

Govt.

Machery



10 DOWNING STREET

Note

I have asked Richard Riley

- (a) why this response is a year late?
- (b) what do I think will be achieved by publishing it now?
- (c) why is it written in such terrible language?

He will let us have a response, and possibly a redraft, next week.

LM

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Secretary of State for Industry

4 March 1982

Michael Scholar Esq
Private Secretary to the
Prime Minister
10 Downing Street
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Dear Michael

ACARD REPORT ON EXPLOITING INVENTION

You will recall that the Prime Minister asked that my Secretary of State should prepare, in consultation with other Departments, a reply to the Report which she had commissioned from ACARD.

2 I now enclose a draft which has been approved by my Secretary of State and his colleagues in other interested Departments. Most of ACARD's recommendations were directed at the Government and we have, wherever possible, provided a positive reaction.

3 You will recollect that the Prime Minister decided that the ACARD Report itself should be published. It was made available in typescript form from the ACARD Secretariat, its availability being announced through an arranged PQ and a press release from No 10. It seems appropriate to us that publication of the response should be arranged in a similar way.

Yours ever

Richard

RICHARD RILEY
Private Secretary

GOVERNMENT RESPONSE TO ACARD REPORT ON EXPLOITING INVENTION

1. The Government welcome this Report and ACARD's broadening of their remit to take account of the problems of existing and new small firms as well as those of the independent inventor.
2. This country has a long tradition of generating ideas in academic and research institutions, and has always had many individual inventors. Equally important however, as ACARD recognise in their report, is the exploitation of ideas and the availability of entrepreneurs, whether operating on their own or within larger businesses, who have the knowledge of the market place needed to select the promising ideas and the managerial ability to transform them into products which can be sold profitably. Whilst our success as a country in this endeavour will depend ultimately on private initiatives of this kind, the Government has a part to play at a number of points in the invention and exploitation process.
3. The Government has a role to help create the educational, economic and social climate in which this process can take place. The recommendations which relate to the educational systems are all being pursued. The Government recognise the need for a financial and fiscal climate favourable to innovation and a number of steps have already been taken.
4. The Government accept that it has a responsibility for encouraging the application of technology in industry as well as providing some support for research and development. The Government also assist the exploitation of this research and development effort through the National Research Development Corporation (NRDC). The Government's decision that the National Enterprise Board (NEB) and the NRDC should work together as the British Technology Group (BTG) whilst retaining for the time being their separate statutory identities, is intended

to strengthen this exploitation process and to facilitate, in partnership with private money, the introduction of new products and processes into British industry, whether the ideas originate in publicly financed research in universities or research councils or privately financed work undertaken by firms or individuals. A number of the recommendations which relate to the NRDC are being considered in the light of the BTG's emerging policy.

5. The Government agree that changes in society's attitude to business are necessary in creating an environment that favours entrepreneurial activity. It is encouraged therefore by the evidence of higher education's increasingly positive contribution to the emergence and exploitation of new ideas. Through its basic functions of teaching and research, higher education provides the economy with a supply of well-educated manpower, new knowledge and improved understanding. The universities and polytechnics, however, also have a direct short and medium-term contribution to make. This they do in a variety of ways providing, often through industrial liaison units, advice, consultancy and commissioned research and development of Science Parks (which bring industrial concerns onto the campus) and the Government welcome the fact that more universities and polytechnics are now investigating the possibility of setting them up.

6. In addition, the Research Councils have provided national coordinators to bring companies and academic departments together in priority fields such as robotics, energy, polymer engineering, marine technology, bio-medical materials, distributed computer systems and production engineering. In most cases the coordinator is an experienced industrialist and in certain cases a consortium of companies contribute to a coordinator's salary. The Science

and Engineering Research Council (SERC) is also experimenting with Regional Brokers whose function is to introduce local industry, and especially small firms, to the help available to them in educational institutions. SERC's Cooperative Grants Scheme encourages industrial involvement in research at an early stage by allowing any company that contributes half the resources of a research programme to receive the exploitation rights, with NRDC receiving a small levy on subsequent sales.

