

Brussels, 31.03.03

**“The role of the universities
in the European Research Area”**
4th European University Association Conference
Bristol, 28-29 March 2003
SPEECH delivered on behalf of Mr BUSQUIN
by P. Caracostas

Good morning,

Monsieur le President, Mr Vice-Chancellor, Sir David, Ladies and Gentlemen, I am really honoured and pleased to be with you today and, first, I would like to express the apologies of M. Busquin who unfortunately could not join this meeting of the European University Association to present this keynote speech. He wished to use the opportunity of your Assembly to open a direct dialogue with representatives of the academic world on the specific issue of the future of their research activities in Europe.

Commissioner Busquin called me last week in his office and stressed a number of key points he wanted me to focus on. I shall try my best to convey his messages to your distinguished Assembly.

The creation of the European Research Area, a process set in motion more than three years ago, has now become a reality. We are moving toward a “single market” for science in Europe.

There is no doubt that universities, which are a key pillar of the research system in Europe, have a critical role to play in this process. This creates fantastic opportunities for them but, at the same time, they have to adapt to a changing world.

These challenges have been analysed in a recent Communication adopted by the Commission on “the role of universities in the Europe of knowledge”, which seeks to initiate a debate and poses a series of questions.

Today, I would like to address some of these questions and to set the scene for the forthcoming debate, to which I hope many of you will contribute. I shall raise four main points:

- the emergence of the Knowledge Society and its implications;
- the new threats and opportunities for the Universities;
- the emerging responses;
- the Commission communication and Mr Busquin key messages.

I. The emergence of the knowledge society

Today, an important issue is the rise of new ways for the creation and dissemination of knowledge. A new paradigm is emerging. It will profoundly affect the way universities operate and interact with the other pillars of the European Research Area both at the global and local level.

The “knowledge-based economy” is a recently coined term. Since knowledge has always been the driving force of growth and well being, something had to change dramatically from previous years to justify a new concept for the economy.

The simplest explanation lies in the rapid acceleration of the production, utilisation (and depreciation) of knowledge, which leads to the growing importance of the intangible capital in major economic sectors.

In this new context, Knowledge is becoming the key resource and the only scarce one. Knowledge workers, thus, become key elements in the production system.

Moreover, since no one can master all the knowledge necessary to carry out a specific task, *scientists have to work in networks*, which will adapt their configuration frequently over time.

Knowledge workers see themselves as professionals rather than as employees, as equals to those who retain their services. This has profound implications both in terms of organisational models for the economic agents and in terms of policy-making decisions.

Clearly, a distinction has to be made between knowledge and information. Knowledge is the result of dynamic cognitive activities; information is a set of formatted data that remain passive until someone can use it.

Universities play a key role in both since they are a source of knowledge and they participate in the creation of information tools. However, the real challenge lies with their role in the reproduction and transmission of knowledge, which has to be considered in a long term's perspective.

The new paradigm is the *emergence of knowledge-intensive communities*, that is when people supported by information and communication technologies interact in a concerted effort to co-produce new knowledge. These communities are *the new agents of change* in a knowledge society.

In this new context, individuals should learn to learn, since everyone has instant access to all the knowledge produced by

the group. Students have to acquire generic learning abilities, the capacity to understand and anticipate changes and be prepared to carry out research tasks.

This has profound implication for the organisation of higher education. The new mission of universities is all about enabling people to evolve in a changing world, and providing knowledge workers with the basic tools so that they adapt themselves to varying occupational needs and perform smoothly within collective units.

II. THE NEW THREATS AND OPPORTUNITIES FOR UNIVERSITIES

1) The impact of globalisation

To start with, it is important to recall the new situation created by the rise of globalisation and market forces and to understand its potential impact on universities:

- Firstly, there is the crisis of the “Nation-States”. The globalisation of markets has gradually eroded their power in many areas. Educational systems are slowly losing their function as central agents of national integration.

