

EUROSCIENCE NEWS

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Will Europe have its research area?

Until Commissioner Busquin announced plans for the European Research Area, it was arguable that European Science Policy lacked substance. The Commission, of course, had been spending, but this in itself never constituted a policy. Essentially, its wings were clipped early on by member states, unwilling to let the Commission fund anything that could be supported nationally. The 'no duplication' dogma prevented Brussels from funding anything outside very specific, predetermined areas, and limited its field of action to the narrowest of dirigiste enterprises. Not only was 'responsive mode' funding excluded, but the nature of the support was also tailored to avoid competition with National Agencies.

Small wonder, then, that the average European scientist felt excluded by the rules. The disappointment of ordinary researchers with the whole structure of European funding has grown even amongst strong supporters of European integration.

With the advent of the ERA, Commissioner Busquin has potentially ushered in a completely new spirit. For years, EUROSCIENCE has advocated that there

should be some alternative to directed programmes and to the cumbersome regulations they entail. Many ideas have been put forward. We have advocated, for example, opening up national funding within the Union to scientists from any member state, which would not require the creation of any new bureaucracy, but which, of course, does not resolve the problem of developing some kind of European strategy. A European Research Council has recently been suggested, and was the central theme of the Conference held in Copenhagen (October 2002) under the Danish Presidency. Many feel that the European Science Foundation (ESF) has a part to play. The debate now extends to the nature of the institution, to its responsibilities, to its constitution and to its structure.

It seems amazing that national monopolies of science funding should still be with us today, despite all the lip service paid to the international nature of science and to its importance for our future. The Lisbon declaration by the European Council (March 2002) was proudly aimed at turning European society into a knowledge-based economy. Funding for Research and Development is to increase to at least 3% of GDP (Gross Domestic Product) by 2010, but who will be in charge of that? While businessmen and bankers run multinational companies, most scientists are still hemmed in by rigid national funding systems, access to which is strictly controlled, sometimes even on an institutional basis. Compared to the situation in the USA or in Japan, this is almost laughable. It is no exaggeration to say that European science remains balkanised.

Copenhagen was a milestone in developing a new spirit. Once things begin to move, it becomes very important not to misinterpret the direction they are going in. The eyes of all European researchers are now on what solution will be chosen. The consensus is that it should be 'bottom up' i.e. responsive mode funding of basic research, with no more attempts to be dirigiste, please. It is also crucial that administrative structures and procedures should be as light as possible. The concept of juste retour should be abandoned in favour of excellence.

Of course, there is the usual question. How much money, and where from? The answers are actually simpler than appears. First, the funding for basic research should match existing framework funds distributed

through Brussels, viz. 5% of the total for science and technology in the Union. Second, with the Union about to enlarge, it is clear that current policies of supporting certain sectors whose difficulties are inherited from the past cannot extend further. Much better, therefore, to restructure the activities of the Union so as to support the future economy of Europe. This, surely, is the whole point of the Lisbon target.

After all this public discussion, something must now be done. If the matter drags on indefinitely with no decision, and if the status quo continues, the consequences for the morale of European researchers will be incalculable. Expectations have now been raised, both in Lisbon and in Copenhagen. There is a clear agenda. If decisive action does not follow now, this will be interpreted as yet another European opportunity missed, yet another example of national governments signing up to grand statements and then doing nothing.

This will be a clear signal to young would-be scientists, so please get it right.

Jean-Patrick Connerade, President

Résumé

Avec l'Espace européen de la recherche (EER), le commissaire Busquin a inauguré une nouvelle époque dans la politique de la science en Europe. Celle-ci souffre entre autres du dogme de la non-duplication entre Etats-membres et Commission, d'un financement dirigé vers des domaines prédéterminés et du manque de compétition entre les agences nationales.

Au sein de l'EER, un Conseil européen de la recherche vient d'être proposé, qui a donné lieu à une conférence à Copenhague sous l'égide de la Présidence danoise de l'Union. Le but de ce Conseil est d'établir, pour la recherche fondamentale, souplesse et compétition hors du cadre rigide national. Ainsi combattrait-on la balkanisation de cette recherche en Europe, tout en créant une structure de gestion aussi légère que possible.

Les modalités de financement et celles de l'inclusion des pays en voie d'accession doivent être étudiées. Mais une action décisive est attendue, et les regards sont tournés vers les gouvernements, eux qui se sont engagés au Conseil de Lisbonne à accroître considérablement l'effort de recherche en Europe avant 2010.

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Science and Technology Based Professions in Europe

Over 90 participants from 25 countries took part in the EC-sponsored EUROSCIENCE meeting on science professions and the future of young scientists which was held in Bischenberg (Alsace, France) on November 6-9 2002. The aim of the Conference, introduced by R.Liberali on behalf of the EC, was to draft practical recommendations to implement the concept of a European Research Area. Main themes and conclusions of the meeting are summarized below.

Changing research practices need additional competencies related to industrial, environmental and societal concerns: the Conference stressed the importance of team or project management, communication skills

President Jean-Patrick Connerade and former President Claude Kordon in action



and budget planning and the need to generalize schemes already addressing these objectives across Europe, using the methodological guidelines already drafted by their initiators.

New jobs are anticipated from the increasing needs of research. Unfortunately, the exceedingly heterogenous and rigid rules governing most European labour markets may

The work of 'post-docs' should be recognized as a professional activity of major importance

fail to attract a better share of these jobs to Europe; they also deter the setting up of targeted task forces and mobility – thus interfering with the emergence of a 'eurocompatible' labour market in Science & Technology (S&T). The Conference therefore proposed a *Charter for Young European Scientists* capable of

bypassing, temporarily at least, national labour regulations, and to entrust the management of corresponding contracts (whether supported from EC or private sources) to a *European Research Contract Managing Office*.

While aware that temporary research contracts have adverse effects (as is well documented, e.g., for the United Kingdom), the Conference concluded that they would help to ensure a wider scientific labour market in Europe. To facilitate this outcome, the work of 'post-docs' should be recognized as a professional activity of major importance for S&T; this would involve steps to enhance career development through harmonisation of salaries (at the market level) and transferability of social benefits. In other words, the risks for young scientists of increased job flexibility should be compensated for by professional recognition and improved access to the social protection traditional in European societies.