7. Other initiatives for bringing together academic and industrial teams in joint activities include CASE (Cooperative Awards in Science and Engineering) and the Teaching Company Scheme. In CASE there is joint supervision of research of direct interest to participating firms, with some 2000 current projects. In the Teaching Company scheme, organised and funded by SERC and the Department of Industry, firms' problems are tackled jointly. There are 46 industrial/academic partnerships in being with others in the pipeline.

8. Notwithstanding these achievements, the Government are not complacent. More importantly, neither are the universities and polytechnics which will continue to extend and improve their contacts and their cooperative efforts with firms. The Department of Education and Science has already initiated discussions with representatives of the universities, polytechnics and research councils and has undertaken to act as the focal point in publicising good practice and identifying and overcoming any obstacles to closer and more effective relations between higher education and business.

Recommendation The UGC should examine the conditions that affect the exploitation of ideas, and the establishment of businesses, by university staff and seek appropriate changes (para 6).

9. The ACARD report does not adduce any concrete evidence for the contention that certain conditions inhibit the staff of higher education institutions from exploiting ideas and establishing businesses. While there may be instances where the "practices, if not the statutes, of some universities are unnecessarily restrictive in specifying the duties of university staff" (Report paragraph 6), it is worth noting that the university industrial liaison units report no case where insuperable difficulties have arisen.

10. The conditions of service of academic staff are determined by individual universities and, for polytechnics, by the employing local authority. The arrangements for the exploitation of ideas and the establishment of businesses varies from institution to institution, although legislation such as the Patents Act 1977 (which entitles employees to a fair share of the benefit their employers derive from inventions patented under the Act) applies to all.

Detailed guidance to universities was last provided in 1976 when the Committee of Vice Chancellors and Principals (CVCP) published the Report of a Working Party on Patents and the Commercial Exploitation of Research Results, and no difficulties have come to light in the operation of this guidance. The CVCP are, however, taking a continuing interest in university-industry collaboration and have compiled details of projects which illustrate universities contribution to industrial innovation and development. This information has been published in a pamphlet entitled "Universities and Industry".

Recommendation The Department of Education and Science should examine the links between business schools and university science and engineering departments (para 7).

11. This recommendation will be pursued in the context of the joint effort the Department of Education and Science has agreed to undertake in collaboration with the higher education institutions (paragraph 8 above).

12. Nonetheless, the terms of the recommendation merit comment. First management and business education is not confined to the two business schools at London and Manchester. Indeed about two thirds of such provision is made outside the universities, centering upon the 12 Regional Management Centres (RMCs) which are based on polytechnics. The RMCs are variously organised but frequently comprise a network of colleges involved in management education, centred on one or more polytechnics and in some cases also having links with a local university business school. Management and business education at all levels is thus pursued alongside science, engineering and other technical education. Nor is there evidence of "inadequate contact between the technical and financial/management sides" of universities. Indeed the industrial liaison units (see paragraph 5 above) were designed to facilitate just this sort of technical and managerial cross-fertilisation.

Recommendation In the current review of engineering education following the Finniston report, attention [should] be given to the introduction of appropriate elements of business administration in engineering courses (para 5).

13. There are already about 50 courses at universities which combine a business or management subject with an engineering subject. In 1978 the UGC encouraged developments of the kind now proposed by ACARD by providing funds to eight universities for experimental four-year courses aimed at giving undergraduates a better understanding of the business environment. Similar courses have been

developed at two polytechnics while the post-graduate Total Technology courses, supported by the SERC, have been in operation for some years.

14. Finniston recommended that under-graduate courses for engineers should aim primarily at producing first-class engineers with a good knowledge of engineering practice and that subjects such as business administration should be taught at a later stage. The education and training recommendations in the Finniston Report and related issues were debated at a two-day national conference sponsored by DES in October 1980. A report on the conference by an independent committee appointed by the Secretary of State for Education and Science was published in March 1981.

15. The future pattern and content of engineering degree courses will be greatly influenced by recent discussions and by the new Engineering Council. The Council will have the power to accredit engineering degree courses for the purpose of admission of individuals to a register. It will no doubt take into account the themes of recent debates, but it will be independent of Government and free to develop its own views.

