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Europe as a Scientific Space

Dear Prime Minister,
Dear Madame Commissioner,
Dear Mr. Chairman,
Distinguished Colleagues,
Ladies and Gentlemen,

When John Richardson and the organizers asked me to give a speech on "Europe as a Scientific Space", I soon realized that there were at least three challenges entailed.

The first one is, of course, in the Einstein Year, the World Year of Physics, related to the relativity of space and time, i.e. to speak for just 20 minutes on a topic as wide as that, and hopefully say something useful in this magnificent building of the Hungarian Parliament. It is not that I am afraid of the architectural beauty, but anyone speaking in a traditional Parliament building must be aware of the standards set by the long line of previous speakers and the high expectations of an audience sitting in a room like this. Being from Germany and keeping in mind the difficult history of our two countries in the mid-twentieth Century as well as more than four decades of separation thereafter may well add to turning this challenge into a really difficult one. But I think that this occasion some 15 years after the 'Velvet Revolutions' in Central and Eastern Europe and about 13 months after the EU enlargement also offers an opportunity to take stock and to reflect on our common future.

The second challenge has to do with "Europe". What is it, where does it start, and where does it end? Given that geographically speaking it appears to be nothing but an appendix to the land masses of Asia, and that it is not just a politically defined entity, we cannot help but taking a different approach. Perhaps, we must conceive of

Europe more as an open space which can only be filled by our intellectual endeavours and our common cultural heritage (I am sure that Gottfried Wagner will come back to this point in his address), and ultimately it could be wise to follow the advice of the well-known Hungarian writer and former President of the Berlin Academy of Arts, Gyorgy Konrad, who recommended to conceive of Europe as a “work in progress”.

The third challenge lies in the term “scientific space”. My immediate reaction was that the title should be rephrased to “Europe as a Research Area”. But the term “research area” could also be misleading, because it is so closely associated with the EU’s objective of establishing a European Research Area (ERA). Furthermore, I am sure that you are aware of the fact that in English the word “science” restricts itself to the hypothesis-driven natural sciences, nowadays perhaps also including medicine and engineering. All other areas, in particular the humanities, would thus be outside of the scope and remit of my speech. I hope you agree that this would be too narrow a view of the development of higher education, research, and scholarship in Europe. Therefore, I took the liberty to interpret “scientific” comprehensively in the German sense of the word as “wissenschaftlich” which clearly includes the humanities and social sciences as well as all other areas of higher learning and research.

So much to the challenges for me as a speaker. They are still small ones, especially when compared to those Europe is facing in higher education, research, and innovation.

1. Competition and competitiveness in an international perspective

At the beginning of the 21st Century Europe and with it the European research system are experiencing an unprecedented pace of social, environmental and technological change. The ongoing transition in the international division of labour from hands, tools, and machines to brains, computers, and laboratories as well as the increasing importance of electronic communication for international networking make it imperative for researchers, and policy-makers as well as for industry and politics to enter into a process of assessing strengths and weaknesses, reviewing funding

modes and institutional structures, and subsequently adapt to the changing environment of knowledge production.

The quality and accessibility of new knowledge as well as relevant research and technological development are decisive for the future well-being of our societies. As a consequence of this crucial development, the European Union has vowed to develop into a knowledge-driven society and to create a European Research Area (ERA) following the Lisbon European Council in March 2000 which had set out a daring strategic goal for the European Union, namely to become the most competitive and dynamic knowledge-based economy in the world by 2010. The Council made a commitment that “research activities at national and Union level must be better integrated and coordinated to make them as efficient and innovative as possible and to ensure that Europe offers attractive prospects to its best brains and to achieve this objective in a flexible, decentralised and non-bureaucratic manner”. Two years later, in March 2002, the Barcelona European Council Presidency Conclusions called for the adoption of the Sixth Framework Programme and its legal instruments, and for an agreement “that overall spending on R & D and innovation in the Union should be increased with the aim of approaching 3 % of GDP by the end of 2010” – an ambitious goal in view of the present 2 %.

In a report presented at the end of last year, a High Level Group assessing Europe’s progress towards realizing the Lisbon strategy that was chaired by Wim Kok, the former Prime Minister of the Netherlands, clearly stated that so far there has been “disappointing delivery” of the strategy due primarily to a lack of determined political action, because the agenda has been overloaded, coordination has been poor and there have been conflicting priorities. Europe seems to be caught in a vicious circle: Over the last four years, the Kok report states further: The overall performance of the European economy has been really disappointing. The economic upturn in Europe has been much weaker than in the United States and Asia, in part because of continuing structural weaknesses, and in part because of the fact that the rate of growth of public and private demand has been low, in particular in Germany. Due to these structural weaknesses in many member states, the overall economic performance has been poor and consequently it has been more difficult to implement the Lisbon strategy. It has also been harder in this low growth environment for some govern-

ments to keep their commitments to increase investments in university education and research activities by at least four or five percent each year.