Participants showed an increasing awareness of their responsibilities towards society and stressed the importance of training *young researchers* – as well as *established scientists* – in re-appraising the role of science in society.

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Résumé

La conférence de Bischenberg sur les nouveaux métiers de la science et de la technologie en Europe (6-9 Novembre 2002) a proposé quelques recommandations adressées à la Commission européenne: a) les compétences des jeunes scientifiques doivent être étendues en fonction des enjeux industriels, environnementaux et sociétaux qui affectent les pratiques de recherche; b) la rigidité des marchés du travail européens pourrait être contournée par l'adoption d'une Charte des jeunes scientifiques européens et par la création d'un Bureau européen de gestion des contrats de recherche; c) en compensation d'une flexibilité accrue, le travail des postdocs devrait être reconnu comme une activité professionnelle à part entière et les salaires harmonisés au niveau du marché.

Workshop on European Doctoral student mobility

Alerted by its younger members who experience obstacles to short-term mobility during their PhD training, EUROSCIENCE started an initiative in 2001 for the creation of an "Award for European Doctoral Student Mobility". This (symbolic) award was to be bestowed upon academic institutions that had made outstanding efforts to facilitate the mobility of PhD students in Europe. A proposal for funding presented to the European Commission was unfortunately rejected on practical grounds, although the idea itself was judged valuable.

In order to rethink the initiative, a one-day workshop was held at the International Science Forum in Heidelberg on October 12, 2002, with financial support of the Stifterverband. This workshop was not only attended by the initial promoters of the project, as for example the Marie Curie Fellowship Association, but also by representatives from Eurodoc, PI-Net (Postgraduates International Network) and the DAAD. Walter Denk from the EU office of the German Ministry of Education and Research gave an overview of the actions that are planned regarding mobility within the 6th Framework Programme.

LAUNCH OF A NEW MAGAZINE ON SUSTAINABILITY!

The first issue of LaRevueDurable, a bi-monthly, interdisciplinary magazine appeared in November 2002. Its editor, Jaques Mirenowicz, who is also a good friend of EUROSCIENCE, aims to publish articles focusing on research and innovation that promote sustainable development, encouraging contributions that respond constructively to the challenge of sustainability. Though published exclusively in French, contributions written in English, German or Spanish will be translated. For further information (and free copy of first issue), contact j.mirenowicz@cerin.ch.

In open discussions, the participants considered all aspects of the award project, and it was agreed that instead of pursuing the idea of a Mobility Award, an international conference should be organised towards the end of 2003, where universities and research institutions can exchange their experiences regarding PhD mobility. The aim of diffusing good practice in this field will be further supported by an ongoing publicity campaign. The Gulbenkian Foundation in Lisbon has already flagged its great interest in hosting the conference. If you would like to join us in its further planning, please contact us via dmeyer@mariecurie.org or benefhoff@web.de.

Benedikt Hoffmann

Colloquium on transportation across the Alps

The dramatic accident in the Mont Blanc tunnel has crystallized the long-standing opposition to the traffic of heavy trucks from those living in the Alpine valleys. However, the technical background of options to provide a sustainable future to the growth of intra-European commerce is not generally known.

Experts from four different European countries met to debate these complex questions at a one-day colloquium organised by EUROSCIENCE-Leman and the AFAS (Association Francaise pour l'Avancement des Sciences) on September 26 2002. The meeting took place at the Archamps (Haute- Savoie) Technology Park, thanks to the hospitality of the French MP, Claude Birraux, President of the French Parliamentary Office for Science and Technology Assessment and a member of EUROSCIENCE.

Some of the themes that were discussed are outlined below:

- transportation across the Alps – a European problem, calling for European solutions;
- the lack of co-ordination in rail standards across Europe (signals, voltages, regulations) tends to favour road transport;



P. Salini (centre) moderates debate between U. Balmer (Swiss Ministry for the Environment, right) and J-C Boual (French Research Institute on Transport) at Archamps colloquium

- the share of road transport as compared to rail is constantly decreasing: how can one reverse this trend? (taxes? regulations?);
- what is the future of combined transport (putting trucks or containers on trains)?;
- status of the French-Italian Lyon-Turin rail link. (new low-profile carriages are being tested to allow passage through existing tunnels);
- new technologies (robotized loading of vehicles on trains, progress in signal technologies to locate trains and provide information to customers);
- risk assessment for transportation of dangerous goods in tunnels.

For a complete transcript of the colloquium, see www.euroscience-leman.org.

Robert Klapisch

MOBILITY: NOVELTIES in THE 6th FRAMEWORK PROGRAMME (FP6)

FP6 includes an activity, "Human resources and mobility", now renamed "Marie Curie Actions", with a budget increased from 900 million euros in FP5 to 1580 million in FP6 for the period 2003-2006. The parts of this activity that are aimed at enhancing the mobility of researchers and securing their return and reintegration to their home base, contains a number of new features, some of which have been repeatedly proposed by EUROSCIENCE, and less restrictions on the definition of beneficiaries.

For further information, please visit: http://europa.eu.int/comm/research/fp6/mariecurie-actions/action/action_en.html, and especially the sections on Early Stage Training, Individual Fellowships, Return and Reintegration Mechanisms. Calls for proposals will be issued by the end of 2002.

FEATURES

Editors note: The Features articles below focus specifically on issues surrounding the creation of a European Research Council. The important and ongoing contributions of EUROSCIENCE to this debate are summarised below (first article), followed by two articles that elaborate on the background and future perspectives for the issues involved.

The view of Euroscience

Revived by the European Science Foundation (ESF), which set up a high-level group to reflect on the project of a European Research Council (ERC), the idea of creating a new organism dedicated to funding long-term basic science in Europe has recently been debated at a conference organised by the Danish Presidency of the European Union Council in Copenhagen on 7-8 October.

