

INFORMATION

RESEARCH POLICY

Address delivered to the Parliamentary and Scientific Committee in
London on 19 October 1976 by Dr. Guido Brunner

140/76

The speech following below was made to the Parliamentary and Scientific Committee by Dr. Guido Brunner, member of the Commission of the European Communities and in charge of the sector "Research and technological Development" on 19 October 1976.

Taking into account the important socio-economical influence which technological research exerts on the Community's internal development we thought we should let you have Mr. Brunner's statement.

Ladies and Gentlemen,

First of all let me say how delighted I was to receive your invitation to speak to you today. I am aware of the great impact your deliberations have on science policy in this country. I hope to be able today to broaden your field of interest in some measure by attracting your attention to what is going on in research and development on a Community level. It is needless to say how much we would appreciate your advice and your support in all matters concerning Community research. These matters - far from being an esoteric exercise for a Commissioner and his officials in Brussels - have, by their very nature, a bearing on the science policy of the United Kingdom and of the other Member States.

Over the past years the Commission's staff, working together with experts from the Member States, have for the first time assembled data on public expenditure in all the nine Community countries. We discovered that public spending on research and development in the Community for civil purposes only was in 1975 of the order of 13.2 billion u.a.*)

The forecast for 1976 was that Member States would spend about 2.2 billion u.a.*) on research and development. Compared with these figures, the money we spent from Community resources on research and development was rather modest: 214.8 million u.a.*) in 1975 and 270 million u.a.*) in 1976, in other words, the Community's spending was less than 2 % of that of the Member States. Although we foresee in the coming years an increase in this percentage of Community spending to about 3 %, a question raised by Mr. Osborn at the meeting of the European Parliament in September deserves an answer. The question was:

*) While waiting for the general introduction of the European unit of account (E.U.A.) all data is given in units of account (u.a.) used at present for estimating the Community's budgets:

1 u.a. = 0.416667 £

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Corrigendum 2

Please take notice of the following changements of figures:

Page 2, second paragraphe, last line, 11.2 billion u.a. instead of 13.2,
third paragraphe, first line, 12.3 billion u.a. instead of 2.2,
4th line, 134.4 million u.a. instead of 214.8,
167.2 million u.a. instead of 270,
5th line, 1.5 % instead of 2 %,
7th line, 2 % instead of 3 %.

Page 3, third paragraphe, first line, 12.3 billion u.a. instead of 13.2,

Page 5, 4th paragraphe, second line, 264 million u.a. instead of 374.4,
third line, 440 million u.a. instead of 480.

Page 8, 4th paragraphe, 4th line, 374 million u.a. instead of 560 million.

Page 9, 3rd paragraphe, second line, 900 million u.a. instead of 1.1 billion,
4th paragraphe, second line, 350 million u.a. instead of 480 million.

Corrigendum 1 can be regarded as cancelled.

why we should make so much fuss about the two percent of public expenditure, whereas we say very little about the 98 % being spent by the Member States?

It will come as no surprise to you that I strongly believe in Community-financed research programmes. There are a number of reasons for this, and one of them stems directly from the figures I have mentioned:

If Member States are together spending 13.2 billion u.a. on research in a single year, you may be sure, even without a thorough investigation, that there is overlapping and duplication of work between the different research programmes undertaken and financed by Member States. Especially at a time of budgetary constraint in all the Community countries, it would be a great help not only to the Finance Ministers, but also and even more so to research itself, if we could achieve a more rational structure for European research.

The Community attacked this task in a comprehensive way not long ago. It was only in 1973 that the Commission formulated a proposal for a more general research and science policy, which was then adopted by the Council of Ministers in January 1974. The Council agreed that the Member States' research and development policies should be coordinated. For this purpose, details of the potential, plans and programmes, projects and national research budgets were to be obtained and compared. Furthermore, a scientific and technical research committee, generally known as CREST, was established.