This trend will have major consequences in terms of trans-national convergence of the higher education and research systems, competition among students, staff and resources and a greater mobility of people across a pan-European university landscape.

- Secondly, there is the erosion of the “Welfare-State”. The result is a relative reduction of the role of the state in market regulation along with a decrease of public funding in many sectors, including higher education and research.

Of course, the extent and form of this phenomenon vary across Europe; but there is a trend towards the commercialisation of knowledge and also considering research and education as private goods.

- Thirdly, there is the rise of an ideology and practices favouring market mechanisms in many areas of social activity. The market economy is associated with this ideology and practices that have penetrated many sectors, including education and research.

Business-like management practices are affecting universities. The observed individualisation of learning paths can also be interpreted in the light of this trend.

European universities have to perform in an increasingly “globalised” environment and find themselves competing with universities from other continents. This competition is healthy, but the right conditions have to be created so that they have the means to compete.

This is not only a financial problem, far from it. For example there is the inappropriate and poorly harmonised nature of arrangements for visas and residence permits for students and researchers, be they from the Union or from other countries.

2) Globalisation means a greater role for regions

In parallel with increasing globalisation, there is a growing importance of the local and regional dimension. Increasingly, world level research and innovation is based on strong regional links between researchers, enterprises and public authorities. In less favoured regions, universities can be particularly important as the principle location of research and links to international research networks. Universities can and should therefore play a central role in creating successful regional economies based on knowledge. Their activities permeate the local economic, social and cultural fabrics. Moreover, universities are present throughout the Union’s regions.

On the one hand, the role of universities in their region must become stronger. This is an essential part of achieving the “Europe of knowledge”, and will become even more important looking ahead to enlargement of the EU.

3) The impact of ageing

The third challenge that universities among other social bodies have to face is the ageing of the European population. One of the major consequences for higher education and research is the massive intake of older students with specific needs and characteristics.

The ageing problem will also affect the faculty staff. The system will be faced by a large number of retirements in a short period of time. This, together with a welcome rise in the mobility of scientists, will increase competition among universities across Europe.

4) Underinvestment in research in Europe

In March 2000, at the Lisbon European Council, Heads of State and Government set the Union the goal of becoming "the most competitive and dynamic knowledge based economy in the

world, capable of sustainable economic growth with more and better jobs and greater social cohesion" by 2010. Two years later at the Barcelona European Council, which reviewed progress towards the Lisbon goal, they agreed that research and technological development (R&D) investment in the EU must be increased with the aim of approaching 3 % of GDP by 2010, up from 1.9 % in 2000. They also called for an increase of the level of business funding, which should rise from its current level of 56 % to two-thirds of total R&D investment, a proportion already achieved in the US and in some European countries.

R&D spending may be increased in the Union only if human resources are available in sufficient numbers and with appropriate qualifications. Although further studies are needed to assess precisely the gaps in numbers and skills, available data shows clearly that human resources is a major constraint that needs to be addressed if the EU is to deliver on the Barcelona R&D objective.

R&D is particularly labour intensive. As a result, there is a strikingly linear relation across Europe, the US and Japan between R&D intensity and the share of researchers in the active population, with the latter respectively in the order of five, eight and nine researchers per thousand active population.

This requires urgent consideration, as the European labour market for researchers is already showing signs of tension in some areas. Human resources in S&T are globally close to full employment, with unemployment rates of 3 to 5% across the EU. Even at current R&D levels, the recruitment of new researchers to replace those retiring will be difficult in some EU countries due to their relatively older workforce in S&T. The problem will be aggravated if the demand for researchers outside Europe also grows, and the significant net outflow of S&T human resources from Europe to, primarily, the United States continues, European students are known to represent 36% of foreign students in the US, 73 % of whom are still present in the US five years after they moved (49 % ten years ago). Ministers of Research and Education stated at their joint Informal Meeting in Uppsala (March 2001) that this situation was cause for "grave concerns" for some countries.