The EUROSCIENCE Science Policy Working Group had already conducted a survey (Spring 2002) within the scientific community to evaluate the need for such an ERC and examine its possible structure and mode of action. The results of this survey (for details, see www.euro-science.org) are very much in line with a similar study conducted by ESF and indicate that, for most grassroots scientists, a future ERC represents a much-needed tool for fostering curiosity-driven science that cannot be currently funded by existing programmes. In particular, the Framework Programme (FP) is not aimed at promoting basic research but at promoting economic competitiveness and providing social benefits within Europe, although the new networks of excellence may be targeted towards funding basic science. In addition, FP is perceived as lacking flexibility and its cumbersome administrative system prevents most laboratories, especially small ones, from competing for funding. The ESF has set up the Eurocores programme, but this is still a very small-scale effort, although extremely valuable. Thus, an ERC could be very useful in promoting a larger base for competition (namely European, rather than national) that, together with an increase in funding, would help raise the level and volume of research, as well as promoting excellence.

What then should be the mission of such an ERC? As mentioned previously, a large majority of European scientists is asking for an organism dedicated to the promotion of basic research in a flexible way. More specifically, considering the probably slow building up of an ERC, workgroup members propose that the objective of the future ERC should consist in funding notably emerging fields of science (both "hard" and "soft" sciences). Such fields are underfunded in Europe, usually because of the lack of reactivity of research funding institutions.

For grassroots scientists, a future ERC represents a much-needed tool for fostering curiosity-driven science

With regards to funding mechanisms, a bottom-up approach is overwhelmingly advocated. Projects should be retained on the basis of their scientific value alone, as long as they correspond to the fields of research defined by the ERC board. Thus, funding should not be subject to the 'fair return rule', but only linked to the quality of the project proposals, their scientific merit being evaluated by a peer review system. All basic research, but most particularly in emerging fields of science, including natural and social sciences, should be considered, with decisions taken by the ERC board. New fields arising at the border of existing disciplines should be encouraged.

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Résumé

Depuis l'ouverture du débat sur le Conseil européen de la recherche, le groupe de travail d'Euroscience sur la politique de la science a conduit une enquête auprès des chercheurs au moyen du site Web de l'association. Les résultats de cette enquête sont semblables à ceux de l'enquête similaire menée par l'ESF:

pour la plupart des scientifiques de la base, un ERC représente un outil essentiel de financement de la recherche fondamentale 'curiosity-driven' en Europe. Puis le groupe de travail a rédigé un ensemble de propositions qu'on trouve sur le site www.euroscience.org. En résumé: Un ERC fournirait une base plus large à la compétition (européenne plutôt que nationale), ce qui, avec une augmentation du financement, élèverait le niveau de la recherche, favoriserait l'excellence et accroîtrait le volume de la recherche fondamentale. Cet organisme devrait fonctionner de façon flexible. Il devrait soutenir les champs de recherche émergents (en sciences dures, humaines et sociales) qui, en Europe, sont souvent délaissés. L'évaluation des projets devrait reposer sur leur seul mérite scientifique.

A Dissenting Voice

I have very strong reservations about an ERC for two major reasons, one budgetary and one because I consider that the structural organisation of European science renders many member states incapable of profiting from an ERC. First, a realist's view is that an effective ERC that could make a difference to the competitiveness of Europe (requiring an institution with the power, independence and financial muscle of a National Institute of Health), is simply out of reach. Second, it is premature to create a pan-European structure over what are essentially weak foundations, built in some member states upon under-funded but at the same time non-democratic and corrupt institutions. Indeed, the very scientists who might be expected to profit from such a Council, the potentially most creative, the 30-40 year-olds, in many member states are few in number and ill-equipped to develop independently.

Perhaps the debate on an ERC would be better advanced now by defining clearly its precise ambition – a scalpel to promote change by stealth, including for example, funding a select few by career development awards, or as a "colossus" to lift the funding base towards the magic 3% of GDP, "wished" by the Council of Ministers.

Barry Holland

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Climbing the steps towards a European Research Council

As early as at the beginning of the 1990s, researchers and science administrators argued that Europe had inadequate, bureaucratically conceived funding structures, and that the bodies that represented the European academic community were too many and too weak. Therefore, many of them agreed that a reconfiguration of the role and function of Science & Technology organisations was needed at all levels (local, regional, national, and European).

Most importantly, this was felt to involve a change in the relationship between national (and in some countries, even regional) funding structures for basic and strategic research, and an international orientation of these knowledge arenas. In order to develop a 'critical mass' of high-quality research in relevant areas, Europe appeared to be in need of a transnational funding structure that is capable of creating both a co-operative climate favourable to developing new ideas, with adequate funding modes and mechanisms, and fierce competition of the best and brightest researchers from all over Europe. In 1993 it was stated "as probably self-evident that such a wide scope of activities can only be kept under the auspices of an institution that has

been designed as flexibly and openly as possible in order to allow for the participation of representatives from other areas of public life (especially industry). The status of such a European Research Council (ERC) or a restructured European Science Foundation must be that of a non-governmental international association."¹

Now, almost ten years later, we have to admit that the time was probably not yet ripe for the idea of an ERC. But, as Victor Hugo once wrote, there is "nothing more powerful than an idea whose time has come." In the beginning of 2002 the time for this idea had come, and in the January 18 issue of *Science*, eminent scholars such as Enric Banda, Hans Wigzell, and Ernst-Ludwig Winnacker declared themselves in favour of splitting the EU Framework Programme and of creating an ERC as an independent organization "more clearly under control by scientists"² In the fall of this year, I had the opportunity to call for a "Fresh start for European science" in *Nature*³, and since then the ERC has stayed on the European agenda.

From its first day in office, the Danish presidency of the EU Council strongly supported the idea of an ERC and it was at a conference in Copenhagen organised by the Danish Research Council on October 7-8 2002 that more than 200 eminent scholars, administrators, and politicians met to discuss the need for an ERC. In his opening speech, Gottfried Schatz presented a "Scientist's View" (see p6). He demanded to get rid of the far too bureaucratic funding structures in Europe – a view that still reverberates in the ears of all participants. And in

spite of some controversial opinions on structures and procedures, and intense discussions in three parallel sessions that followed, a large majority opted in favour of establishing an ERC.

