Strengthening research – meeting global challenges
Address by the President, Prof. Peter Gruss
to the

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Ladies and Gentlemen,
"The success [of this country] at home and internationally, crucially depends on the success of our science, and on our place in global scientific collaboration." (Jack Straw in a speech to the Royal Society, on March 21 2005).

One would naturally expect a statement like this from the President of the Max Planck Society. But, ladies and gentlemen, this is a quotation from the former British Foreign Secretary, Jack Straw. This may surprise you, but in my view this statement is significant. It reflects a European policy that attaches more importance to science and research than ever before.

It is generally recognized today that science and research are the engines of innovation and prosperity. And that is how it should be: economists have calculated that in recent decades more than half of the economic growth in the USA has resulted from advances in science and technology, as has 85 percent of the increase in per capita income.

Today, research is a central element of the speeches by the Chancellor of Germany, other European Heads of State and the President of the Commission of the European Union. And this revaluation is not just rhetorical. It is also reflected in the rates at which national expenditure on research has increased. My meetings with colleagues from European research organizations are in some ways reminiscent of auctions: who will bid higher? In Spain, public expenditure on research is increasing by 25 percent annually. By 2010, France intends to increase its expenditure by 26 percent compared to 2004, and Great Britain is planning to double, after adjustment for inflation, its 1997 investment in science by 2008. And naturally, there is also good news to report from Germany. With the Initiative for Excellence to Promote Science and Research at Institutions of Higher Education and with the Pact for Research and Innovation for non-university organizations, German science has suddenly gained great momentum. We welcome the significant boost to research expenditure from the federal government and the *Länder*, despite their stretched budgets. Especially the assurance that we can expect a steady budget increase of at least three percent up to the year 2010 is very important for the Max Planck Society as a research funding body.

The starting point for this development is the European Union's goal of making Europe the most competitive and most innovative region in the world by 2010. In order to achieve these aims, the member states intend to increase their research expenditure to at least three percent of gross domestic product by 2010. Research at the highest level

of excellence is necessary if Europe does not want to run the danger of becoming a continent of imitators rather than of innovators, thereby relinquishing its political and economic role in the world.

However, we also need research to respond to global challenges. This involves crucial questions and issues, such as: how can we predict earthquakes and other environmental disasters more accurately? How can we counter the threat of disease? I only need to remind you of the H5N1 virus and the fears of a pandemic which have not yet been completely laid to rest. Or what are the measures we must take to preserve this planet, the only habitat we humans have?

Science must provide findings and evidence on which political decisions can be based. Or as Jack Straw stated: *"Today's global challenges require us to use science as a tool of diplomacy, and to build the scientific consensus which is the necessary foundation for effective international action."*

When the summit for the eight largest industrial nations in the world begins tomorrow in St. Petersburg, the supply of sustainable energy, for example, will rank as a central topic. Even though some politicians have resisted acknowledging the facts for a long time, sustainable means that the energy sources of the future must function in the most climate-friendly way possible. In the meantime, the temperature readings for our planet resemble the fever chart of a seriously ill patient. Respected scientists interpret hurricanes like *Katrina* which devastated New Orleans last year, or so-called "floods of the century", which are actually returning every few years, as indications of climate change. Deadly catastrophic droughts such as the one experienced by East Africa in the spring of this year point towards the fatal consequences, as does the extinction of animal species.

You might know this rather chilling joke: Two planets meet. One planet says to the other: "You're looking rather sick." "I am sick", answers the planet, "I've got homo sapiens." To which the first planet replies: "Don't worry, that will pass."

Undoubtedly, the best medicine for our feverish planet would be a strict diet – and one that is as carbon dioxide free as possible. The production of CO_2, however, cannot be stopped from one day to the next. The world's economy is based on converting fossil fuels such as crude oil, natural gas or coal to energy. The options for more environmentally friendly energy supplies are currently far too limited.

Certainly, we have solar energy cells and wind power plants, and there are cars powered by bio-fuel, and fuel cells running on hydrogen. These technologies, however, are still lacking in efficiency. The further development of these systems will not suffice – what we need here is genuine innovation. We need basic research to secure the energy supplies of the future. Basic research like that conducted in the Max Planck Institutes.