In this respect, the Barcelona objective of 3% should be seen as a challenge but also as an opportunity for raising the profile of careers in S&T and as a powerful incentive for change in education, training and mobility conditions in Europe.

III. The emerging responses

1) Differentiation

While most governments in both the developed and developing world have well understood the need to expand higher education in order to attain global competitiveness in a knowledge-driven world, they have been equally reluctant to fund higher education at a level which would simultaneously sustain mass Higher Education and the Humboldt ideal. This is even more true when it comes to research.

Thus as the higher education sector has grown in size, so has it become **more diverse both in terms of function and institutionally**. Coming to terms with this diversity is one of the major challenges for higher education in the twenty-first century.

It should also be noted that this shift from an elite to a mass system of higher education has been accompanied by a shift in public policy with regard to universities.

University education is no longer funded publicly as an end in itself. **Rather it is funded for more functional, even utilitarian, purposes**. In other words higher education is a

means rather than an end. The expansion of public funding has not taken place on the basis of cultivating young minds for their own sake. Rather it has taken place on the basis of promoting societal, and not individual, values. Universities have therefore been given a mission, one which is, moreover, set by those from outside the university world - principally government. In the UK at the present time, for example the mission is quite clear; it is to aid economic competitiveness and promote social inclusion. While universities remain dependent upon the public purse this is inevitable, but this also implies a degree of flexibility to change in relation to externally defined goals which universities have felt it uncomfortable to come to terms with.

2) Evolutions of the Academic profession

The culture of the academic profession has, on the whole, lagged behind the changes in the structure and organisation of higher education and learning outlined above. Most academics, at least in some of our countries, are aware only of declining comparative salary levels, increasing staff/student ratios and increasing pressures on time to deliver high quality in both teaching and research.

Taken to its extreme one can envisage a university operating more like **a commissioning agency for teaching and learning,**

putting together the necessary production facilities and, crucially, ensuring quality control. There is, after all, virtually nothing that is currently taking place in a university, which could not, and does not, take place elsewhere. The only aspect of university activity over which universities have a monopoly is their ability to accredit courses. Given the huge cost of producing, and maintaining, high quality courseware for a global market in the future, a tendency in this direction cannot altogether be ruled out.

Such tendencies pose interesting questions about institutional integrity, and even the institutional loyalty of members of staff. The casualisation of academic staff is already well advanced, particularly on the research side. Any attempt to remedy this is clearly going to have to take account of these equally strong pressures towards outsourcing, which again is by no means unique to the university world.

Finally it is worth emphasizing that none of this is going to take place without **very robust systems of quality control and quality assurance.** At its extreme this also strikes at the heart of the Humboldt ideal - the academic profession no longer has the solitude and increasingly has less autonomy to control both the content and the assessment of the learning for which they are responsible. However, concerns about quality are not going to

go away - on the contrary they are going to increase in a more diverse, flexibly delivered, yet still largely publicly funded higher education system. In addition to governmental demands for accountability of public expenditure, there will increasingly be demands from more customer oriented students. Higher education will not be, and cannot be, exempt from the basic trading standards policies which apply to any area of industry and commerce.

All of this suggests that in order to create a more flexible, and professional academic profession, the sector is going to have to invest much more heavily in formal training and career development. We need to recognize that professional development in the academic world will be a continuing process across a lifetime and not merely a formal teacher training qualification obtained during the probationary years.

3) The changes in funding structures

During the 1990s a structural change concerning the expenditure by source of funds has taken place in most EU Member states. The share of government funding decreased for the whole Union from 88.7% to 81.5% within the decade.

While at the beginning of the 1990s, more than 90% of higher education funding came from the government in Austria, the Netherlands, Italy, France, Germany and Finland, at the end of the decade this share was only maintained by Italy. A number of countries such as the Netherlands, Spain, Greece, Sweden and Belgium recorded decreases in the range of 10 to 14 percentage points. These shifts have given the other funding sources more weight: in Spain, Sweden, and Belgium the category of 'other national sources' has won in importance, and in addition in the Netherlands the business sector as funding source increased considerably. For most countries, the latter category plays a more important role at the end of the decade (3rd report on indicators).

