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10 DOWNING STREET

From the Private Secretary

16 April 1981

ACARD PAPER ON PROBLEMS OF
INVENTORS

BPP
Before we go ahead with arrangements to publish the revised version of this report, I should be grateful if you could remind me where we stand on the question of a draft reply to the recommendations. I wrote to you about this when we received the initial version of the paper on 22 December last.

M. A. PATTISON

Mrs. Cecily Morgan,
Department of Industry.

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cc Press 2/20/81

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MR PATTISON

RESPONSES TO ACARD REPORTS

You will wish to be aware of the attached replies of the Chairman of ACARD to the Government's responses to three ACARD reports:

'Technological Change', 'Computer Aided Design and Manufacture' and 'Biotechnology'. Of the three, the reply on 'Biotechnology' is the most vigorous and reflects a fairly general unhappiness in industry and the universities with the White Paper. The other two replies are more modest in tone.

*29/4/81 —
Science
& Technology
Jan 80*

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R H ARAM

Cabinet Office
6 May 1981

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c.c. R. Courtney. ✓

ADVISORY COUNCIL FOR APPLIED RESEARCH AND DEVELOPMENT

70 Whitehall, London SW1A 2AS Telephone: 01-233

29 April, 1981.

Dear Sir Keith

Response to ACARD Report: "Technological Change:
Threats and Opportunities for the U.K."

You wrote to me on the 12 February with the Government's response to this ACARD report. The Council considered the response at its meeting on 12 March and invited me to reflect its views in a letter to you.

Both the response and your covering letter indicated a preference for ACARD to examine closely focussed, clearly defined topics. The Council noted this and agreed that most of its reports should concern such topics. It did not consider, however, that broader topics could or should be excluded. One function of ACARD is to comment on the implications of technological development for government policies and this necessarily involves the Council in some consideration of broad issues. I might perhaps add that the sales of this particular report have been considerably larger than those of some of our specialised reports, indicating substantial public interest in the general subject of technological change and its implications. I believe that the Council should continue to promote increased public awareness of such issues, and hope that you will support this.

The Government response suggested that ACARD had called for a major expansion of Government involvement in industry. The Council considered this to be a misunderstanding of the report's main theme. Our position was aptly summed up by the Prime Minister in a Parliamentary answer to Mr. Ian Mills on 14 January when she referred to Government developing with industry a framework in which industry can take R and D (and other) decisions. Recent NEDO reports have identified industries with growth potential and others where decline seems inevitable. The CBI have recently published a report that suggests comparable priorities. Such studies could facilitate the creation by Government and industry of a coherent basis for the development of technological strategies. The Council would look upon this as constructive and helpful intervention and would welcome further development of it.

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29 April, 1981.

The response rightly pointed out the crucial part played by adequate profit in enabling industry to cope with technological change. It did not, however, refer to the long-lead times usually needed to establish significant change. Without appropriate investment now, industry will not be ready to take advantage of the opportunities opened up when the world economic climate improves. ACARD therefore welcomes the extra assistance for industry to which the response referred and urges that this should be given priority in the Government's spending programme since future industrial success will be founded on developments now taking place in new technologies. ACARD reports "Biotechnology" and "Information Technology" have discussed such opportunities in more detail. In this connection, the Council noted with some concern the apparent weakening of industrial support for Research Associations as a consequence of the recession.

I might add that long-lead times are a feature of higher education also, and that at the ACARD meeting considerable concern was expressed at the Government's slow response to the Finniston Report, and its policies on overseas students' fees, both of which are adversely affecting the ability of universities and other institutions of higher education to produce the skilled scientists and engineers required in the future.

It was, of course, never the intention of ACARD to suggest that service industries should deliberately take on more staff and thereby become uncompetitive. But we believe that employment growth in the future will be concentrated in the service sector: therefore, special attention needs to be paid to the development of that sector. The Council was pleased to note the support given to the development of the computer service industry. We hope that similar support will be available in other service activities, so that Government support schemes do not concentrate exclusively or excessively on manufacturing, critically important as that obviously is.

Finally, the Council was disappointed that the Government did not give adequate consideration to the proposal for tax incentives to encourage large firms to make available to small firms inventions that they themselves cannot use. With its limited resources, ACARD is not equipped to examine the detailed working-out of such an idea and it does seem an inadequate response on the part of Government for the proposal to be dismissed because no practical suggestions for its implementation were included in the Report. There is, I feel a parallel between this and the ACARD suggestion

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in "Industrial Innovation" for a loan guarantee system for small firms which, despite administrative difficulties, has now been implemented by the Government.