The sun tops the list of natural energy sources. Using the light energy it emits, photosynthesis creates the oxygen without which our life would not be possible. A by-product of this reaction is hydrogen, which could be readily harnessed as an ecological source of energy.
Consequently, scientists at the Max Planck Institute for Bioinorganic Chemistry are researching a way to replicate this natural method of extracting hydrogen. There has been a rough understanding of this reaction - which takes place innumerable times on the Earth, day in, day out - for some time. However, researchers are now looking at the details, particularly at the enzymes that are responsible for this reaction, for example, in algae. Their goal is to see if it is possible to use these enzymes and sunlight to split water into its components, thereby generating large quantities of hydrogen.

The safe storage of hydrogen is another challenge for research. A liquid option is methanol, which is alcohol in its most simple form and chemically a compound of

hydrogen, carbon and oxygen. Up to now, methanol has had a disadvantage in that carbon monoxide is generated when it is used in a fuel cell, which hampers the functioning of the cell. Max Planck researchers are therefore currently working on catalyzers with a special nanostructure which suppress the generation of carbon monoxide so that methanol can be used effectively.

To date, fuel cells do not represent an entirely mature technology. Currently, the most effective technology requires large quantities of platinum, which makes their use extremely expensive. Our scientists have already found alternatives based on metal nanoparticles, and the relevant prototypes are currently being tested. Moreover, at the MPI for the Dynamics of Complex Technical Systems, scientists are investigating how fuel cells react to fast changes in load as well as to changing environmental factors – important questions if fuel cells are to power mobile applications. There is also a project planned jointly with two Fraunhofer Institutes in which fuel cell technology is to be coupled with the use of biomass.

In general, biomass energy is considered particularly environmentally friendly as it does not alter the carbon dioxide balance. This is also an area in which basic research can open up new possibilities. The starting point for research at the MPI of Colloids and Interfaces was the fundamental question of how the coal deposits in the Earth were able to develop. The result was a kind of pressure cooker in which any type of biomass can be converted to carbon and water. Only small quantities of energy are required to trigger the reaction. Another advantage is that even damp material, such as leaves, grass cuttings or traditional biological waste becomes an environmentally friendly source of energy, which might be used to generate electricity or form the basis for bio-fuel in the future. Incidentally, this method is also suitable for the rapid production of humus and, unlike normal composting, does not allow 90 percent of the stored carbon to escape into the air as CO_2 and methane. All that is needed now is a committed entrepreneur to advance the process to the application stage.

Hopes are also pinned on the possibility of generating larger quantities of energy in fusion reactors in the future. In these reactors, energy is to be obtained from the fusion of atomic nuclei, similar to the process in the sun. Researchers have been pursuing this ambitious goal for over half a century. It would now appear that their persistence is paying off: the last few years have seen some of the key problems solved - by researchers at the MPI of Plasma Physics in Garching, among others. In Greifswald, a Stellarator reactor is currently being built which is based on these findings. At the same time, ITER, another type of reactor, a so-called Tokamak, is under construction in Cadarache in France as part of a major international project. Findings made by the researchers in Garching will be incorporated there too. ITER is scheduled to go into operation in 2017, while the reactor in Greifswald will be commissioned as early as 2012. Let us hope that we will then be taking a major step closer towards a secure and long-term energy supply.

Ladies and gentlemen, there is a host of other areas in which the Max Planck Society is investigating the subject of energy. You will be able to read about some of them in our latest edition of the MaxPlanckResearch magazine, copies of which are available in the foyer.
Again and again our research delivers astonishing findings, which are followed by pioneering inventions. For example, the MPI for Solid State Research currently holds the world record for energy density in the anodic side of batteries. What is so outstanding about that? It means that future batteries for mobile phones, laptops or electric cars will last five times longer than is currently the case.

Other Max Planck Institutes are for example researching the basis for lighter materials, which help cars and aircraft to consume less fuel. They are searching for catalysts that will make engines work more efficiently and are examining the impact of global warming on flora and fauna.

I do not wish to deny that our country will continue to be dependent for some time on the fossil sources of energy - oil, coal and gas, - which all increase the share of carbon dioxide in the atmosphere. But it is the task of researchers, and therefore also of the Max Planck Society, to lay the foundations for the sustainable energy sources of the future today, thereby securing the foundation of life for future generations.