Given this large majority and the recent political debates on a European lack of competitiveness, it is now time to climb the next steps, to make the idea of an ERC become a reality. As soon as possible we should establish a working group which will hopefully be able to develop a concept meeting to address the quite different, but legitimate interests of science, society and politics. It will have to come up with real options for the creation of an ERC. As Goethe put it at the beginning of "Faust": "Words have been interchanged enough. Let me at last see action too."

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Résumé

Le diagnostic sur les structures de recherche en Europe (inadéquates, bureaucratiques) et sur les organes représentant la communauté scientifique (trop nombreux, trop faibles) date du début des années 90. Il apparaissait qu'une évolution devrait impliquer, pour la recherche fondamentale, une modification de la relation entre structures nationales et orientation internationale. La construction d'une masse critique européenne dans nombre de secteurs apparaissait incontournable et le concept d'un Conseil européen de la recherche était évoqué.

Dix ans plus tard, l'idée a mûri, et comme l'écrit Victor Hugo, 'rien n'est plus puissant qu'une idée dont le temps est venu'. Les revues *Science* et *Nature* ont ouvert leurs colonnes aux partisans d'un tel Conseil. Puis lors de la conférence de Copenhague (Octobre 2002), le discours d'ouverture prononcé par Gottfried Schatz (voir *ES News* 22, page 6) a plaidé pour une structure de financement de la recherche fondamentale qui évacue la bureaucratie – une vue qui a été soutenue par une majorité des participants. L'action est maintenant nécessaire, la compétitivité de la recherche européenne l'exige.

¹ Wilhelm Krull, "European Science and Technology in Transition: Opportunities and Limitations for Changing Research Policy Structures at European Level", October 1993.

² Hans Wigzell, "Framework Programmes Evolve", *Science* (2002) Vol. 295, 444

³ Wilhelm Krull, "Fresh start for European science", *Nature* (2002) Vol. 419, 108



Do we need a European Research Council? A scientist's view¹

Science politics, why and how?

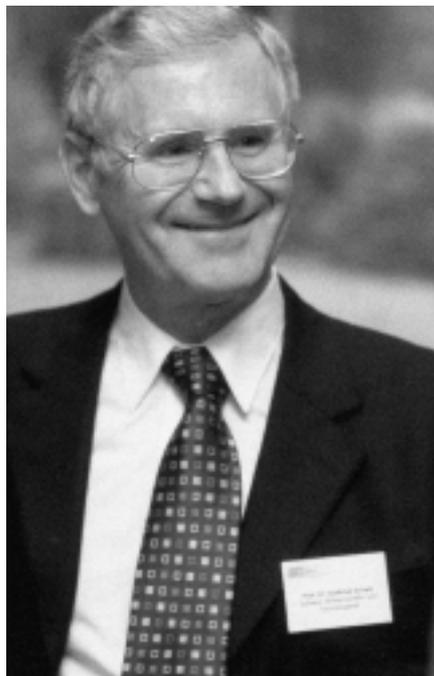
There are different ways to do science politics, and most of them do not work very well.

Here is the most common way: political and administrative bodies have a vision, draw up a detailed plan, and then get the scientists involved. The result tends to satisfy politicians and administrators much more than the scientists. Another way to do science politics is through mixed committees with politicians, administrators and scientists. This approach avoids controversy, but the decisions are generally not based on a clear vision, are riddled with compromises, and are rarely satisfactory. The third way leaves everything to the scientists. This way is rarely followed because there are few places in the world where scientists have that much power. And that's good because they should not have it: if public money is involved, our political representatives cannot stand aside, but must see to it that tax money is spent in the public interest.

Fortunately there is yet another way to do science politics: In a first step, the scientists decide what is needed. In a second step, they discuss their vision with representatives from politics and, later, with administrators to reach a workable solution. This approach has the advantage that it starts with a scientifically sound and coherent concept, and that compromise only enters later. Yet each party can still make sure that its interests are met. Political strategy and administrative expertise are important and we scientists should never forget that we are amateurs in these fields and need help. We should always remember that we do not have a God-given right over the taxpayer's money. When we participate in formulating science policy, we should firmly uphold common sense and the interests of science, but should do so in a spirit of modesty and cooperation.

Why do we need the European Research Council?

First, most of our European instruments for funding research exclude the humanities and other areas of scholarship, which do not promise "practical" benefits. This is very shortsighted, because most of Europe's urgent problems are social and political problems, which the natural sciences or technology alone cannot solve. Mathematics and the natural sciences are at the heart of our Western culture, but their overwhelming preponderance over the humanities and social sciences destabilizes our societies. Europe badly needs a funding body that supports all forms of science. I am using the word "science" in the Germanic connotation of "Wissenschaften", which includes all forms of scholarship.



Second, a European Research Council (ERC) should become both a counterpoint and a yardstick for many of our antiquated academic structures. It would be hopeless trying to modernize all of these systems in a coordinated manner. But we could offer European researchers the alternative of getting funds from an efficient European agency whose decisions are largely immune to local influence. Having to compete with others is a very persuasive incentive for national bodies to become

better. An ERC could bypass national barriers and allow researchers, particularly young researchers, to be judged by peers from abroad.

The third reason why I support the idea of an ERC stems from my concern that Europe is neglecting long-term basic research. I do not share the view that "basic", or "free", research is fundamentally different from applied research. I believe there is only good research and bad research. Basic Research has a long and uncertain time frame and a very broad focus, whereas applied research usually has a shorter time frame and a narrower focus. Both types of research are important, but the short-term mentality of today makes long-term basic research particularly vulnerable. We should therefore entrust the funding of long-term research mainly to the public sector. The European Framework Programs have mostly focused on short-term applied research. But if we concentrate too much on applied research, we will soon have nothing to apply. Europe badly needs a body that funds long-term research in all areas of human inquiry.

How to go about it

How could we start? I would suggest asking a small group of internationally known, broad-minded and politically astute scientists from different disciplines to forget about all possible constraints and tell us what an ERC should look like. We should then ask this group of scientists to discuss their vision face to face with top politicians. Administrative experts should be consulted only after the blueprint of an ERC has won the approval of both the politicians and the scientific community. As the next step, we should persuade an eminent scientist to be President of the new organization and help it to a promising start. I would give the new President as much freedom as possible in selecting the Executive Committee and drawing up the organizational structure. I assume that the new leadership would aim for a reasonable balance of disciplines, nationalities, and gender, but I would encourage them to keep the usual bickering between countries and disciplines at arm's length. Scientists respect excellence and rank a new organization largely by the reputation

¹ Based on Professor Schatz' opening speech given at the Copenhagen Conference in Oct 2002

of those who are in charge. EMBO's immediate success owed much to the prestige of its founders, and the same is true of CERN.

