Interview with the President of the Max Planck Society

Society of Satisfied Researchers

Academia: The Max Planck Society (MPS), like no other scientific organization in Europe, is known for producing Nobel Prize winners. Since 1948, the year when the MPS was established as the successor to the Kaiser Wilhelm Society, 15 scientists from your institution have been awarded this most prestigious prize. How do you explain this extraordinary phenomenon?

Professor Peter Gruss, President of the Max Planck Society: *The keys to our success are a clear focus on innovative areas of basic research, and a high degree of autonomy and freedom in our institutional decisions. The MPS takes up new research areas that German universities are not in a position to deal with adequately, as they require interdisciplinary approaches or specialized equipment and highly skilled personnel. Based on the so-called Harnack Principle, the MPS has found its way of identifying the best researchers from all over the world. Max Planck Institutes offer them optimal working conditions with a secure financial basis. We succeed in attracting the best scientists from all over the world: 25% of our directors and more than half of our 9,000 junior scientists and guest researchers come from abroad.*

Over 5,000 scientists from abroad are involved in research activity at the MPS's institutes. By offering better laboratory conditions and financial support than these researchers may be able to find in their own country, might you not be accused of supporting the brain drain?

Science is international, and the respective international orientation of research organizations is characterized by a stimulating exchange of researchers. Scientists have to be mobile primarily in order to enrich their experience and knowledge. However, mobility of researchers is a necessity not only for their individual career development, but also

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A factory of Nobel Prize winners – the main entrance to the Max Planck Society Headquarters

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for the scientific development of a knowledge-based modern society. The Max Planck Society is indeed privileged to host nearly 5,000 visiting researchers from all over the world, almost 200 of them from Poland. The MPS offers them competitive and attractive international research conditions. But it is worth noting that the Max Planck Society generally cannot provide long-term perspectives for foreign scholars: fellowship agreements are typically concluded for up to three years, after which the researchers either move on to continue their international training, or return home. The MPS's policy is thus to contribute to the development of a highly skilled international researchers' community and to strengthen collaborative relations with international partner institutions. We are convinced that the establishment of such links has a much more sustainable effect than a "one-way street" leading to a brain drain, especially in countries of Central or Eastern Europe.

The newly appointed scientific members of the MPS are on the average about 10 years younger than the members elected to the Polish Academy of Sciences (PAN) in 2003. The average age of all our members is about 70. Don't you think that our Academy should be rejuvenated?

PAN holds elections to appoint new scientific members, regardless of whether or not they hold an active position at a PAN institute, and a large proportion of PAN members are university professors. New scientific members of the MPS are generally researchers who are nominated as department heads or institute directors. It is therefore difficult to compare the two different systems. In recent years, the trend in the MPS has been to favor scientists of a relatively young age. In 2003, the average age of all the MPS's active scientific members (not including the emeriti and the external members) is 53. The average age of all the newly appointed members over the last five years (from 1999 to 2003), at the time they took up their positions, is 44.

The MPS has about 30 International Research Schools in Germany. Don't they replicate the tasks performed by universities? If not, what is the distinctive role played by the MPS schools?

The education and promotion of young researchers are the prominent tasks of German universities, which grant all academic degrees, including PhDs. The education of junior scientists for new research areas is, however, also a specific challenge for the MPS. Therefore, the International Max Planck Research Schools have been set up as a joint initiative between Max Planck Institutes and (national and international) universities, to give the best PhD students the chance for an excellent, well structured education in specific innovative and often interdisciplinary fields. In order to induce synergetic effects, research topics for theses are interlinked to generate greater scientific value. Our goal was to attract at least 50% of the students from foreign countries. At present, 60% of the students at the International Max Planck Research Schools come from abroad. There is also cooperation with Poland: the International Max Planck Research School centered on the "Molecular Basis of Plant Develop-

ment and Environmental Interaction" at the Max Planck Institute for Plant Breeding in Cologne, for example, cooperates with the PAN Institute of Bioorganic Chemistry in Poznan, as well as with partners from France and Hungary.

You are prominently engaged in very strong cooperation with the Chinese Academy of Sciences, especially in physics and biologically-oriented research. Do you have any special reasons for directing your international activities towards this country?

The Max Planck Society is impressed by the dynamic development of the Chinese research landscape and the support that science enjoys in China. The Chinese Academy of Sciences is spearheading this development in areas of basic research and, at the same time, it is to a great degree open-minded with regard to the external influx of ideas in terms of science and science organization. The Academy is therefore our "natural partner" in this country, just as PAN plays this role in Poland. Furthermore, we are also observing interesting developments at Chinese universities. If you look at our international relations in a broader perspective, you will see that our institutes focus their collaborative efforts on European countries and on the United States of America. Such cooperation is mainly managed "from the bottom up," i.e. with full independence, guided by the scientific interest of the researchers. Our cooperation with China, in contrast, still needs some executive support, not necessarily in terms of funding but rather in terms of "political blessing."

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Judging by your 2002 annual report, it seems that financing for the MPS's research activity is being decreased. This is a phenomenon that scientists in Poland are experiencing in a very drastic way. How can politicians be convinced to increase the budget for research?

