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Destroying barriers

The Max-Planck-Gesellschaft and German unification

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The Max-Planck-Gesellschaft is heavily involved in unifying science policy in the new Germany. It is proving to be a difficult task, especially because of the deadlines imposed on the operation by the political and economic considerations. Nevertheless, significant progress has been made in creating research groups and institutes in the old GDR along proven constitutional lines. Whilst appreciating the urgency of implementing unification principles, this should not be at the expense of properly thought-out solutions.

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THE CREATION OF a homogeneous scientific landscape in a unified Germany is, simultaneously with the pre-eminent political, economic and social context as a whole, faced with enormous challenges. To outline the path the Max-Planck-Gesellschaft (MPG) has taken so far in the course of Germany's unification and to understand not only the role it has played up to now in the process of unifying scientific policy, but also the role it intends to play in the future, it is necessary to look back for a moment.

On the occasion of the MPG's General Assembly held on 22nd June 1990, Professor H A Staab, then President of the Gesellschaft, described the previous day's historical reality as follows:

> "Like many other areas, the Max-Planck-Gesellschaft was hardly able to have 'official' contacts with the German Democratic Republic during the past decades. More favourable contacts with most of the other countries in the former socialist block in Eastern Europe, however, existed for years...; as a result of its unnatural policy of partition, the GDR even fell behind Romania to rank last until after the beginning of last year."

The two German states, however, were not only divided. The GDR's borders were also almost impermeable, especially with respect to science. All this changed after the borders were opened in the fall of 1989. The MPG immediately started a cooperation programme which enabled its institutes to collaborate with scientists and research institutions in the GDR in many ways: through the ex-

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Annex 1. The Max-Planck-Gesellschaft

The Max-Planck-Gesellschaft (MPG) – a self-governing body formalised under a private law – is the successor of the Kaiser-Wilhelm-Gesellschaft, which was founded in 1911. Apart from the universities, the MPG is the largest research organisation dedicated to basic research in the Federal Republic of Germany. Its purpose is to promote and support scientific research, especially by maintaining research institutes.

The MPG's particular functions are to carry out research in fields which the universities cannot readily undertake (such as interdisciplinary fields and those requiring specially-equipped institutes), to advance new scientific methods and procedures and to enable the highly qualified scientist to work independently.

Currently, the MPG maintains 62 research institutes and research units which vary considerably as to size and personnel. Fifty-one of them carry out research in natural science, the others specialise in the humanities and social science. These institutes are largely autonomous within the limits of their annual budgetary allocations.

'Units' (*Projektgruppen*) are established for a limited period of time (usually five years) to initiate research in new fields; they can, but need not, form the nucleus of new Max Planck institutes or may be turned into university institutes. In an effort to revitalise university research in the new German Federal states, the MPG is currently realising plans to establish 29 research groups at universities located there, as well as in the eastern part of Berlin.

Close ties are maintained with research organisations and universities in the Federal Republic of Germany, but also co-operation with foreign countries is strongly supported. In 1990, some 1,700 guest scientists and scholarship holders from abroad worked at Max Planck institutes. At the same time, almost 1,000 joint international projects were in progress, often on the basis of bilateral co-operation agreements. Furthermore, the MPG is involved in such international organisations as the EISCAT Scientific Association in Kiruna/Sweden, the International Institute for Applied Systems Analysis (IIASA) in Laxenburg/Austria and the European Science Foundation (ESF) in Strasbourg/France.

The MPG's budget comes from various sources: 84% is from the Federal and *Länder*, or State, governments; 12% is project funds from the Federal and State governments and from the Association of Donors to German Science and Research (*Stifterverband für die Deutsche Wissenschaft*); the MPG's own resources (membership fees, patents, and so on) make up the remaining 4%. The total budget (operating budget plus investment funds) for 1990 amounted to approximately 1.3 billion DM.

In 1990, the MPG's permanent staff numbered about 8,700, including some 2,400 scientists. Moreover, a total of nearly 3,000 scholarship holders and guest scientists (both Germans and foreigners) worked at Max Planck institutes.

change of scientists and through visits; through joint research and colloquies; by donating instruments and books.

This action on the part of the Gesellschaft was a clear expression of its willingness to contribute to the national duty of demolishing the Wall. Moreover, the MPG participated in the manifold process through which scientists and institutes on both sides became acquainted with each other, with each other's research system and with events in the course of each other's research. The differences between the research systems became more obvious during the subsequent months.