One of the most important tasks of the new scientific leadership would be to ensure an effective and transparent separation between political and scientific responsibility. Failing to do that has made many scientific organizations go sour. If the ERC is to be run with public funds, politics must of course decide on the overall goals, the funding level, and the way performance will be controlled. But then politics must be wise enough to step aside and leave the actual operations to the scientific leadership. If the science of a project demands the formation of networks, networks should be funded; but they should never be required. If scientists want to work on a topic that happens to be considered "relevant" at the moment, so be it; but "relevance" should never be a must. And if scientists want to do an interdisciplinary study, fine; but interdisciplinarity should never be a condition.

Should the ERC set scientific priorities? In principle yes. But in practice no, because such decisions are always arbitrary and might prevent some of the most innovative research. The greater a scientific discovery, the more it surprises us. If the ERC adopts this principle, it will make mistakes. But it should not be afraid of mistakes, because mistakes are part of every innovation. If living cells never made mistakes in copying their genetic material, we would all still be bacteria. If our funding policies are based on central planning and too cautious, we will avoid not only unpleasant surprises, but also pleasant ones.

And finally, we should start small. A European Research Council might begin by awarding postdoctoral fellowships just like EMBO, but unlike EMBO the fellowships would be for all scientific disciplines. The next step might be predoctoral fellowships. These could be tied to the condition that the receiving institutions offer an acceptable graduate program. Predoctoral fellowships could thus be a powerful incentive for Europe's universities to establish graduate programs, which some of them have failed to do. If we want to strengthen Europe's research, it is a good idea to start with the researchers. Once fellowship programs have proven successful,

the ERC could expand operation to include individual research grants and more ambitious programs, such as big central facilities for European research.

When I said that an ERC should start small, I did not only mean its financial scale. I also meant that the Council could evolve from structures that we already have. EMBO and the EMBC are such structures. Why not build on this base of existing strength? For example, we could let EMBO evolve into an ERC for all scientific disciplines. The new Council would not be created out of the void in six days, but evolve in a Darwinian process from what's already there.

Europe badly needs a body that funds long-term research in all areas of human enquiry

An ERC should not replace, but complement the current European Framework Programs. Even though long-term research and applied research are not fundamentally different, they have their own psychology and their own mechanisms. Technological innovation that exploits already existing scientific information often profits from organized coordination, and the review of applications must often accept that some key proprietary information cannot be divulged. In contrast, innovation in long-term basic research is usually driven by individuals who follow their scientific intuition and who may be hindered by an obligatory planned strategy.

A partnership between the ERC and EU Framework Programs

All of these general guidelines are not very original, yet we violate them all the time. The victims are scientific innovation – and the taxpayer. Europe's science programs started off on the wrong foot, but this is not the time for criticism. It is the time to be optimistic and to look ahead. During my years in research I have learned that good science is not logical, planned and pedan-

tic, but intuitive, often chaotic, and full of surprises, just like good art. And during my years in science politics I have learned that science policies are only effective if they are simple. I have learned that science and art are both fragile flowers that wilt quickly when we manipulate them too much. We must prepare the ground for them, go for the best talent, and then remove all barriers that prevent these talents from blossoming and producing fruit. We must have the courage to be selective, but also the wisdom to step back. If we follow these principles, Europe's science could be second to none.

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Résumé

A la question: 'Avons-nous besoin d'un Conseil européen de la recherche', l'auteur répond du point de vue du scientifique, mais aussi en faisant appel à son expérience en politique de la science. Après avoir envisagé trois façons non satisfaisantes de conduire la politique de la science, il préconise une démarche 'bottom-up' qui maintienne et les intérêts de la science et ceux du contribuable. Il souhaite que le Conseil européen de la recherche soit bâti sur ce modèle.

Un tel Conseil devrait s'adresser à toutes les sciences ('dures', humaines et sociales). Il introduirait la compétition parmi les organismes de recherche nationaux. Il financerait la recherche de base à long terme et serait donc un complément aux Programmes-Cadres de la Commission européenne.

Sa mise en place devrait veiller à une séparation claire des responsabilités scientifiques et politiques. On ne devrait pas craindre de faire des erreurs. On pourrait commencer à petite échelle, d'abord avec un système de bourses pour les postdocs puis les doctorants. On inviterait les universités à établir de vrais programmes doctoraux. Puis on instaurerait des contrats de recherche individuels, puis des programmes plus ambitieux. EMBO est une bonne structure-modèle, il pourrait évoluer en un Conseil européen de la recherche, en s'ouvrant à toutes les disciplines.

ES2002

Euroscience General Assembly 2002

EUROSCIENCE held its 3rd biennial General Assembly in Strasbourg on November 10th 2002. This followed a welcoming reception held on the previous evening, which was hosted by Alain Levy, the Deputy Mayor of Strasbourg, in the splendid and historic Hotel de Ville (next to where the Marseillaise was first sung). Earlier in the week, EUROSCIENCE had also organised a highly successful three-day conference on New Science and Technology Based Professions in Europe in Bischenberg.

MEETING OF OUTGOING BOARD

The last meeting of the outgoing Governing Board took place on the evening preceding the General Assembly at the Maison Kammerzell, a restaurant in a picturesque Renaissance building near the Cathedral. Two main agenda items were discussed at length, finances and membership fees, leading to specific proposals to be put to the General Assembly (see below).

PRESIDENT'S REPORT

President Jean-Patrick Connerade welcomed participants to the General Assembly that was held in Strasbourg, which was also the venue for the EUROSCIENCE Constituent Assembly in 1997. He thanked the University for hosting this event and the city of Strasbourg for supporting it. In describing the activity of EUROSCIENCE, he stressed how well our association has evolved, and the importance of the many and varied initiatives taken by its individual members (see below), reflecting the role of EUROSCIENCE as a 'bottom-up' organisation. He also noted that the move of the Secretariat from Paris to Strasbourg two years ago has enabled the association to strengthen its base by establishing an independent Office, employing its own staff. On behalf of all the members of EUROSCIENCE, the President thanked Laurence Nottellet and Raymond Seltz for the tremendous work they are doing

Establishing the new office and coping with two Conferences in the same year was a major achievement.