Kind regards,

Yours sincerely
A. Spinks

Dr. A. Spinks.

The Rt. Hon. Sir Keith Joseph, MP.,
Department of Industry,
Ashdown House,
123 Victoria Street,
London, SW1E 6RB.



ADVISORY COUNCIL FOR APPLIED RESEARCH AND DEVELOPMENT

70 Whitehall, London SW1A 2AS Telephone: 01-233

16 April, 1981.

Dear Sir Keith,

On 29 January you kindly sent me a departmental response to the Advisory Council's Report on Computer Aided Design and Manufacture. The paper has been considered by members of the Council's original Working Group and discussed at the March meeting of ACARD.

The Working Group and the Council were pleased to note the number of their recommendations that have been accepted by Government. It is regrettable that a different impression was given by several press reports that focussed on recommendations that were not accepted.

We do not think that continuing dialogue at this time between the Department of Industry and the Council is necessary or likely to be productive. ACARD would prefer to return to the topic in about a year's time to review progress in the context of its recommendations and the Government's response. Therefore, we do not expect a further response to the detailed points set out in the rest of this letter, but they may interest Departments concerned.

- 1) Our Working Group was unable to obtain much information on Government activities during its studies. ACARD therefore believes that, in the light of the comment that Government is itself a user of CAD/CAM, Departments should do more, subject only to the limits of security, to make their activities and their successes with CAD/CAM known to appropriate parts of British Industry.
- 2) ACARD had not expected that, at this time of financial stringency, there could be a physical move of the CAD Centre and the National Engineering Laboratory to one location. It has been glad to learn that a single Director of the two organisations has been appointed. The Government response leaves the Council with the impression, however, that this Director could promote more coordination of the two establishments' activities, for example, dissemination of information, and training.



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- 3) ACARD welcomes information being made available through the Scientific Counsellors in Embassies on activities in other countries. It was particularly pleased to learn of the excellent flow of information on electronics coming back from the Scientific Counsellor in Tokyo who was appointed about a year ago. Earlier, I had been, personally, impressed by discussions at our scientific offices in Tokyo and Washington.
- 4) Some parts of the Government response are centred on the activity of the Mechanical Engineering and Machine Tools Requirements Board and the Computer Aided Engineering Panel of the Department of Industry. Members of ACARD are concerned that interest in computer aided design and computer aided manufacture extends outside the interests of this Board. The electronics industry for example is an extensive user of these techniques and also has a role to play in the supply of CAD/CAM equipment and software.
- 5) The Council has noted that the Department of Industry believes that the encouragement of the use of CAD/CAM equipment through leasing is a matter entirely for the commercial suppliers of equipment and that there are no plans to provide financial support for this purpose.
- It was reported in *The Times* on 11 February that the Government has decided to assist the introduction of more robots in industry by paying 25% of the cost of new processes that adopt robots as prime constituents. We believe that it is also possible under the Product and Process Development Scheme for prototypes of new equipment, such as that for CAD/CAM, produced by British manufacturers to be placed on trial with British users. The introduction of CAD/CAM into industry is, we believe, as urgent and important as the introduction of robots and the Council therefore assumes that financial support under such schemes could be made available for CAD/CAM.
- 6) The Council thinks that there may have been a misunderstanding about Recommendation 8, on which in any case a response is awaited from the National Economic Development Council. ACARD did not have in mind that British manufacturers should at this time attempt to compete with the American manufacturers



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of large turnkey systems, but believed that the need for smaller cheaper systems, for use in small companies and in education, could provide an opportunity for a British company.

Comments in the response on software development in universities and public sector research establishments are not, we believe, relevant to this proposal. The comment that as many as thirty projects are being supported by NRDC and that a further twenty-five projects are under assessment suggests that there may be proliferations to the point where individual projects are hardly substantial or perhaps worthwhile. The response to Recommendation 11, that there are at least forty organisations currently offering 'various CAD services', raises the same question.

Dr. Duncan Davies was present at the meeting of ACARD at which all these points were discussed and we are sure that the Department of Industry will give them further consideration. As I suggested at the beginning of this letter, an immediate response would not really be profitable. I propose that ACARD should consider, in a year or so's time, whether it should review progress on this topic.

Dr. A. Spinks.

The Rt. Hon. Sir Keith Joseph, MP.,
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