Unfortunately we had to learn that coordination of national programmes is not easy of accomplishment. We first had to work out a methodology for comparing the different Member-State programmes, which meant collecting data on research programmes and public expenditure. Our knowledge of what is being spent in Member States on broad categories of research is now fairly complete and satisfactory, as you may see from the booklet of which I have a few copies with me. But our data basis is rather limited as far as specific programmes are concerned. We have produced a survey on energy research in the Community and we are doing the same on medical research, in which efforts we are very grateful for the assistance given by Sir John Gray, who is the Chairman of the CREST Sub-Committee on Medical Research. Progress is slow. This, however, is hardly surprising. In your country, as well as in other member countries, the Commission is confronted

with very substantial R&D machinery. To gear such a machinery to Community coordination is quite naturally, a long, time-consuming task.

While scientists, politicians, and public opinion are all used to the idea that research needs a national effort, they are much more reluctant to agree on a common effort with other countries, who may perhaps one day, when it comes to industrial exploitation, become competitors. But I am confident that the future will be marked by ever-greater coordination of national research activities.

We will pursue our efforts at coordination, but I feel that we have to bring Community-financed research into the picture in order to achieve tangible results. In future we will try hard to use the Community programmes more than in the past to bring about coordination of the research which is going on in the same field in the Member States. Best suited for this purpose are the research programmes which are being carried out in the Member States' laboratories, the so-called "indirect action"; the programmes of the Joint Research Centre, however, also have an important task in this respect.

Before I give you an outline of the Community research programmes, it might be useful to look back for a moment into the past. Community research started with the Euratom Treaty in 1958. The aim of Euratom was to contribute to the development and growth of the nuclear industry in the Community. Research activities had necessarily to play a major role in efforts to achieve this aim. A large joint research centre with four establishments, in Ispra (Italy), Geel (Belgium), Karlsruhe (Germany), Petten (Netherlands), was set up. Community funds were also used to finance nuclear research in member countries. The weakness of these research activities was their concentration on nuclear energy. When Member States became aware that there was too much nuclear research going on, that enormous amounts of money were being spent for the benefit of relatively small industrial sectors, funds were reduced. Euratom was not spared the repercussions of this critical development. Instead of extending the Community research activities to other sectors, the Council tended to starve the JRC of resources. This meant annual research programmes without any long-term perspective; it meant reduced staff, and less money. The October 1972 Summit and the entry of the United Kingdom, Ireland and

Denmark into the Community at the beginning of 1973 mark the turning point in Community research policy. At the Summit, the Heads of State agreed in principle on developing a common policy in the field of science and technology, including coordination of national policies and extension of Community programmes beyond the nuclear field.

In 1973 a new four-year research programme was adopted for the Joint Research Centre. This programme included for the first time activities in the non-nuclear field, such as the environment, materials and non-nuclear energy. Also in 1973, the Council agreed to non-nuclear research programmes being carried out in the Member States' laboratories. These programmes dealt with environmental research and with measurement and standards for a large number of industries, e.g. steel, pharmaceuticals and construction.

At the present time, we have Community-financed multianual programmes which are being carried out by laboratories in the Member States in the fields of non-nuclear energy, biology, agriculture, the environment, measurement and standards, plutonium recycling, and plutonium waste disposal and fusion (without JET).

All these programmes were adopted by the Council either this year or last year. The financial resources for the coming years total 374.4 million u.a. Community funds cover only a part of the expenditure, a further 480 million u.a. will be spent on these programmes by Member States. In addition, there are research programmes on a year-to-year basis for coal, mining technology and the improvement and use of steel.

Apart from the scientific results, we expect to get from these research programmes a major stimulus to coordination of research done in the Member States. This should have a threefold effect:

- The advisory committees attended by experts from the Member States have to direct Community work in such a way as to integrate it in an optimum manner into what is already done by Member States. At the same time, these experts ought to look into the national programmes in order to avoid wasteful duplication of activity.
- On the other hand, the awareness of scientists in different Member States that their work is part of a Community programme has in itself an

integrating effect. We try to enhance this effect by sending Community-paid scientists to the various laboratories.

- In the third place, the fact that Community finance covers only part of the expenditure - in no case more than 50 % - militates against parallel research in Member States.