However, the question as to the manner in which the German states and their respective political, economic, social and cultural systems should deal with each other remained unanswered initially. In fact, it remained unanswered for quite a long time. This period of uncertainty overshadowed the Gesellschaft's 1990 General Assembly and interfered with the development of positive concepts for scientific policy for the MPG. Only the essentials could be drafted.

Professor Staab and I, as his successor, both spoke of the substantial correspondence between the scientific system and the political system in the GDR and, subsequently, of the incompatibility between the GDR's research system and the specific kind of research system as it had developed in the Federal Republic of Germany. Both of us cautioned against a convergence which would "suspend the freedom of research and the independence enjoyed by our scientific organisations" (Staab) and demanded that "future research in Germany, with support from a variety of governmental and social sources" and by virtue of a strong backbone "of autonomy ... should be allowed to keep its course marked by freedom and achievement" (Zacher).

Eleven days later, on 3rd July 1990, these statements produced results which, in turn, led to a meeting between representatives of scientific policy and scientific organisations from both German states. In their communiqué, the Ministers for Research from the Federal Republic and the GDR found this governing principle:

> "A homogeneous scientific landscape is being aimed at for Germany as a whole. This landscape will feature a differentiated structure guided by the principles of freedom of research, the principles of federalism and the principles of social economy, while incorporating elements which characterise today's scientific landscape in the Federal Republic."

In fact, the Unification Treaty followed this course.

Common task

As the outline for the future character of the research system in a unified Germany became clearer, the Max-Planck-Gesellschaft was able to begin discussing the role it wants to play. A detailed and comprehensive process of discussion and mutual agreement took place, which was ultimately followed by an active period of realising the plans that were made.

Never before in the history of the Gesellschaft were there so many scientists who neglected their own research and so many employees who put their daily work aside to commit themselves to a common task within the scope of research policy. This

commitment reflected an extremely strong sense of duty to the Gesellschaft and to research in Germany, although a collegial feeling of concern for the scientists in the new German Federal states was, and is, an equally strong motive. And there were many people who were glad to, at last, be able to do something for their old home again.

The MPG drafted a concept based on the premise that it not only should, but that it wanted to, figure in a unified Germany in the same manner as it had in the former Federal Republic. This had two consequences: first, the Max-Planck-Gesellschaft should expand its activities to the new Federal states and, secondly, this expansion should be expressed by the establishment of institutes.

Institutes are traditionally the core of the Gesellschaft's activities. Even during the process of unification, the MPG is taking action through its institutes — both those which already existed in the former Federal states, and those which are being established in the new states.

In detail, there were three aspects to the MPG's concept:

- The deficits in both international and domestic communication suffered by science in the GDR, and the difficult conditions under which research is pursued in the new Federal states demand increased possibilities for co-operation between Max Planck institutes and researchers and institutions in the new states in the future.
- The Max-Planck-Gesellschaft is supposed to supplement research undertaken by universities. Consequently, normalcy of university research is a prerequisite. The Academy of Sciences and universities in the GDR had a different relationship. If the MPG intends to play the same role in the new Federal states that it previously played in the old states, it must make a contribution towards the restoration of normal university research.

  The MPG's special scheme of research groups (*Arbeitsgruppen*) meets this demand. A research group must originate from an initiative taken by a Max Planck institute, which then observes the progress of the group's research. Set up for limited periods of five years, these groups are designed to be integrated by their host universities thereafter. The establishment of such groups is scheduled for 1991 and 1992 and, if need be, for 1993; their terms will thus expire between 1996 and 1998. Afterwards, the MPG will again concentrate on the support of research through, and in, its institutes.
- The Max-Planck-Gesellschaft also plans to establish and operate institutes (the first step is usually research units (*Projektgruppen*)) in the new Federal states. These will give prominent researchers the opportunity to take up important and promising subjects in basic research. In doing this, the MPG has given special attention to advice from the German Science Council, the Wissenschaftsrat, as to which research institutions existing in the former GDR should be taken into the framework of the Max-Planck-Gesellschaft.

As a result of German unification the MPG is focusing on co-operation between researchers, setting up research groups in the old GDR, and establishing and operating research institutes in the new Federal states

Encouraging progress

Action is being taken on all three aspects. Firstly, the Max Planck institutes are continuing their unrestricted co-operation with researchers in the new Federal states with zeal and with a wealth of new ideas.