Obviously, after reading the Kok-report, there is no reason for complacency, but there should also be not too many reasons for complaint. Even if it seems to be clear that Europe will not be able to achieve most of the Lisbon and Barcelona goals by 2010, the goals themselves are still expedient, and Europe-wide action towards them is needed more than ever before: In order to overcome our weaknesses, but also to build on our strengths.

In particular when we take a closer look at the European performance in the area of higher education and research, we quickly realize that Europe is a world leader in many respects. When we compare the European situation with that of our major competitors, in particular with the United States and Japan, we often tend to look at it almost from the start with an inferiority complex. But this is definitely not the right approach, if we want to strengthen our own research base. And there are – beyond the well-known and widely distributed, really impressive figures about the Harvards, Stanfords, Princetons, and Yales of this world – a lot of less well-known figures which show that Europe is indeed taking the lead in many respects:

- Europe shows the highest human development index level in the world.
- As the former chairman of the first benchmarking exercise conducted by the European Union, in particular on Benchmarking of Scientific and Technological Productivity I can assure you that already in the late 1990s the then still EU-15 were the number one region in the world with respect to the overall production of scientific literature (more than 400,000 articles per annum).
- In a number of relative indicators – such as publications per inhabitant, per scientist or publications per million Euros/Dollars spent in our universities – the EU also leads the US and Japan.
- In ‘triad patents’ (patents held simultaneously in the US, the EU, and Japan) per million spent in business R & D, some European countries – Germany, Sweden, and the Netherlands – clearly outperform Japan and the US.

As you can see, the overall picture is not as bleak as it is often cited by the media. Nevertheless, there are two important performance indicators which must be of concern to us all: The number of citations per publication, and the number of Nobel Prizes (and similarly prestigious awards). In both of these areas Europe is not doing as well as it should, and indeed could do. With respect to achieving major breakthroughs, to implementing radically new paradigms and basic innovations, we Europeans have reasons to think about, and indeed make use of opportunities to improve our productivity and performance.

One important cornerstone in this endeavour could be the proposed European Research Council (ERC). And, last but not least our Chairman Dan Brändström as well as myself and a number of other private foundations across Europe were involved in setting it up. If properly conceived, the ERC could indeed help to improve our competitiveness by offering opportunities for intense participation of the respective research community, opening up a new arena of Europe-wide competition, and also by providing additional incentives for networking to the best researchers in Europe, in particular to the young ones.

Having said that, let me also stress how important it will be that steps and measures taken by an ERC are complemented by national and regional efforts to support world class basic research. I should also like to say to all those who think that this cannot be achieved by small countries, or even regions that there are very impressive cases to learn from such as the Catalan and the Basque regions in Spain, or Slovenia and Estonia as well as the Republic of Ireland with its newly established Science Foundation Ireland (SFI) focussing entirely on the support of world class research in two key areas for the fast growing Irish economy: biotechnology, and information and communication technology. Of course, in all of these cases support from various EU sources (including the Structural Funds) plays a crucial role, but the message is also clear: The search for the most talented researchers, the provision of research-friendly framework conditions, the maintenance of a competitive infrastructure as well as the creation of centres and clusters of excellence must be ultimately achieved through a bottom-up process. It all starts if not in our own backyard, then at least at our own front door!

2. Small things matter – the role of foundations

Given the billions of Euros spent by public authorities and enterprises, one might ask what impact comparatively small-scale foundations can achieve in this area. As I will try to demonstrate, it is indeed not the overall amount of money spent, but rather the approach taken by foundations that makes the difference. Their autonomy, alertness, and flexibility enable them to operate effectively as facilitators of change, to establish islands of success, and thereby also to achieve considerable impact on policy- and decision-makers. By fostering risky projects, encouraging networking across disciplinary, institutional, and national borders, and by helping some of the most creative researchers to break new grounds, foundations are able to prove that even on a European scale small things matter.

Let me briefly illustrate this point by giving you three examples:

- The first one has got to do with encouraging new ways of independent thinking in Central and Eastern Europe by setting up new Institutes of Advanced Study. Not far from here, across the Danube and up the hill in the old town of Buda, the first such institute, the Collegium Budapest, was established in 1991. It was soon to be followed by others, e.g. the New Europe College in Bukarest, established in 1994 as a private foundation under Rumanian law, and the Sofia Nexus Institute of Advanced Study in Bulgaria.

