in the arrangements recommended in the report by Lord Rothschild (1971) and established by the Government of the day (Framework for Government R&D (Cmnd 5046), 1972).
4. Executive responsibility for the use, or support, of science and technology is not the same as responsibility for advice. Moreover, individual Departments are not and cannot be responsible (i) for reviewing the Government's overall effort; (ii) for monitoring value for money of the national portfolio of R&D; (iii) for identifying opportunities and needs outside their current areas of responsibility; (iv) for maintaining the national capacity in adequately qualified scientists, technologists or engineers, in facilities, in the necessary range of skills and expertise and in inter-sectoral scientific links; (v) for considering the structural organization of research, or (vi) for assessing the inter-relationship of international and national scientific endeavour.
5. Yet, without a source of advice on these and other common aspects of a nation's science and technology capability, Ministers cannot reasonably feel assured that the UK is gaining the best national return from its science and technology investment, that the demands from present and future customers for research will be met without recourse to the expensive import of know-how, that Government policies will be able to remain soundly-based scientifically, and that social, environmental, health and welfare matters of concern to the electorate will continue to receive adequate scientific and technological attention, or that the UK is making the most of the scientific and technological endeavours of other countries.

Science + Tech
MTG with G Pollock
5/16

6. We conclude, from the above, that there is a strong case for the Government to establish a National Science Advisory Council (NSAC). Its terms of reference would be:

- to review national expenditure on civil science and technology and to assess the efficiency and effectiveness of the use of the nation's scientific and technological resources, not least in comparison with other countries;
- to identify new opportunities and demands created by advances in science and technology and to advise on the implications for Government policies;
- to monitor the quality, scale and organization of the nation's scientific and technological resources (manpower and facilities) with particular reference to current and predicted demand upon them and implications for the educational system;
- to advise on Britain's role in international scientific and technological collaboration and the implications for national research expenditure and organization;
- to report to Cabinet;
- to make its findings public, where appropriate.

7. For this Council to be effective it would need to be chaired by a senior non-Departmental Minister, preferably by the Prime Minister. Members of the Committee, perhaps a dozen in number, would be appointed, ad hominem, one of whom would serve as Deputy Chairman. Following the general pattern adopted for ACARD, members would be drawn from research, industry, education and finance. They would need to recognize that this would be a substantial part-time commitment. The Council would have the support of the Chief Scientific Adviser's staff in Cabinet Office and would need to have access to Government papers. It would communicate with Ministers and officials through the normal channels of that Office. In this way, and through publications, it would generate that much broader, well-informed debate on science and technology policy that has hitherto eluded the UK and reduced its competitive thrust.