Secondly, the MPG's Senate has now agreed to establish 29 research groups. The process has already begun at the universities in the new states: in common with other organisations, the MPG is finding that the difficulties encountered on the path of German unification are, in almost all respects, greater than ever imagined. Nevertheless, the first groups started in January 1992.

Thirdly, the establishment of research units and institutes in the new Federal states has also begun. The German Science Council recommended that the MPG should continue operating the Central Institute for Electron Microscopy and Solid-State Physics in Halle within the scope of a Max Planck institute. It was officially founded on 1 January 1992, under the name Max Planck Institute for Microstructure Physics. A second institute, the Max Planck Institute for Colloid and Interface Research, was also founded on the same day.

Following another recommendation made by the Science Council, the MPG established, as of 1 January 1992, an affiliated society charged with supervising research on seven main topics in the humanities. However, the MPG does not want to anticipate decisions here with respect to the founding of institutes and has, therefore, postponed the establishment of 'centres' for these research topics. In addition, the MPG has convened a committee to develop a concept for the planned establishment of an Albert Einstein Institute for Gravitational Physics.

At the same time, deliberations with respect to the establishment of new institutes continue. Committees have been convened by the three sections which comprise the MPG's Scientific Council. They will work out a number of proposals for new

institutes during the months to come. Research subjects — although, of course, they can only be mentioned here with extreme reserve — include economics, plant physiology, enzymology of peptide bonds and non-linear dynamics, as well as European integration.

Simultaneously, the sections will examine further proposals. The limit to the MPG's endeavours with regard to the establishment of research units and institutes cannot be expressed in numbers. One institute differs from the next. Moreover, the Max Planck institutes' objective is to take up important and promising subjects in basic research for which prominent scholars and their proficiency can be enlisted. Each decision is subjected to very specific conditions. Presumably, however, the Max-Planck-Gesellschaft would be able to pass a resolution on more proposals than the limits imposed by finance and number of personnel will allow.

The Gesellschaft will continue to devote itself to these tasks with the utmost concentration.

Premises questioned

The Max-Planck-Gesellschaft, thus, has joined forces with all other scientific organisations in an effort to broaden the scope of those premises of the character of the research system that were previously adopted with success in the Federal Republic to include Germany as a unified whole. It has, however, now become apparent that the circumstances in unified Germany are threatening to distort these very premises — or, at least, their actual relevance in the new situation.

With respect to the integration of researchers and research institutions formerly belonging to the GDR Academy of Sciences into the research structures in the Federal Republic, the Unification Treaty allowed this process to take its own course until the end of 1991. This period of time was, for many reasons, too short to permit convincing solutions to be found for all potentialities worthy of preservation within the Federal Republic's research structures. There was, therefore, an increased risk of precipitate solutions which would not have been appropriate.

On the one hand, this seemed to lead, even in cases in which all signs point to a positive future, to the employment of socio-political instruments, rather than instruments of science policy, to keep this future open. On the other hand, it led to the distension and alienation of instruments of science policy which had proved successful within their previous boundaries.

It is not clear if the same is true for developments intended for the circle of national research centres, but it most certainly is with respect to the numerous suggestions made by the German Science Council to establish so-called 'Blue List' institutes (which receive equal parts of their funds from the German Federal government and from the State governments). It is also true for suggestions to create new forms of research outside universities — for example, under partnership law.

These trends are all the more disquieting because a call can be heard in the old Federal states, as well, to allow for new types of research institutions. The growing number of university students in the old states has caused one possibility to be disregarded: that of having research centres within the university system where researchers are not counted as teaching staff. Increasingly, therefore, it is being said at the universities that research only has an opportunity if it is organised outside the universities' sphere.

The Max-Planck-Gesellschaft must caution against the danger of a change in the system of research organisation which would be ill-considered because time is growing short. Such a change could result in a loss of efficacy on the part of specific types of organisation within the system, and in a loss of profile on the part of the entire character of the research system. The risks which would have arisen from a prolonged phase of transition in which the research institutions in the former GDR were integrated into new structures cannot be underestimated. It is, however, compulsory to compare these risks with those resulting from haste.

One and a half years ago, it was widely agreed that the patterns of the research landscape in the old Federal Republic were an asset. This was, in a sense, affirmed by the Unification Treaty. It would not, however, be the first time that, once it has been affirmed, the value of an asset is overruled: in this case, such a step would be most unfortunate.