Ladies and Gentlemen,
It is often difficult to classify research of this nature into basic and application-oriented research. On a European level, we therefore speak of “Frontier Research”. This is what we experience every day in the Max Planck Society, not just in energy related topics, but also in numerous other areas. Something that is initially the focus of pure basic research eventually results in a product. The research conducted by Mr. Hänsch, which he will present himself following this address, is an example of this process, as is biomedical research. Axel Ullrich from the MPI of Biochemistry and his team, for example, are examining which factors inhibit the growth of blood vessels. Significantly, the cancer drug Sutent, which uses this principle to stop the growth of malignant tumors was first launched in the USA.

Unfortunately, here in Germany, we succeed far too rarely in converting scientific knowledge into commercially exploitable technologies. After all, the German economy - particularly small and medium sized enterprises - should share in the pioneering research results. At various levels, the Chancellor and you, Minister Schavan, have assigned committees to address these issues. The Max Planck Society is also involved in finding a solution to this problem through the experiences of its spin-off company, the technology transfer company Garching Innovation.

Ladies and Gentlemen,
The Max Planck Society has always considered itself as an organization for basic research which, at the same time, does not lose sight of applications. But let me make one thing clear: the Max Planck Society cannot be and does not want to be a second Fraunhofer Society. Basic research, as we conduct it, should not be placed under the dictates of short-term commercial exploitability. Such research cannot start with the end result, the potential product. Its nature is precisely to generate the unforeseeable, the completely unknown. Your support for knowledge-driven basic research, Minister Schavan, is of course particularly welcome.

In order to explore the areas on the boundaries of current knowledge, we need the best minds in the world - whether these are renowned scientists, who set up departments as Directors at the Max Planck Institutes, or junior researchers at the outset of their careers. We do everything possible to create an environment in which they can pursue and implement their innovative and high-risk ideas. As part of this, particularly those concepts should be realized which are hardly taken into account in general application procedures. The technology researcher Norman Lewis recently said “In [today’s] culture, Christopher Columbus would have been fired for not delivering his target of discovering a new route to India and discovering America instead.” For the Max Planck Society I have to say: on the contrary; it is exactly the high-risk research such as that demonstrated by Columbus or other brave explorers which often delivers results worthy of a Nobel Prize.

Ladies and Gentlemen,
The process that leads to knowledge is a shared effort. Particularly in the natural sciences, teamwork is the secret of success. This does not mean, however, that first class results will emerge by themselves provided that a sufficient number of small contributions are linked together. A congenial atmosphere is a requirement that ensures that the standard of achievement is constantly pushed higher and higher. There is a need for creative centers in which enough brilliant scientists come together to inspire each other and spur each other on. In turn, these scientists provide an incentive to the best

junior scientists to come to our Institutes. A strong infrastructure with the creative potential of many excellent employees is essential. For example, we need mechanics, technicians, electronics experts and engineers who support research with their ideas and thereby drive these undertakings forward.

It is a particular strength of the Max Planck Society that it is collectively spearheaded by excellent scientists on every career level who enjoy the best possible technical support at acclaimed Institutes. This strength is reflected by international rankings in the most cited scientific publications, which position the Max Planck Society within the top ten organizations worldwide in the majority of research fields. With regard to Nobel prizes, the Max Planck Society can compete with institutes such as Stanford, Harvard and the MIT. The International Scientific Advisory Boards which observe our Institutes closely, regularly confirm this perception.

Regardless of where you look - to the administrative departments, the workshops, the laboratories or the libraries of the Max Planck Institutes, you will find that each of us identifies with Max Planck as an institution and its aspiration to rank as one of the leading scientific organizations worldwide. Thanks to this dedication we have become a “brand” or a "trademark" that is known far beyond the borders of Germany. In this way, we are able to attract colleagues from all over the world - even though our salaries cannot compete with those of American institutions. Yesterday, for example, the Senate of the Max Planck Society agreed in a second reading on the appointment of two scientists from Rockefeller University. One of them has already accepted.

Internationality within the Max Planck Society, and its international visibility are probably unparalleled in Germany – although we are definitely a relatively small society! In 2003, we had 270 directorships compared to the 12,600 chairs at German universities alone.

Naturally, we engage in close cooperation with institutions in Germany and worldwide. The crucial point for us is which partner and which form of cooperation is best for the subject in question. Particularly in German research, there is a division of labor that works very well: the universities and the various research organizations outside of the universities mostly have a clear mission. Cooperation is necessary to optimize or supplement the strengths in each case.