Recommendation Government should consider the contrast between the State's role in protecting physical property and its role in protecting intellectual property (para 8).

16. The Government accept that intellectual property is of increasing importance in business life but it is not convinced that there would be overall national advantage in moving, in matters relating to patent infringement, from civil to criminal procedure. Protection by patenting is of long standing and has evolved with time, increasingly being based on internationally agreed principles.

17. It is a longstanding rule that legal aid is not available to groups or corporations. Even the Royal Commission on Legal Services, which recommended some relaxation in the existing rule, specifically excluded from its recommendation groups carrying on a trade or business or operating for profit. Special arrangements for litigation concerning intellectual property do not seem appropriate.

NATIONAL RESEARCH DEVELOPMENT CORPORATION

18. The Corporation's remit is to secure, in the public interest, the development and exploitation of inventions. It can support inventions, whether or not they are patentable, from any source in the public or private sector, and it handles inventions relating to entirely new products or processes and also significant evolutionary improvements. The association of the Corporation with the National Enterprise Board under the title of the British Technology Group will strengthen the Corporation's entrepreneurial approach.

19. Since 1950 NRDC has had rights of first refusal to many inventions arising from Government R&D establishments and work funded by the Research Councils. This recognises that, to secure commercial exploitation, it is often necessary to obtain patent protection and, in many cases, to make financial support available for development or for work aimed at extending or improving the patent protection. In practice NRDC has accepted only about one-quarter of the public-sector inventions offered to it and the remainder could be exploited by some other route.

20. NRDC is subject to the financial discipline of breaking even, taking one year with another. Largely because of one invention which was exploited with outstanding success, the Corporation has been able to conform with this requirement. Nevertheless, the

Corporation's experience, as with similar bodies overseas, is that inventions of major commercial value emerge from academic research only very occasionally and generate substantial income only as a result of many years of further research and development. NRDC is currently self-financing.

Recommendation (i) The NRDC should be assured access to Exchequer funds up to its present £50 million borrowing limit (ii) its monopoly right to inventions originating in certain Government research establishments or financed from the Science Vote should cease (para 15).

21. In recent years NRDC's rights to public sector inventions have been modified in favour of alternative arrangements. For example, with Science and Engineering Research Council Cooperative Grants, industrial property rights arising from the research go directly, in the first instance, to the industrial partner in the collaborative project who then pays a modest royalty NRDC should he make commercial use of the rights. The Government will be considering both these recommendations in the light of BTG's emerging policy.

Recommendation NRDC [should] consider giving financial support to the inventor to meet, at least in part, patenting and licensing costs, but without providing any staff support for these activities (para 19).

22. The Corporation has been reconsidering its policy on this issue and is willing to provide such support in appropriate cases.

Recommendation NRDC [should] reserve funds specifically for the support of inventors and place these under the

control of the official responsible for dealing with private inventors (para 22).

23. NRDC has not so far made such allocations either for private or academic inventors, but executive staff responsible for private inventors now have delegated financial authorities similar to those for staff responsible for public sector inventions.

Recommendation NRDC should do more to educate inventors in the realistic appraisal of their projects and should in particular consider amending their initial document for inventors.

24. The main educational need for many inventors is a better understanding of commerce and industry. Few such courses for innovators have yet been provided, but the Government is examining how the needs should best be met.

25. NRDC is revising its booklet "Help for the Inventor" which normally accompanies the application form (attached to the ACARD report) and the new version will draw special attention to commercial factors.

FINANCE

26. There has recently been some improvement in the availability of risks funds for the exploitation of inventions and innovations. This is partly the result of improvement in the quality of the presentations to the financial institutions by those seeking finance. The financial institutions have also taken steps to improve their technical appraisals of projects and their implications for the market. Steps taken by the Government include the Business Start-up Scheme and the Loan Guarantee Scheme for small businesses.

Recommendation The capital taxation rules applying to founders of companies should be as generous as those applying to agriculture (para 24).