We have one programme where coordination is already almost perfect, namely, the fusion programme. Here all the research activities in the Community are part of the common programme and are being coordinated by a committee on which all the fusion laboratories in the Community are represented. Our goal is to confer a similar coordinating function on all our research programmes. The next programme in which we are trying to bring this about is the programme on non-nuclear energy. This will be done in two ways: first, by giving the present advisory committees for the different programmes a coordinating function; secondly, Member States must commit themselves not to promote parallel research.

And what about the Joint Research Centre?

I mentioned earlier that in the late sixties the JRC went through a very difficult period. But it got a fresh chance in 1973, when, for the first time in six years, the Council of Ministers adopted a four-year programme. A new management took office in 1974. This management and the scientists at the JRC have proved that the Centre, despite a very limited budget, is able to do useful work in the interests of the Community. I should like to quote the case of the research on transuranic elements and advanced fuels carried out in the Karlsruhe Establishment. I should also like to mention the studies which have been performed with the aim of improving the safeguards procedures for verifying the flow of nuclear materials, the "fuel cycle". We can safely say that, without direct research activity, without the Joint Research Centre, the Euratom nuclear safeguards would not have been given its present role in the implementation of the Non-Proliferation Treaty.

In the past we heard a number of critical remarks from British members of the European Parliament, going so far as asking to close down the JRC.

I am very pleased that our new programme for the JRC secured the maximum support at the September session of the European Parliament with the sole exception of the Communists, who abstained. It would indeed be unwise to continue arguing against an institution which has its basis in the Euratom Treaty.

But it was not for this reason that the Commission put forward a new multi-annual programme for the JRC in May. The Commission presented its proposal because the JRC has valuable work to do for the Community which cannot be done elsewhere.

The task of the JRC is threefold:

- The JRC has to do the research work which can best be done in a Community laboratory. This criterion applies, for example, to research of a central character, such as when a large installation could serve the entire Community. Furthermore, the JRC seems to us best suited to conduct research work where the findings of a "transnational" laboratory may have more authority than national research, which could be mistrusted by public opinion. Consequently, the research on reactor safety which covers a large part of the new programme, seems to me particularly appropriate for the JRC. Another example concerns solar energy: here the JRC will help to work out standards for solar collectors. The results of this work may serve not only industry, which is involved in this development, but also future users of the installations in question, not to mention the benefits as regards the free movement of such goods in the Community.
- Secondly, our own research activity is a prerequisite for coordination of research in the Community. If we do not have our own research activity in Community establishments, we cannot, for lack of expertise, claim authority to coordinate national research activities. This coordination cannot be done by bureaucrats alone, but calls for impartial scientists' expertise as well. And this expertise is available in the Joint Research Centre.

The function of a project leader, which in the field of hydrogen the JRC has assumed in the International Energy Agency, shows that the JRC is also in a position to coordinate the research efforts of Member States in relation to international organizations and non-Community countries.

- Thirdly, we should not forget that member countries without any major national research capacity, which cannot afford huge research institutes, attach great importance to a research centre of a certain scope which belongs to all and from which they could benefit directly. Without that, there is always the risk that the Community will be financing establishments in member countries where research has already been done. In this way the Community could aggravate existing discrepancies.

In May of this year, we presented a proposal for the new four-year programme for the Joint Research Centre. This proposal further concentrates the activities of the Joint Research Centre on those fields in which it is particularly competent and for which there is a special research priority. Ten research projects have been chosen for the next programme, dealing with the following fields:

- energy
- environment
- public services.

This new programme has been worked out very carefully, has been discussed with scientists of all Member States and has met with general approval. It goes hand in hand with the new staff regulations for our research manpower. These new regulations will in particular provide for more mobility of research staff and will get us away from the practice of permanent contracts. Community research will benefit a great deal from these new regulations.

