Introductory Speech

at the Opening Event of „Science and Art in Europe“

by the President of the Max Planck Society,

Peter Gruss,

Berlin, May 22nd, 2005

Many thanks to the four ladies from the Quarrel Quartet whose music carried us into completely new spheres! At your performance last year in Warsaw, I already had the opportunity to observe that science holds no fear for you. I am therefore particularly pleased that you have come all the way to Berlin for today's event.

Ladies and gentlemen, when it comes to classical music I have always been fascinated by the perfect interplay between the instrumentalists: the notes, of course, are given, as is the tempo – nevertheless, each note must be perfectly in tune. To me, therefore, a concert is the perfect form of cooperation – also, because it is free of competition among the individual players. Every one involved is important in their own way, fulfilling their parts to the best of their abilities. This is the only way that the greater whole – a quartet, a symphony, an opera – can be successfully performed.

Here, a comparison comes to mind with science: because science, too, is for the most part, teamwork. If somebody takes the leading role, the importance of the other players is not diminished. It is rather the case that without the cooperation of the entire team, it would not be possible to pursue research in many areas.

The advancement of science and culture in Europe is primarily a national responsibility. Take the example of scientific research, which is naturally a subject closer to my own heart: over the years, all European countries have established their own internal research structures and organisation. Research and education, being the most important raw materials of this continent, must be of particular concern for every European government. Unless it builds on the strengths of its research and education, a nation cannot become a knowledge-based society, which, in turn, is the basis for economic prosperity. It is a proven fact that those countries with above-average investments in education and research are more economically successful than others.

But there can be no such thing as national research in the narrow sense of the term. Research is international by definition. For one thing, scientific concerns do not end at national borders. In fact, rather the opposite is the case: many fields of research deal with topics that have only emerged in a global context. Just think of the global climate change, the problems of the world food situation or issues of energy supply!

For another thing, scientific knowledge has increased on a global level for some time now. As a result, the quality of research activity is measured by international standards. In other words: all scientists have to measure their performance against that of their best colleagues across the globe. At the Max Planck Society, for example, we attempt to

attract international leading scientists to our institutes, ensuring the quality of research through Scientific Advisory Boards, which are made up of international members. In addition, we have cooperations with many scientists in other countries.

At the same time, we are all engaged in competition with scientists in other countries. We have to hold our ground in particular against the United States, as the strongest scientific nation in the world, in order to prove that research in Europe is far from being simply *l'art pour l'art*.

It is especially in this context that a new situation presents itself, against the background of a Europe drawing ever closer. With small countries no longer able to compete individually on an international level, we need Europe to be a community: the objective is a European Research Area, as suggested by the former EU Commissioner for Research, Philippe Busquin. This proposition makes sense because if European scientists pool their efforts, their work will be far more visible and far more competitive. To accomplish this goal, however, European research needs the appropriate structures, for example, for the advancement of science, which should also measure up to the highest standards. We should therefore aim to create a European Research Council that adopts the virtues of the US National Science Foundation or the German DFG. For this to work, the ERC must be based purely on principles of peer-reviewed scientific excellence, and it must have minimum bureaucracy.

But it is not only a question of harmonisation or implementation of structures. If we want to be competitive as a European scientific community, it is essential that investment in the overall European research and development activities be increased to at least 3% of the GDP. This is in line with the objective of the European heads of states and governments, who stated at their meeting in Lisbon five years ago, that this target should be achieved by the year 2010. Today, most European countries, just as the EU, are far removed from reaching this goal. A concerted effort is needed within the EU *and* in every individual member state in order to make funds available for high-performance research activities. Currently, 95% of public funds designated for this area come from national budgets. Each government is therefore responsible for scientific research within its own country, and thus in Europe, as a whole.

For the time being, the organisation of scientific research will also build on existing national structures. It therefore makes sense for the research institutes within Europe to coordinate their efforts more effectively. Only recently, the Max Planck Society hosted a meeting of the heads of the European research organisations in Munich to discuss possible ways of strengthening independent research in Europe. I am greatly pleased that organisations from the Eastern European countries also actively participated in this meeting.

Despite a difficult history and long years of separation by the iron curtain, we have a long tradition of bilateral cooperation with our Eastern European neighbours. We already had close contacts to some of these countries during the time of the east-west conflict. On both sides, such contacts were mostly established by individual scientists who developed and strengthened such cooperation. All three sections of the Max Planck Institutes participated. For example, scientists and doctoral students from Szeged, Hungary, were involved in research at the Max Planck Institute for Breeding Research in Cologne. Although this group made a considerable contribution to the success of the institute, it returned back home after its residency ended in order to support plant physiological and plant genetic research in Szeged, and to expand the exchange programme.

Such close relationships, even friendships, existed as early as in the 1970s in the areas of physics, astrophysics, and mathematics, but also in historical sciences, where, together with Polish partners, cautious attempts were made to heal historical rifts – efforts, which helped to dispel mutual distrust.

In addition, we look back on longstanding ties in science in law, which also reached into politics. But even those collaborations hardly known outside the four walls of the relevant institutes – for example in the area of experimental medicine, neurological research, chemistry, or material research, have helped to build – bit by bit, like a mosaic – the basis for a long-term partnership. On such a foundation, the Max Planck Society establishes its current project plans, as well as its partner groups.

A special role in all such collaborations has always been played by junior scientists. After their post docs, outstanding young scientists are given the opportunity to engage in research in an Independent Junior Research Group with a small team, an independent budget, and the independency of a professor. The Max Planck Society set up this possibility for autonomous research in the 1960s, and 10 years ago extended it to other countries. In the year 2000, the first Independent Junior Research Group took up its work in Warsaw. In exchange, a Polish group will begin its research project in Dresden soon. I hope there will be similar such exchanges in the next few years.

I am very pleased that junior scientists will also play an important role in the next few days in the workshops of “Science and Art in Europe”. The subjects will cover all the important focal points of research: from nanotechnology to astronomy, from biodiversity to the cultural artefact law, from RNA and proteins up to material research.

You will no doubt use the seminars to discover mutual potentials, and on the basis of this, develop new collaborations. Or, referring back to our initial theme, that of music: I hope that you will find harmonious interplay with one another in the next few days, with occasional creative impulses being offered by a scientific ensemble. For this, I wish you every success!

Now, however, I would like to give the floor to Minister Bulmahn.