27. The Government remain committed to reducing the impact of capital taxation and a useful start was made in the 1980 Finance Act. The 1981 Finance Act contains further measures aimed specifically at encouraging lifetime transfers. Further progress will, of course, depend on the economic climate. But so far as this particular recommendation is concerned it should be borne in mind that since 1977 transfers of a controlling interest in a business have qualified for the same 50 per cent reduction in value as transfers of owner-occupied agricultural land.

Recommendation The Government should consider the introduction of a personal tax relief in respect of investment in small firms (para 25).

28. The Chancellor announced such a relief in his 1981 Budget Statement (the Business Start-up Scheme). The details are contained in the Finance Act 1981, Part IV, Chapter III.

Recommendation Small companies should, like individuals, be able to offset capital losses against income. And we would restate two recommendations made in "Industrial Innovation" (page 8):

- (i) that tax arrangements which made it attractive to large companies to assist or spawn small businesses might be developed; and in this connection note that a recent report by the Business Graduates Association concludes that United Kingdom Tax laws actively discourage this.

- (ii) that the idea of a multiple public sector loan facility, based on the amount of private sector investment in small businesses, should be considered. (Para 26)

29. These suggestions will be borne in mind but the Government believe that the provision of loans to small businesses must be primarily a matter for the private sector. The Government are nevertheless anxious to see an improved flow of private sector funds to small business owners and entrepreneurs wishing to establish their own ventures. Some progress has already been made to encourage private individuals to invest in small businesses through the Business Start-up Scheme (see paragraph 28 above) and the Venture Capital Scheme. This latter scheme (introduced in 1980 for individual investors) was extended in 1981 to investment companies. The Chancellor also announced that the Government have reached agreement with the banks for the introduction of a Government-backed loan guarantee scheme for small businesses. This has been operative from June 1981.

30. These and the other measures already introduced by the Government to help small firms have been publicised under the Business Opportunities Programme. One aim of the programme, launched on 6 May 1981, is to ensure that individual entrepreneurs as well as the owners of small businesses are aware of how they can benefit from these measures to take full advantage of business opportunities.

PREMISES AND EQUIPMENT

31. It is the Government's policy to encourage the start-up and growth of small businesses and as part of this policy steps have already been taken to stimulate small factory building. The first-year industrial building allowance for new premises of up to 2500 sq.ft. was increased from 50 to 100 per cent in April 1980. Agencies

such as the English Industrial Estates Corporation (EIEC), the Welsh Development Agency (WDA) and the Scottish Development Agency (SDA) develop industrial estates in the assisted areas with Government and private money.

32. The small workshops allowance and other industrial building allowances apply throughout the United Kingdom and investment in small premises can be particularly profitable. Direct subsidy for small premises is normally undesirable as it would tend to distort the market and prevent investment by the private sector. So as not to discourage other developers in the area and to persuade the financial institutions to participate there must be an expectation of a reasonable return. A tenant is therefore usually required to agree to a long lease with a right to assign to another business if the venture is unsuccessful or there is a need to move to larger premises.

33. However, the English Industrial Estates Corporation realise that a long lease could cause problems for a business just starting up and have recently been offering very easy terms on their small factories as suggested in the ACARD report. So long as the tenant is prepared to pay an economic rent the terms of the rental agreement are negotiable and may be as short as three months. It is hoped that this practice will extend to estates in the private sector if the EIEC experiment is successful.

Recommendation Finance companies might also receive it [development finance] for providing equipment for lease (para 28).

34. Regional Development Grants are already available to finance companies providing equipment under lease for use in Special Development Areas and Development Areas when other criteria of the grant scheme are met.

Recommendation Government should actively encourage such links [between inventors and local authorities and educational establishments] (para 29).

35. The Government agree that closer links with small firms and individual inventors should be encouraged particularly for turning ideas into prototypes through use of the facilities in colleges of further education. Many colleges are receptive to such approaches and some already make their facilities available. It is the responsibility of each local authority to decide what arrangements are appropriate for its area, for example, Sunderland Local Education Authority have received funds under the Urban Programme to develop facilities in the local college for local enterprises to try out their ideas, and a growing number of local authorities are joining with universities to establish Science Parks.