All of this, of course, has been achieved, and is likely to have to be achieved in the future, on the basis of declining unit costs. This is simply to state a political reality. Indeed the present public expenditure climate is probably, about as good as it will ever get so far as higher education is concerned. And yet there remain massive, and continuing, investment needs. They range from obvious deficiencies in buildings and equipment, through to continuing investments in teaching and learning technologies and on into the renewal of very variable student services. **It is difficult to see where the resources for this are going to come from without tapping into private sources of funding** in one

form or another - either from the students themselves or through the development of more public/private partnerships.

No university on its own can possibly find the investment required to produce and to maintain high quality courseware in all disciplines and combinations of disciplines, simultaneously. We have never done it with text-books and we shall certainly not do it with the new teaching and learning technologies. There are also huge deficiencies in investment in buildings and infrastructure - a walk round any university campus will demonstrate this. There is this pressing need to diversify income sources, but no clear consensus on where these income sources might lie. The heated debate over student fees has more than amply demonstrated the sensitivities of tapping this particular source, although in the long term there is probably no alternative to an increasing contribution coming from this source. Other possibilities include to develop industrial income through patents, licensing, royalties and spin-out companies. But even the most successful American institutions in this field, like MIT and Caltech, produce little more than 2-3% of their annual research income by this means - useful, certainly, but not a satisfactory alternative to core funding.

4) New governance models

The implications of all of these changes are potentially very far reaching for traditional systems of governance in higher education. In particular what Americans call "shared governance" - essentially the collegial system of decision-making - has found it very difficult to come to terms with the accelerating rate of change. Equally there is little evidence that a shift towards a more clearly defined system of line management, with a "command and control" style of institutional leadership, has been any more successful. Indeed, in comparable knowledge-based organisations in the private sector the shift has been in the other direction, towards flatter management structures with more participative decision-making.

Nevertheless, most members of the academic profession have found it difficult to come to terms with management techniques imported from the private sector - most notably management according to outputs rather than inputs and, especially management by objectives. This has not been helped by some of the more arcane aspects of the performance indicator industry imported into higher education. Nevertheless we still struggle to develop appropriate systems of governance which can simultaneously be collegial and participative, whilst also decisive and agile. All of this has placed a very high premium

on the quality of institutional leadership, as many of the failings in traditional approaches toward professional training apply equally in higher education management as they do among other academic and academically-related staff.

All these emerging responses need to be analysed and debated to identify more clearly good practices.

IV. The communication on universities

Now, I would like to recall some key points of the recently published Communication on the role of universities in the Europe of knowledge, which tries to address all the issues I have just mentioned.

As I said earlier, this Communication seeks to start a debate. It does not provide solutions but I hope that it will lead to a better understanding of how universities are and will be able to effectively play their role.

The European university landscape is primarily organised at national and regional levels. It is characterised by a high degree of heterogeneity in their organisation, governance and operating conditions. This heterogeneity can be seen between countries - because of cultural and legislative differences - but also within

countries since not all universities have the same vocation, nor do they react at the same pace to changes.

However, European universities face the common threats and opportunities I have just referred to and they have a common need to adapt to this evolving context. The structural reform inspired by the Bologna process constitutes an effort to organise that diversity. This will increase their competitiveness both within Europe and globally.

The Communication examines the place and role of European universities in the knowledge society, offers some ideas on universities in a European perspective and sets out the main challenges along with some issues for consideration.

What are these issues? I will refer to those falling into two broad categories:

- accessing sufficient financial resources;
- consolidating excellence;

Resources

It is indeed essential to ensure that European universities have sufficient and sustainable resources. This is true for education

and research alike. The worsening under-funding of universities jeopardises their capacity to keep and attract talents and to strengthen the excellence of their research base.