In his report, he highlighted the activities of EUROSCIENCE over the last two years:

- The Budapest Conference (June 14-16 2002), organised jointly with EARMA. This major event, in which EUROSCIENCE'S contribution focused on a workshop on "Science for Reduction of Risk and Sustainable Development of Society", was very successfully managed by Alik Ismail-Zadeh, a member of our Board (see report in EUROSCIENCE News 21);
- Another major event was the recent conference on "New Science and Technology based Professions in Europe", held in Bischenberg (November 6-9 2002) – a great success by all accounts. It was supported by the European Commission, with Claude Kordon, former President of EUROSCIENCE, chairing its organising committee (see report on p2);
- Following up on an earlier meeting in 2001, a lively workshop on "European doctoral student mobility" was held in Heidelberg on October 13, 2002, supported by the Stifterverband für die Deutsche Wissenschaft. (see report on p3);

The President announced that the Rammal Award Ceremony, sponsored by EUROSCIENCE, will take place on December 3 2002 in Paris. This year's recipient is Professor Ahmed Teebi, a specialist in paediatrics and medical genetics at the Hospital for Sick Children, Toronto.

He then went on to describe how EUROSCIENCE is increasingly consulted on big European issues, as a relevant source of information and as a 'bottom-up' organisation, offering our partners the opportunity of hearing the "voice of scientists". This was clearly recognized, for example, by the invitation extended to several members of EUROSCIENCE to participate in a recent conference in Copenhagen to debate the issue of a European Research Council (see feature articles in this issue, p4-7).

Finally, he stressed the need to focus our efforts in the near future in preparing the major EUROSCIENCE event planned for

Stockholm in August 2004 – ESOF2004 – the first pan-European scientific conference.

The President then called upon members to help increase individual membership of EUROSCIENCE, proposing that we all invite six friends to join, providing each with appropriate documentation about our association.

In conclusion, the President Connerade thanked members of the outgoing Board for their contribution to the growth of EUROSCIENCE and welcomed the new Board.

The President's report was unanimously adopted (with one abstention).

NEW GOVERNING BOARD ELECTED

The Secretary General reported on the results of the last election, which took place by postal ballot (for the first time) in June 2002. Five new members were elected to the Board – see full list of new Board members on p12. A total of 34 candidates had stood for election (of which 13, for re-election). He pointed out that while the statutes allowed for 24 members of the Board, it had been decided by the outgoing Board to reduce this to 17, so as to allow for co-optation of members taking up special responsibilities for EUROSCIENCE, and that Anna Schytt (from Swedish Television) resigned from the Board after the election to take over new responsibilities in connection with ESOF2004. The first 18 candidates topping the voting list were therefore declared elected and this was unanimously approved by the General Assembly.

Raymond Seltz

TOWARDS A EUROPEAN RESEARCH AREA

Two presentations took place during the morning session of the General Assembly that reflect EUROSCIENCE'S long-standing concern with the development of a European Research Area and the active contributions made by some of our members to bring this project to fruition.

Benchmarking Science and Technology Productivity in Europe. Wilhelm Krull, EUROSCIENCE Honorary Vice-President, was chairman of the expert group that produced a document (in June 2002), at the request of the European research ministers, on the efficiency of the S&T system in Europe. This was the first

comparative exercise of this type ever conducted at the level of the European Union, and a learning exercise both for the EU and for the member states.

The goal was to help the Commission draw together its science and technology policies based on a clearer knowledge of the performance of the EU vis à vis the USA and Japan and amongst EU member states. For this purpose, the existing indicators that were used were critically assessed in order to develop a methodology that could be applied in subsequent exercises.

W. Krull illustrated the major findings of the survey, interspersed with malicious cartoons (See for example page 5). Let us quote here the summary of the report:

- "The EU represents the largest source of scientific publications, slightly ahead of the USA, and a great deal ahead of Japan, in absolute numbers.
- In publications per inhabitant, the EU is ahead of Japan but lags behind the USA. The gap with the USA has almost halved between 1995 and 1999.
- In publications per money spent in university research the EU leads the USA and Japan, and its lead doubled between 1995 and 1999.
- In citations per scientific publication, a measure of the quality of publications, the USA leads the EU, which is ahead of Japan.
- In the USA patents per money spent in business R&D, Europe lags behind the USA and Japan.
- In "triad patents" (patents held in the USA, EU, Japan) per money spent in business R&D, Germany, Sweden and the Netherlands outperform Japan and the USA, whilst the UK and France follow Japan but outperform the USA. Triad patents are a more appropriate indicator for comparing the USA, Japan, and the EU, than patent data from any single national or regional patent office."

As to performance within the EU, the following emerges, with a very high score for Nordic countries:

- "Two thirds of EU publications come from UK, France and Germany.
- In publications per inhabitant the Nordic countries lead, followed by the Netherlands and the UK.

- Publications per money spent in university R&D show a wide divergence around the EU average, though variation is asymmetric, with the higher scores (UK, Finland and Denmark) over 40% above the mean, and low scores (Germany and Portugal) only 10% below the mean.
- In citations per paper six countries were more than 20% above the world average in 1998, five are on or around it and only four below.
- The number of patents per business R&D expenditure shows a substantial variation between EU countries, with Sweden, the Netherlands and Germany as top scorers. The sectoral composition on industry strongly influences such rankings.