In this respect, we want to work more closely with the Fraunhofer Society in the area of "translation" in the future. This refers to the transition from scientific knowledge to a commercially viable product. As part of the Pact for Research and Innovation, we have also undertaken to continue to further expand our joint ventures with the universities. Since the Excellence Initiative at the latest we have been dealing with self-confident and at the same time very receptive partners - to our mutual benefit. We are delighted to be able to extend our long-standing cooperation activities. And of course, we are eagerly anticipating the final decision on which applications to the Excellence Initiative will be approved. After all, the Max Planck Institutes are also very strongly represented in this area.

The imminent creation of Excellence Clusters will influence our deliberations on which locations are still expedient for scientific reasons or where it would be important to move closer to a University in order to contribute to a Cluster in a more targeted way. However, these are not solutions that we can realize in the short-term.

Ladies and Gentlemen,
Innovative research also means constantly reviewing existing activities and taking on new ones. At the Max Planck Society, we have a comparative degree of flexibility. We are able to structure the Institutes in a way most suitable for the given area of research. With no curricular guidelines, we can close a department when the professor in charge of it enters into retirement, and we can examine if a new research direction should be

pursued. I would especially like to thank my colleagues in the Perspective Commissions of our Sections as well as in the Perspective Committee for their support in these tasks.

Currently we are rededicating the Max Planck Institute for History in Göttingen, which means that in the future, it will explore a new research area under a new name. One working group in the Section has proposed a possible subject: “Social and personal integration in culturally heterogeneous societies and comparative history of religion.” The focus will therefore be on issues of cultural and religious differences: how have these differences developed historically? How has the way in which they are perceived and dealt with changed over time?

In yet another research topic, we would like to take new institutional approaches: in Hamburg, the Max Planck Society will be putting the spotlight on research revolving around free electron lasers. From our side, scientists from the Chemistry, Physics & Technology Section will assist in setting up and conducting the first experiments on this unique source of light. At present, our colleagues from the MPI for Nuclear Physics and from the Fritz Haber Institute are participating in pioneering experiments. Their goal is to establish a Center for Free Electron Laser Studies (CFEL) with the University of Hamburg and DESY as partners. A Max Planck Research Group at the University of Hamburg will form the central element.

Ladies and Gentlemen,
Policy makers have recognized that science and research are crucial for the future of our country. More money is available, and rightly so. At the same time, one of the slogans in connection with the Pact for Research and Innovation is “More research for the money”. Scientific organizations are called on to achieve greater efficiency – and that is only reasonable. Politicians, however, can also make a major contribution by examining the general conditions under which our scientists do their research.

Take copyright laws, for example. The law is about to be amended; this is undoubtedly necessary, given the possibilities that the Internet and new electronic storage media have opened up. However, the provisions in the draft that has been submitted are a long way from being helpful for education and science.

For example, the reform will permit only public libraries to make their holdings available at electronic reading stations. Yet libraries in schools, higher education and research institutions such as the Max Planck Institutes are as a rule only accessible to a limited group of people. Whether they will nevertheless count as public libraries or whether they will have to go without electronic reading stations in the future is not made clear in the revised version of the copyright law.

Also, the rights to research results that are published in a magazine will continue to belong to the publishing house only. This doubles costs for publicly financed research organizations like the Max Planck Society; we pay once for the research and then again to use results that have been published in this way. This is tightening up existing regulations to the detriment of science - and in favor of the mainly foreign scientific publishers whose profit margins already considerably exceed 20 percent in the first place.

In this respect and in many others, this amendment fully runs counter to the open access approach that we would like to see applied to the communication channels and technologies available nowadays. Apart from one statement from the Federal Council that was favorable to science, the legislator has continued to ignore the intervention on the part of the affected scientific organizations.

The current provisions in stem cell legislation are only of limited applicability for basic research and are completely unsuitable for medical purposes. The cut-off date regulations only permit research with contaminated stem cell lines. I know that the Federal Parliament had good reasons to sanction these regulations five years ago.

In the meantime, however, it is not only scientific developments that have moved on. The European Union is planning to fund stem cell research projects with a budget of 50 million euros within the context of the 7th Framework Program. My plea to policy makers would be to at least rethink the penalty structure. The aspect of legal uncertainty here is especially problematic. In actual practice, the legal situation is so complicated that researchers cannot readily distinguish between what is permitted and what is forbidden and need legal advice as a result. Incidentally, the Chair of the National Commission for Ethics, Kristiane Weber-Hassemer, is in favor of removing penalties for researchers from the German law. Her argument is that the views on the ethical acceptability of research of this kind have diverged in Europe, although all parties involved emphasize their obligations to the demands of human dignity and human rights. Therefore, researchers should not be criminalized unnecessarily.