36. However, colleges which wish to exploit their facilities and expertise for gain must operate within the legal framework of the Local Authorities (Goods and Services) Act 1970 and the Local Government Act 1972.

GENERAL COMMENT

37 The ACARD report has provided a useful stimulus to Government and to a range of other organisations whose long-term interests can be served by reconsideration of the role of the inventor in the creation of wealth, and by review of the adequacy of the existing mechanisms. Since the report was first drafted there have been contributions to the debate from entrepreneurs, bankers, academics and individual inventors.

38. It has been suggested that academic staff have little incentive to exploit the results of their ideas commercially or to make special efforts to avail commercial innovators of their expertise, since their promotion depends mostly on the traditional pattern of research

followed by open publication. Equally, it has been suggested that industrial and commercial staff are not sufficiently aware of and do not make sufficient efforts to exploit academic expertise. It was proposed that a national award scheme, which would recognise successful entrepreneurial initiative involving close and active partnerships of higher education institutions with industry and commerce, could help to remedy these deficiencies. The Government supports this view and has established through the Department of Industry a scheme, to be known as the EPIC Award (Education in Partnership with Industry or Commerce), with cash grants in some cases to assist the development of the partnership. The aim will be to reward and encourage successful examples of cooperation between universities, polytechnics or colleges of higher education and industrial or commercial companies which contribute towards improving the competitive performance of UK industry and commerce, and which can also serve to encourage others. It is intended that the Award should create recognition for such activities as comparable with that given in higher education to published academic work. The scheme will be organised and funded by the Department of Industry in consultation with other Departments. In addition, the British Technology Group has recently announced its Academic Enterprise Competition which offers cash awards to academics who have set up or intend to set up businesses to exploit the results of their research.

39. It has also been suggested that individual inventors and small businesses need further advice on how to make contact with the most appropriate sources of assistance. The Department of Industry will examine the suggestions made in para 13 of the ACARD report for improving links between inventors and entrepreneurs. There is already a multiplicity of channels, including the trade and technical

press, NRDC and private-sector financial institutions, and professional licence brokers. Informal personal contact is often of great importance, as are local and regional organisations.

40. There are many services in the private and public sectors for supporting innovation, the principal institutions being referred to by ACARD in para 16 of their report. Most provide help for inventors and small businesses as part of their broader function. It therefore seems appropriate that each should continue to promote its services individually rather than through a single point. The Government accepts, however, that individuals and small companies can be helped by access to a local source of advice. The Government's Small Firms Services already provides sign-posting services and can, in particular, steer enquiries towards the most appropriate support mechanisms in the public or private sector. In addition, an in-depth counselling service provides many of the features identified by ACARD as being necessary in getting an inventor with a viable proposition on the road to successful exploitation. The Government therefore consider that no additional service is necessary, but the Department of Industry will ensure that the Small Firms Service is fully attuned to giving the right advice to inventors and that this function is publicized.

41. The face-to-face guidance provided by the Small Firms Centres is usefully complemented by published guides, such as those in the Department of Industry's Small Firms series, Money for Business prepared by the Bank of England and the City Communications Centre (1) Official Sources of Finance and Aid for Industry in the UK, published by the National Westminster Bank Ltd., and Sources of Finance for the Smaller Company, published by the Institute of Directors. Further information is provided in the booklets and leaflets published under

(1) Available from the Bulletins Group, Economics Division, Bank of England.

the Business Opportunities Programme referred to in paragraph 30 above. It therefore seems unnecessary for the Government to take steps to sponsor the publication of a comprehensive guide which ACARD recommend in para 17 of their report.

42. This country has an enviable record of scientific achievement and invention but this had not been adequately matched by application to create wealth through competitiveness in world markets. Attitudes which lead some (but not all) UK business sectors to be less effective in long-term international business than as innovators must be changed. The twentieth century British innovator must be as accepted, honoured and rewarded as his forebears were in the first half of the nineteenth century. But of course the technologies, market needs and institutional mechanisms have moved on. The Government will welcome further ideas for additional changes which may now be needed in those areas which they can influence.

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