In the discussion that followed, a participant asked whether it was money, or the system, which accounts for Europe's lag in R&D (as compared to the USA and Japan). One reason, it was pointed out, was that the European national science systems – with the notable recent exception of Finland's – often lack continuity in their policy. Another member of the audience remarked that benchmarking, when conducted within industry, starts from the demand side, while the EU benchmarking exercise started from the supply side; hence

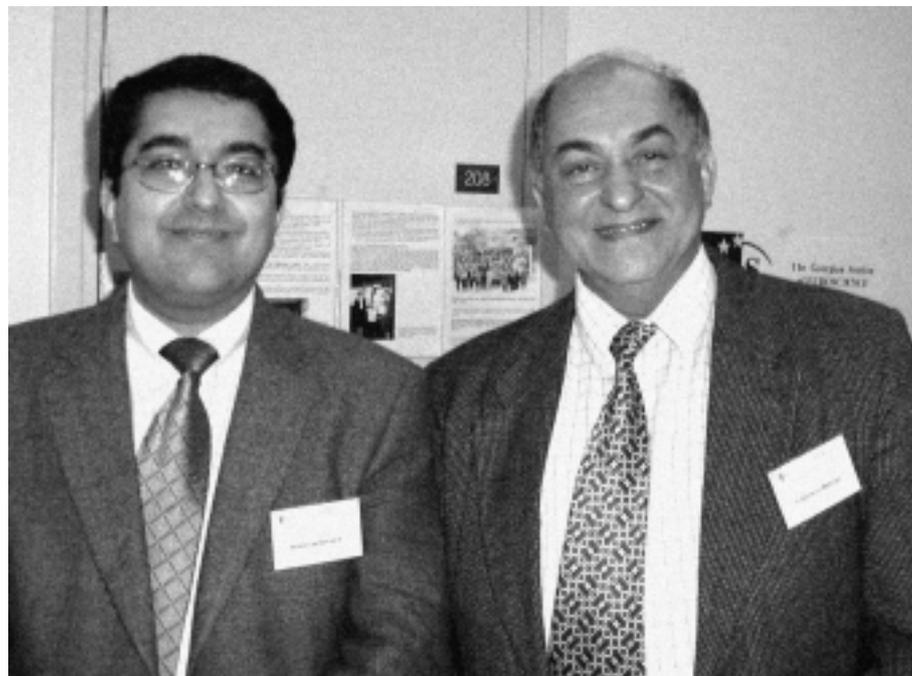
the inescapable crucial question of "who really needs the research that we are offering?" In reply, we were reminded that the goal of this S&T benchmarking exercise was to help decision-makers, rather than to provide a product for the market. Finally, it was noted that the situation of the candidate countries should also be screened through a similar analysis.

The Round Table on the [European Research Council](#) featured Jerzy Langer, Vice-President of EUROSCIENCE, who is also a member of the high-level group set up by the ESF to present a feasibility study for an ERC, Enric Banda, Secretary General of ESF and Frederic Sgard, who had led the work of EUROSCIENCE on the ERC. J. Langer paid tribute to "the father of the ERC concept", Enric Banda, and gave an overview of ongoing work. E. Banda in turn stressed that in his view Europe shows a lack of ambition, that Europe should be built upon new discoveries, education and innovation, and that while the concept of an ERC is certainly difficult, ways have now been opened to pursue its realisation.

For more on the ERC, see p4-7!

Francoise Praderie,
Honorary Vice-President
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[Alik Ismael-Zadeh](#) and [Mikhail Libenson](#)
emerge smiling from the Round Table.



Yuri Bandazhevsky

At the meeting of the 3rd General Assembly of EUROSCIENCE held in Strasbourg, a unanimous motion was passed, empowering President Jean-Patrick Connerade to write to Mr Joe Borg, President of the Council of Europe, on behalf of EUROSCIENCE, requesting that the Republic of Belarus should NOT be admitted to membership of the Council of Europe until Professor Yuri Bandazhevsky, a distinguished scientist, is released from prison and reinstated in his civil rights. The letter was sent on November 14.

Meanwhile, there is deep concern about the severe deterioration in the physical and psychological health of Prof. Bandazhevsky. His wife Galina, a paediatrician, wrote on September 6, 2002, to the UN Human Rights Committee and to the UN Working Group on Arbitrary Detention, asking for help:

"When I saw my husband for the first time in 3 months (I had no rights to visit him during all this time), I did not recognize him. The man before me was another man, a man crushed, indifferent to his surroundings [...] And here, after everything he endured to defend his truth, he tells me that he is giving up. He speaks like a frightened man, pushed to the very edge, [...] a man who is being forced to choose between his children and science."

Galina Bandazhevskaya was allowed to see her husband on November 4th; he presented her with a request to undergo an independent health examination by an international commission of physicians.

EUROSCIENCE will call upon the Belarusian government, the European Union, international governmental and non-governmental organizations, to exert pressure using all possible channels to obtain the immediate and unconditional release of Professor Bandazhevsky and to provide him with all appropriate medical care. The "Union of French Psychiatrists" has already sent a letter of support along these lines to the President of Amnesty International.

Members of EUROSCIENCE are invited to write letters in Russian or

English to the relevant authorities (see www.euroscience.org for addresses and advice). Please send copies of your appeals to diplomatic representatives of Belarus accredited to your country.

Lydie Koch-Miramond

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Euroscience Open Forum 2004

Work to prepare this major pan-European Forum (see www.esof2004.org), the first of its kind, is rapidly intensifying.

The governance structure for ESOF2004 has been established and several key projects are now under way. The Steering Committee for ESOF2004 has held meetings every 3 weeks since August 2002. The other committees (Finance, Local Organising and Programme Committees) are busy organising their respective responsibilities. An Advisory Board for ESOF2004 Advisory Board has been constituted. It is chaired by Hans Wigzell (Karolinska Institutet), with Wilhelm Krull (Volkswagen Stiftung) as Vice-Chair and includes, amongst others, Philip Campbell (Editor of Nature), Peter Gruss (Max-Planck Society), Helga Nowotny (ETH Zentrum) and Ortwin Renn (Centre of Technology Assessment). A first meeting will take place early in 2003.

Numerous meetings have recently been held at the European and national levels. What can be said is that the dialogue with Nature continues to be fruitful and that applications for support have now been submitted to five Swedish Research Councils. Moreover, the British Association wants to collaborate with EUROSCIENCE, intends to participate in ESOF2004 and has written a letter of support. There have also been quite a few meetings with the European Commission regarding its possible involvement with ESOF2004, as well as several ongoing dialogues with European Research Centres and learned societies.