With regard to research, the current provisions mean that ultimately no international cooperation of any kind will be possible for German researchers. In my view it is particularly alarming that especially young people will avoid stem cell research and associated areas. The course of developments will pass us by, and we will not be able to make up for the lost ground.

Green genetic engineering is another development where we are falling behind. Incidentally we owe this technology to a discovery by the MPI for Plant Breeding Research (Jeff Shell). Apart from limiting considerable commercial exploitation, research is also restricted because the law on green genetic engineering impedes outdoor test planting. I am aware that a large majority of the population object to genetically altered food. Especially in research, however, the concern is not only with food, but also with using transgenic second-generation plants to clean soil containing heavy metals, produce pharmaceuticals or with derive energy, for example. Again, Minister Schavan, I am very grateful to you for arguing for a more research-friendly course within government.

Sadly, the current parallels to the first genetic engineering act of 1990 are striking: regulations that were excessively stringent in comparison to those of other countries were a factor in German companies' stepping up their pharmaceutical research abroad. Today, we must assume that once again outdoor test planting and subsequent production and marketing will not be possible in Germany.

For me, this subject is an impressive example of the importance of a sound education in the natural sciences at school for the culture of discussion in our democracy. I would be interested to know whether the genetic engineering survey that was conducted by Emnid a few years ago, would produce better results today. At the time, 44 percent of those surveyed said that natural tomatoes do no contain any genes. Some 30 percent believed that eating genetically modified tomatoes could alter human genetic makeup. I would at least like to see an improvement in the basis for objective and informed discussion.

Ladies and gentlemen,
We compete worldwide for the most innovative results and the best scientists. We must acknowledge that these scientists have different ways of acquiring their qualifications and other needs compared to the average employee in public service. Academic work functions quite differently from the work performed at a tax authority or a residents' registration office.

Consequently, we need research-specific limit regulations, as in external funding projects, for example. If a project is funded for longer than five years, we can neither replace the whole team of researchers after this period, nor give the scientists permanent contracts. Commensurate solutions must be found for such projects. The law under which employees are assigned to tariff groups must also take specific scientific issues into account.

Why do we answer the question of a scientist's performance capability on the basis of age - thereby losing productive scientists to the USA?

We should not hesitate to call old and established practices into question: can a law governing employment conditions and tenure for civil servants, which is specific to a particular German state, still provide appropriate guidance for a scientific community operating on an international level? At the Max Planck Society, we have a globalized budget and a performance-related salary system. Nevertheless, the salary limits are laid down for us indirectly within a rather rigid payment structure. Furthermore, we are only allowed to pay bonuses at certain times and in accordance with certain procedures. Still today, under the Bund-Länder commission, the Max Planck Society requires agreement from the federal government and from the 16 Länder on many further internal issues, even and especially in the case of individual, detailed questions.

Everyone is talking about reducing bureaucracy - why don't we dare to take some moves in this direction? It is hardly expedient to provide better resources for research on the one hand and erect legal barriers on the other.

We need creative ideas to allow us to react as individually as possible to different situations. This also applies to the advancement of women in science. A few of my colleagues have yet again dusted off their proposals for a quota system. This means determining how many women in which subjects must achieve which positions.

Ladies and gentlemen, that is missing the point entirely! If the proportion of women in the stage between doctorate and professorship falls, then we have to offer female scientists in this phase greater incentives. In the Max Planck Society we have achieved good results with a special program for women in the post-doc phase. For a limited period of time, we make personnel and practical resources available to women who have excelled in competition with the best of their peers, thereby enabling them to independently implement a research program.

As well as providing mentoring programs and career development seminars for women, we also help with support in childcare. Here too, however, we have to negotiate with our funds providers as to the extent to which we are allowed to support these measures financially. We have in any case set ourselves the objective of offering childcare at each of the larger Max Planck locations. Furthermore, we are the first academic organization to undergo an overall "Career and Family" audit. This means that we have had ourselves investigated to see how well family and career can be combined in our Society and have asked for details of how to improve the situation for parents here. We know that this question is particularly essential for women in science. Consequently, we are striving to further extend our offerings in this area.