In view of the “wounded sensibility of small cultures” (Emil Cioran) it was particularly important that in each case the initiative was taken by local researchers, and then in an interculturally sensitive manner picked up by the heads of the Wissenschaftskolleg in Berlin as well as a closely cooperating network of grant-makers. When the respective national governments were still reluctant (and some are hesitant even today) to support such apparently luxurious places of free thinking and intellectual debate, primarily Swedish, Swiss, and German foundations stepped in to facilitate the process of setting them up, and they have stayed committed to supporting these institutes ever since. Thus they have secured the institutes’ successful attempts at reaching the necessary levels of deep thinking, sophistication, and creativity.

This does, however, not imply that these institutes are in danger of becoming the new ivory towers in an otherwise still suffering research environment. On the contrary, the pause for thought provided by them is often being used by their fellows to rethink and reconfigure their own priorities and ultimately engage in social and political practice. – As I noticed during a recent visit to Bukarest, several ministers of the present Rumanian government are former fellows of the New Europe College and will hopefully succeed in bringing about the much needed change in their respective area of responsibility.

- Only a few hundred yards from here, at Utca Nador No. 9, you can find another breeding ground for future leaders (several former students have also become ministers or (chief executive officers of large enterprises in their home countries): the Central European University (CEU). Thanks to the generosity of the Hungarian born, American philanthropist George Soros, Budapest can be congratulated for hosting the first foundation-based, fully endowed private university in Europe, able to run its core operations on the basis of its own regular income resulting from the investments made.

Compared to our large publicly financed universities with tens of thousands of students, the CEU is still a relatively small institution with about 100 professors and some 1,500 students. And yet to establish such a stronghold of independent teaching and research provides many challenges, not only to the Rector and the members of the Central European University, but also to us all. Last, but not least because of the lessons we, and in particular our public universities will have to learn.

Due to the fact that almost everywhere in Europe citizens are used to carrying a high tax load, we still expect governments to fully cover the costs of our universities and research institutes. All too often this coincides with tight regulatory regimes of managerial accountability and quite disproportionate government control. Let me clearly say that this will have to come to an end. The global competition for the most talented young people can only be won if we change paradigms quickly. No doubt, our universities must become more efficient, but in or-

der to achieve that they must be given real autonomy and the freedom to establish optimal structures for the institution as such, but also for their staff. The latter really calls for opening up new opportunities to develop independent career paths early on in academic life. With it goes at each level of decision-making the readiness to personally take on the responsibility for the choices made. In full agreement with Yehuda Elkana, the Rector of CEU, who emphasized this on many occasions, I would like to stress that we have to reinforce the need to exercise informed and independent judgement in our universities. In addition, university leadership will also have to see to it that more private resources are tapped in order to adequately water the new seeds in hopefully fertile grounds.

- My third example is not focussing on any specific institution, but rather on individuals and the need for intellectual networking across Europe. It is also a telling example of the fringe benefits of EFC meetings, because it all started with a dinner conversation at the AGA in Lisbon, and since then has been developing into a joint funding initiative of the Compagnia di San Paolo, the Riksbankens Jubileumsfond, and the VolkswagenStiftung on “European Foreign and Security Policy Studies”.

The participating foundations are convinced that the national views which dominate academic and practical approaches towards a Common Foreign and Security Policy (CFSP) should recede in favour of a transnational perspective. The envisioned research and training programme aims at developing such a perspective by young researchers and practitioners in their further qualification. The programme also aims at mobility across borders and between the academic and practical spheres. The candidates can work at academic institutions of their own choice and appropriate European organizations engaged in CFSP. Each participant in the programme will be funded for up to two years. At least half of the time should be spent abroad in an academic or practice organization. Individual activities should be combined with the active participation in conferences and summer schools involving the other researchers funded in this initiative. Events should be held every six months. Joint publications and internet presentations could serve as further instruments for supranational networking.

Candidates for funding are young researchers and practitioners who aim at postgraduate or postdoctoral research in the field of CFSP. They should be selected according to personal qualification and the expected quality of the proposed piece of research. Disciplines, nationality, or belonging to an EU member state should not be essential. Candidates who have passed the research and training programme should be able to work as university teachers, analysts for institutes or “think tanks”, in the media, the civil service, or in political NGOs.

It is a crucial task not only for research and research funding institutions to open up these career perspectives to young researchers. Above all, innovation is created by brilliant minds and their ideas. A well set-up innovation process, on the other hand, will also result in the creation of ideas and, subsequently, of bright minds who pursue these ideas. Foundations should be striving to be part of such a “self-sustaining” innovation process – because we need these ideas in order to further develop our work.