What we now need is your input and help. Funding and other forms of support are essential. We hear a lot from people interested in the Open Forum. What we need now is your help in engaging

national structures such as research councils, universities and industries in your country. Please contact us at carl.j.sundberg@esof2004.org or gabriella.norlin@esof2004.org

Carl J Sundberg

Chairman of ESOF2004 Steering Committee

Working Groups

The activities of the most dynamic working groups are documented on the website. This is the case, for example, for the Science Policy group, reporting on election issues in France and Germany and the debate regarding the ERC. In addition, the Young Scientists group has contributed very actively to the discussions that took place at the Bischenberg conference (see report, p2), as well as on issues concerning the mobility of doctoral students (see report, p3). Lydie Koch-Miramond (Ethics in Science group) reports recent developments on human rights issues, specifically with regard to the fate of Prof. Bandazhevsky (on this page). Finally, the group on East-West collaboration has been very active as

NEW DATE FOR ST PETERSBURG MEETING

After further consultations between members of the St Petersburg Association of Scientists and Scholars (SPASS) and members of the EUROSCIENCE Board, it was decided that the 300th anniversary meeting on "Non-governmental organizations as mediators of scientific and technological development", organized by the St Petersburg branch of the EUROSCIENCE Working Group on Technology Transfer (ESWGTT), will now take place in October 1-4 2003, instead of April 9-11 as previously announced in EUROSCIENCE News 22.

For further information, see www.stpetersburg.technology-transfer.net.

Nelly Didenko

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the core organisation for the Budapest workshop, while the Technology Transfer group deserves much credit for its dynamic collaborations with EUROSCIENCE members from Eastern Europe.

Other Matters

Finances. Our Treasurer, Ekkehard Winter, presented the audited accounts for 2001 and the provisional budget estimates for 2003- 2004). During the year 2001, there was a 33% increase in income (to 124 000 Euros), but also in general expenditure (by 35%) that was mostly linked to the salary of an Assistant (to the General Secretary) recruited in 2001. The year ended with a surplus of 3600 Euros. The General Assembly unanimously approved the audited accounts, which will be published in full in the next issue of EUROSCIENCE News.

He then went on to present the provisional budget for 2002-2003 (as required by our statutes), noting that we will need regular increases in membership fees to help cover the cost of overheads for important projects in the pipeline (e.g. ESOF2004). The provisional budget for 2002-2003 was unanimously adopted by the General Assembly.

Membership fees. The outgoing Board decided, after a vigorous debate, to submit the following proposals to the vote at the General Assembly:

- To reduce the number of categories in "Active individual members", "Associate members" and "No fee";
- To increase the individual membership fee from 35 to 40 Euro, with a reduced fee of 20 Euro for students, members from EU candidate countries (new!) and members under a joint membership agreement (new!) and
- To waive fees for honorary members and members from countries with economic difficulties.

These proposals were unanimously adopted by the General Assembly.

The next Governing Board will discuss a proposal by President Connerade that fees be collected in local currency

in countries with economic difficulties and well-organised local sections. A major part of the money could be used for local activities.

Local sections. EUROSCIENCE, which draws its membership from 40 European countries, must achieve some coherence over such a wide geographical distribution. The Board proposes to adopt a federal structure, anchoring our representation to local sections wherever that proves possible. The Leman section, which can be regarded as a model, has been very successful in the past in organising events closely related to local concerns (e.g., see report on Leman section, p3), thus enhancing the visibility of EUROSCIENCE at regional level.

Progress reports from the local sections in Ukraine, Georgia, Romania, Bulgaria and from SPASS, in Russia, showed that there seems to be an excellent basis for these countries to adopt a federative contract with the Office of EUROSCIENCE; a person in charge of coordinating each of these sections should be now be designated to maintain contact with the Office.

Raymond Seltz

Our secretary General, Raymond Seltz, flanked by the ever photogenic Alik Ismael-Zadeh (on his left) and Simeon Anguelov (enjoying a private joke?)



Editor's footnote

In trying to present the flavour of this year's "hot topic", the creation of a European Research Council, in our FEATURES section, I have received generous help and advice from Jerzy Langer and Francoise Praderie – thank you both!

Clearly, the debate on how to bring about an ERC is now gaining speed both within EUROSCIENCE and elsewhere; for example, this is the theme of a forthcoming meeting in Paris (February 18-19 2003), under the auspices of UNESCO, hosted by the three major European bodies for the Life Sciences.

To keep up the momentum, I would encourage our readers to send in their comments on any of the issues raised in these pages. In particular, what are your views on the concept, elaborated by Gottfried Schatz and others, of engaging with a much broader view of science than is traditional, i.e., one encompassing "all forms of scholarship"?

BEST WISHES TO ALL FOR 2003!

**Euroscience
on the Web:
www.euroscience.org**

IN TOUCH

New Board Meets

The new EUROSCIENCE Board met during the lunch-break of the General Assembly. President Connerade made the following proposals, which were unanimously accepted:

To co-opt onto the Board, John Lagnado, the new editor of EUROSCIENCE News, and Mikhail Libenson, Chairman of SPASS;

To appoint as Vice-Presidents, Carl Sundberg, the key person involved in ESOF2004, and Frederic Sgard (now at the OECD), who spearheads the science policy activities of EUROSCIENCE;

and as Honorary Vice-Presidents, John Finney and Jerzy Langer, in recognition of their deep commitment to EUROSCIENCE and valuable contributions to its successful development.

Raymond Seltz,
Secretary General

Members of the new Board (...and others) pose for Alik Ismael-Zadeh at the General Assembly 2002. From left to right, back row: VS Kozhukharov, I Wüning, C Kordon, J Lagnado, J Langer, S Anguelov, T Mayer, E Winter, B Hoffman, C Sundberg, E Gheorghiu; front row: R Seltz, L Nottellet, A Niehaus, C Heller del Riego, D Raboud, F Sgard J-P, Connerade, P Tindemans.



NEW EUROSCIENCE GOVERNING BOARD

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New members of the Board are highlighted in bold. The Governing Board also declared John FINNEY and Jerzy LANGER, former Vice-Presidents, as new Honorary Vice-Presidents by the outgoing Board.
*Members of the EUROSCIENCE Bureau

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