This is one contribution towards attracting women to the Max Planck Society. In the Pact for Research we have also declared ourselves prepared to increase the proportion in management positions annually by one percent. That does not sound like very much, but we need to take a long-term perspective in these matters. We have to broaden the basis first to ensure that outstanding female scientists can eventually move into the respective positions. Currently, we are still having problems finding qualified women at all in some areas. And at all costs we must avoid outstanding female scientists appearing as "quota women"! It goes without saying that our objective must be to have the proportion of women in management positions in science equivalent to the proportion of women in the population, as is the case in other areas.

Ladies and gentlemen,
Research and research organizations are a part of society and should also be perceived as such. This is particularly true for the Max Planck Society, which is organized as an association and also supported by its funding members. At this point I would like to

express my heartfelt thanks for the support you have offered over many years, and indeed, in many cases, over and across a number of generations. Your unequivocal commitment to science and your willingness to be a part of this organization are testimony to your great trust. It is especially thanks to you that the Max Planck Society is not perceived as an abstract construct but as an accessible association. It is also particularly due to the work of the members of public life who act as advisors and mediators on the boards of trustees of the Max Planck Institutes that we have a solid anchor in society.

A new element is now entering the picture: private donors have founded the Excellence Foundation for the Advancement of the Max Planck Society. Mr. Pöllath and Mr. von Holtzbrinck, I would like to thank you, the initiators of this foundation, for your strong commitment. I would also like to thank Mr. v. Pierer, Mr. Dibelius, Mr. Neugebauer, and Mr. Winterkorn, Mr. Rodenstock and Mr. Reemtsma as representatives of the many other people who are supporting us in setting up the private Foundation for the Max Planck Society.

The foundation exclusively supports the research of the Max Planck Society, and I am particularly pleased that it has recognized and is reinforcing our successful model: our autonomy regarding research subjects. We will improve our chances in global competition with these funds. Even before the foundation was actually set up, the donors helped us at the end of last year in an unparalleled campaign to make Mr. Hänsch, a Nobel Prize winner, a competitive offer. It persuaded the Nobel Prize laureate to turn down many highly paid positions offered from the USA and remain at the Max Planck Institute in Garching. A joint campaign by the federal state of Bavaria, the Ludwig Maximilian University and the Carl Friedrich von Siemens foundation will shortly ensure that Mr. Hänsch will be able to continue his work at the University of Munich after his 65th birthday. The Excellence Foundation for the Advancement of the Max Planck Society is not only concerned with established colleagues. Yesterday, I was in a position to make offers to four scientists, one female and three male. These four young people have already been awarded the Otto Hahn Medal for the best doctorates. Their careers in science will now be funded for five years. Such funding could enable them, for example, to carry out research at an institution abroad for a certain period of time. After that, we will offer them the opportunity to set up a research group at a Max Planck Society for three years. Where there are outstanding ideas for projects and in order to encourage independence at the earliest possible stage, it is also possible in some cases to set up an independent group at a Max Planck Institute straightaway.

Ladies and gentlemen, the Excellence Foundation demonstrates clearly that also in this country more and more people are recognizing that the state alone cannot provide excellent science.

Obviously, not everyone is in a position to support high-risk, innovative and expensive research with private funds. But there are other ways in which each individual can do a great deal for research.

I appeal to all of you to help to ensure that the people of this country open themselves up to opportunity. This means having an open mind towards the opportunities presented by science and research; an openness which also must manifest itself in policies and legal frameworks for research.

This means being open to people from all over the world who are needed here to secure Germany's position as a location for research in global cooperation in science.

This means the openness that has emerged here, in an almost miraculous way, over the last four weeks during the World Cup. Our country has shown that it is different - different from how everyone had always thought it was; it has shown that Germany has more to offer than rainy weather and the lingering smell of sauerkraut. It has shown

that, despite modest forecasts and expectations, hope as a principle worked well for our national team on its home ground. It has shown that it is possible to be proud of this country, without being arrogant or nationalistic. It was a young, self-confident and personable Germany that was awarded the title “World champions of the heart”, especially by guests and observers from other countries. Or as The Times commented, “Someone should bottle the new mood in Germany and send it around the world.”

It is my wish that the bottling will not be necessary. If just some of the optimistic mood remains, we will, I believe, have fulfilled one of the most important conditions, not just in football, but also in other areas, for finding and appreciating our place in the world.