One of the main targets of our press and PR strategy is to convince politicians, the media and society of the necessity of basic research for developing solutions to the problems of tomorrow. Basic research lies at the beginning of the value chain of knowledge. Max Planck defined our mission by coining the phrase: "Application must be preceded by knowledge." One of the prominent political tasks has to be promoting research as the key to our nation's future. Unfortunately, research has not been ranked on the top of the political agenda. This year we have had to cope with a budget freeze, something that has caused the financial deficit we accumulated over the past years to worsen. This forced us to implement a consolidation program, including cuts in the budgets of our institutes and the closure of 12 of 270 departments in total. The German chancellor has promised us a budget

increase of 3% for next year, but further cuts cannot be ruled out, especially in project funding.

The MPS's policy concentrates mainly on basic research. Don't the guiding principles of the European Union, expressed in Framework Programs 5 and 6, which are directed towards applied sciences, run counter to your research strategy?

European research funding, as an important instrument in the realization of the European Research Area, has given the Max Planck Society more impetus in networking and integrating with European research partners. Even though European research funding primarily aims to strengthen the scientific and technical foundations of European industry and increase its competitive strength on international markets, the MPS has competed for European funding with far-above-average success. 369 EU-funded projects, with funding amounting to € 80.5 million, have been carried out within the 5th Framework Program.

The third-party funds raised by the European Union are effective in complementing the national funding of the Max Planck Society and its Institutes. EU project funding is used to maintain, develop, and acquire research partnerships which offer participation in European research projects. The Max Planck Society has always acknowledged its responsibility to actively help shape European research funding, and to commit itself to developing and improving the quality of good science.

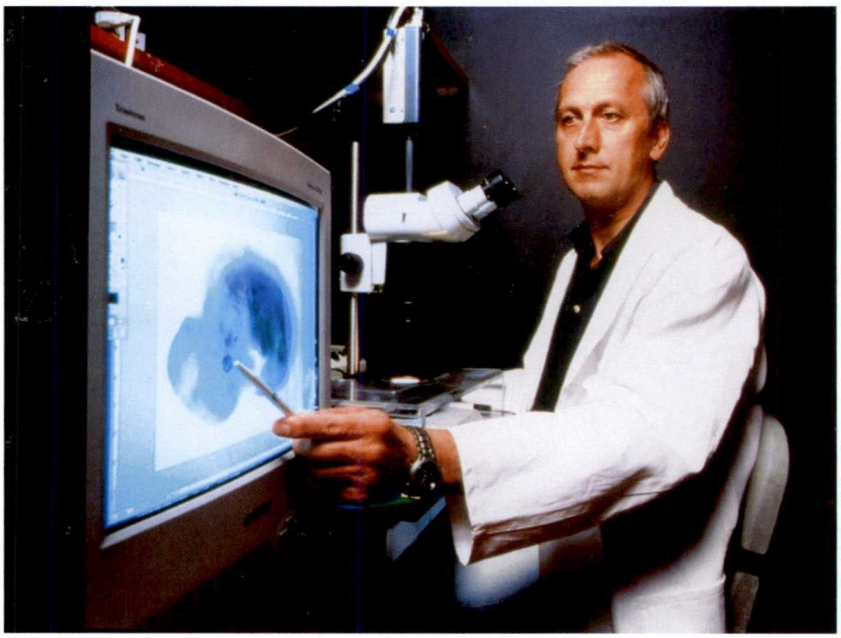
Apart from the existing national and transnational funding mechanisms, the European Research Area could be further enriched by a new research funding body on the European level, subject to purely scientific criteria of excellence: a European Research Council. The MPS is contributing to consultations to this end, and is participating in the respective initiatives.

How do you judge the cooperation between the MPS and the Polish Academy of Sciences? Is there something unique here, not to be found among other bilateral agreements?

The Max Planck Society has strived to stimulate relations with Polish scientists over the last few years. This applies to the institutes of the Polish Academy of Sciences as well as to universities in Poland. Our partners are scientists working in the fields of fundamental research, rather than in application-oriented fields.

In the process of establishing a common ground for the European Research Area, we cooperate in training our best young people and in finding new European career paths for them. We see a strong commitment to these aims in the Polish scientific community, as well as a readiness to create new common strategies of cooperation. In 2000, therefore, we signed an agreement on exchanging Junior Research Groups with the Polish Academy of Sciences. One such Junior Group of the Max Planck Society is now working at the International Institute of Molecular and Cell Biology in Warsaw. In exchange, a group financed by PAN will soon be installed in Dresden. I am very pleased to say that together with the Polish Academy this mechanism of career building for younger scientists in their post-doc time is running very smoothly, and the Polish scientific community is most supportive of it. And so I am sure that the next step will be just as promising.

We have identified several fields of research where scientists from the two sides can compliment each other, and where common endeavors can lead to synergies. Molecular biology, ecological sciences and biodiversity are examples of such fields. I also see good prospects for material sciences, informatics, physics and chemistry, although they are not yet the focus of these new initiatives. But I am confident that our cooperation in these fields will expand in the near future. Initiatives from Polish scientists regarding new proposals for scientific workshops, or for joint research activities in promising fields, are highly welcome.



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"Being president of the Max Planck Society is more than a full-time job. There is unfortunately not much time left for continuing research. Nevertheless, I remain in close contact with my former institute to stay informed on the latest results in my research field"

interviewed by
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