In this context, the target set by the Union to increase Europe's research effort to 3% of its GDP becomes extremely relevant.

Universities have to participate in this effort by raising more money for research from public and private sources.

It is also important to note that the new instruments on the 6th Framework Programme provide a more sustainable way to finance research activities. This is also true with the Marie Curie Actions.

Universities have access to four main sources of income: public funding for research and teaching, private donations, income by selling services particularly to the private sector and contributions from students.

Excellence

The aim must be to bring all universities to the peak of their potential. A precondition for this to happen is a context in which long-term planning is possible. Excellence does not grow overnight!

Accumulating the intellectual capital represented by world-class teams of researchers takes a long time and requires the possibility to recruit on a world-wide basis. Moreover, the recognition of excellence depends on the critical attitudes of peers, measured not country-wide, but Europe-wide and indeed world-wide.

Member States thus need a general consensus within political and civil society as to the contribution which excellence in research and in universities makes, and on the need to foster it. Such consensus should seek to insulate the research sector from the hazards of changing financial circumstances. Here, it is striking to note that a bipartisan consensus to support federal expenditures for research has existed in Washington for several decades!

Another condition needed for excellence is that universities be enabled and encouraged to develop more interdisciplinary work. As I said before, advanced research increasingly falls outside the confines of a single discipline. But this requires flexibility in the organisation of universities, in the way the careers are evaluated and in the attitude of departments, which should accept cross-border work.

In this context, universities have to make choice. They have to identify areas where they have attained, or can reasonably expect to attain, excellence in research, a process that should reflect the results of objective evaluation.

This may lead to increased specialisation and concentration of resources.

However, one should not forget the European dimension and the role of the Networks of Excellence foreseen in the 6th Framework Programme. With this new approach, the Union wants to foster the building up of a virtual capacity for excellence, which has the critical mass needed and is, whenever possible, multi-disciplinary.

Last but not least, the Union needs a pool of top-level researchers, engineers and technicians. There is a paradox here. The Union produces slightly more graduates than the USA but is has fewer researchers than major technological powers.

The problem is with the business sector where there are, proportionally, fewer researchers than in America and in Japan. We should hope that this situation would change, especially if Europe reach the ambitious target of spending 3% of its GDP

for research and technological development, with 2% coming from industry!

CONCLUSION

Main messages

Europe has the ambition to become the most advanced knowledge-based society and has many of the ingredients necessary to reach that goal. Universities are European's best assets for doing this. As a matter of fact they have been around since the middle age in such place as Oxford, Prague, Bologna, Paris or Salamanca just to name a few.

And in these old days they were part of a Europe of knowledge where scholars could move freely from place to place.

But universities have to adapt to a new Europe and indeed a global world. They have to develop new curricula in the context of the Bologna process, to move toward multi-disciplinary research, to foster mobility and, at the same time, to compete for the best minds.

The Communication on the role of universities in a Europe of knowledge addresses all those issues and more. I am sure that

the European University Association will contribute to the debate. I know that EUA has drawn the attention of its members to the Communication. I hope that many will react and I look forward to hearing from them.

I would like to stress four main messages for your meeting:

1. The debate is open on the communication and we expect a broad participation and discussion from all stakeholders in the next weeks, in view to feed the future action plan to be set up. Of course, I expect that you focus on **Universities as a key actor in the ERA.**
2. The question of the necessary increase of public financing the research activities of universities is a crucial issue for the future of European research.
3. The co-operation and the links between universities and enterprises (specially SMEs) must be reinforced and improved in view to raise the competitiveness of European research and industry. But we must also integrate the regional and local dimension of the universities and research activities.
4. **Human capital is our European strength** and we need to build on it. The main future role of universities is to better answer to the challenge of producing 500 000 high level researchers capable of answering the needs of both research

excellence and industrial competitiveness in the next ten years.

Thank you for your attention.