The new programme will be discussed at the Council of Research Ministers this coming Thursday. It is one of the two major items on the agenda. The discussions will not be easy, as they involve considerable sums of money. The programme of the Joint Research Centre amounts to some 560 million u.a. for four years. I would, however, like to stress the necessity of a viable programme for the Joint Research Centre. The money which was made available for the current programme was not sufficient. It would be bad policy indeed if we were to keep the JRC going without enabling it to do research in a sensible way. And it is certainly not pure coincidence that only France, Germany and your own country, which themselves all have a major R&D capacity, have hitherto been pressing for considerable cuts in staff and funds for the future programme. We run a great risk within the Community if we do not

strongly resist tendencies to neglect the interests of the other partners. But I am an optimist and count on beneficial results from this Council meeting.

The second major item on the agenda of the Council meeting on research is the construction and siting of the Joint European Torus (JET), the large-scale experiment in our fusion research programme. What is important, at least to my mind, is that we have a decision on the programme, including some technical but crucial details, namely, the organizational structure, the status of the personnel and the scale of the financial contributions for the different fusion laboratories of the Community. Even if the Council is unable to take a stand on the question of siting JET, I think a decision on the actual project would be a big step forward. By doing this, the Council will have affirmed its will to carry out the project, which is of the utmost importance for the scientists working on JET. And we shall be in a position to continue that part of the work which can already be done without a decision on the site. Nevertheless, the decision on the site must be taken before the end of the year. I am, however, confident that, if the Commission proposal for the Joint Research Centre programme is approved, it will be easier to find a satisfactory solution to the problem of the Joint European Torus.

If all goes well, Community funds for research purposes up to 1980 will amount to 1.1 billion u.a.

If this is compared with the money allocated to Community research from 1973 to 1976, which was about 480 million u.a., the outgoing Commission may, without being immodest, look with some satisfaction on the record of its achievements. But more important, it seems to me, is the increased responsibility the Commission will have in the years to come. Although our programmes are still on a small scale compared with those of the Member States, their impact on Community policy in general and on the research efforts deployed by Member States in particular will inevitably increase. I take this responsibility, which we share with the European Parliament and the Council, very seriously.

One thing on which we shall have to focus will be the strengthening of supervision over the research programmes. We have already started in the JRC: the new programme, by reducing the number of objectives, by defining them more clearly than in the past, will be of considerable assistance in checking what has been done to achieve the goals set for it. A JRC screening operation has now been completed. A new organizational structure has been introduced to ensure more efficient direction. Certain amounts of money will be put at the disposal of those who are responsible for a given project and time-limits for the achievements of results will be set. A review of the supervisory procedure which is being applied to research done by national laboratories but financed from the Community budget seems to me also to be required.

A word on cooperation with non-Community countries with cooperation on energy research among OECD countries now developing in the International Energy Agency in Paris, the Community has managed from the outset, and despite the political problems we all know, to take an active part in the work done there. The Community is project leader in the fields of thermonuclear fusion and of hydrogen. Recently we concluded a general agreement on cooperation with the International Energy Agency in Paris and signed two "implementing agreements on nuclear fission and fusion research. Further agreements on the production of hydrogen and solar energy are being prepared.

We have concluded an agreement with Sweden associating that country with our fusion programme. A similar agreement will shortly be concluded with Switzerland. A framework for scientific and technical cooperation with European countries was set up in 1971. This framework, generally known as COST, embraces the Community and the following 10 countries: Austria, Finland, Greece, Norway, Portugal, Spain, Sweden, Switzerland, Turkey and Yugoslavia. Israel has submitted recently some proposals for cooperation within the same framework. This structure has, generally speaking, worked very well. We owe to COST the medium-range forecasting centre which was set up at Reading in 1973. Unfortunately, however, we have to face the fact that since then no new agreement has been signed. We shall analyse the reasons for this lack of progress and we shall make proposals for revitalizing the COST structure.

To sum up, our priority task for the next few years will be to consolidate what we are about to achieve and to improve the procedures and the instruments which we apply. But this is not enough. We shall also try to extend the scope of common research policy to other sectors, amongst which I may mention by way of example raw materials and medical research.

In extending slightly the scope of Community action and in making a vigorous effort to bring about closer coordination of national research activities, we may come nearer to our goal: a coherent and comprehensive Community policy which serves the scientist as well as the man in the street by better use of our capacities in Europe.