Some of you may argue that these three examples are predominantly situated in the humanities and social sciences, both of them areas which are not sufficiently covered by the EU’s Framework Programme. So foundations once more seem to be filling the gaps left over, or neglected by public funding agencies. Ultimately it all boils down to the well-known and widespread notion that foundations are pursuing niche strategies instead of achieving real impact. – Well, I do hope that each of the three examples given convincingly demonstrates that even relatively small-scale institutions and networking initiatives can have, and with respect to future developments increasingly will have considerable impact not only on our ways of thinking, but also on the more practical side of life.

3. Europe and beyond – global responsibilities

Nevertheless, we have to admit that the power and the resources of foundations are limited. The intellectual lighthouses, or perhaps also the islands of hope and success we can help to create will only achieve wider impacts if we can link up with partners, convince decision-makers that changes are feasible, and engage in advocacy and strategic alliances. The latter applies even more when we take a wider perspective

and acknowledge that there can be no such thing as national, or European research in the regional sense of the term. Research is international by definition. For one thing, scholarly concerns do not end at national borders. In fact, rather the opposite is the case: many research areas deal with topics that have emerged in a global context.

If we take a closer look at the role of European higher education and research in the world of learning, we quickly realize that we have not only lost a lot of ground over the past decades, but that we have also not been taking our responsibilities seriously. In the case of the developing world, in particular Sub-Saharan Africa, we have strong reasons to be ashamed of our inability to find appropriate solutions. As Kofi Annan pointed out in an article entitled "A Challenge to the World's Scientists": "The number of scientists in proportion to population in the developing countries is 10 to 30 times smaller than in the developed countries. Ninety-five percent of the new science in the world is created in the countries comprising only one fifth of the world's population. And much of that science – in the realm of health, for example – neglects the problems that afflict most of the world's people. "(Science, vol. 299, 7 March 2003, p. 1485.)

If roughly 90 % of the medical research conducted worldwide focus on about 10 % of the diseases, i.e. primarily on those most common in the Northern hemisphere, there are fundamental shortcomings to be acknowledged and new approaches to be taken. Of course, foundations alone cannot and indeed should not pretend to be able to solve these problems. The grand challenges involved must be addressed at the G8-, and UN level. But again foundations can help to encourage those who are willing to bring about change. The traditional, postcolonial approaches to collaborative research are no longer viable. What is needed, is to develop new ways of sustainable capacity-building, to take a long term view in order to ultimately empower African researchers with the confidence and the courage to chart their own future. So far, in a lot of cases one crucial long term success is missing: the true "commitment to listen to local voices" (The Lancet, vol. 363, 3 April 2004, p. 1087) a deep understanding of the issues and the corresponding research needs. Without serious attempts to overcome our Eurocentric views of the world, to adapt to local problems and perspectives, and to develop already early on the funding concepts in truly symmetric part-

nership, we will not succeed in responding adequately to the grand challenges of our common future.

Several European foundations have already begun to change their strategies and funding modes accordingly in order to improve on North-South as well as South-South cooperation. In addition, initiatives such as “Europe in the World”, the attempts made to mobilise leadership and resources towards achieving the Millenium Development Goals, the HIV/AIDS funders’ initiative, and the EFC Sub-Saharan Africa Funders Network have become widely acknowledged as important steps towards taking on jointly the responsibility to successfully engage in locally informed and sustainable research capacity building. In the end, both sides will benefit from these endeavours. The idea of two different worlds of science should be an “anathema to the scientific spirit” (Kofi Annan), but it will require the commitment of us all to change current conditions, and to bring the full benefits of training and research to every part of the world.

4. Concluding remarks

To support communication and cooperation among researchers from different disciplines, institutions, and countries, to facilitate international exchanges and the creation of efficient, effective and sustainable collaborations. To make European academics more aware of intercultural differences and pressing issues, and to enable foreign researchers, in particular from less favoured parts of the world, to participate in internationally competitive research endeavours. – These should be the prime objectives of European foundations committed to the support of higher education and research.

If our initiatives are conceived in an interactive and symmetric process between the foundations’ staff and the respective research community with the clear goal of setting priorities, providing incentives, and thus generating targeted impulses, I am sure that we can make a difference. Of course, it takes a lot more of detailed analysis and thorough discussion than I was able to outline here. During the next two days we will in several sessions have ample opportunities to talk openly about the most appropriate methods, about successful experiments, but hopefully also about mistakes made. We should listen carefully and participate actively. Thereafter, we will have to return

to what foundations are usually good at, and that is putting fresh ideas into practice. If what we are doing does not speak for itself, then words won't be of any help either ("Wo die Tat nicht spricht, da wird das Wort nicht viel helfen." (Friedrich Schiller)

Thank you very much for your attention.