



European Science Foundation "Roadmapping science in society" Seminar

Opening address by Arnold Migus

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Dear colleagues from all over Europe,

I am very happy to welcome you in these historic premises in Paris, whose older part was built around 1710 and has a lot of stories attached to it. Let me give you a few examples:

- The building where we are now was called "Hotel Antier", the name of a well-known singer at the French Opera who lived here, and there has been a lot of gossip about the reception she gave here in honour of King Louis the 15th.
- In the 18th century there was also a theatre in its Park, where forbidden plays of Marivaux were presented.
- And in 1784 and 1785, John Quincy Adams, who at the time was a diplomat in the US Embassy, and future president of the USA, lived here.

The concrete buildings around the park were built in 1954 by the French oil company TOTAL, as its headquarters.

The venue has been the headquarters of CNRS since 1993. We no longer welcome kings nor perform theatrical plays here. Today we simply do research management, the day-to-day business of running CNRS, the largest research performing organization in Europe with some 1.100 laboratories in France and around the world, in which some 77.000 scientists and support staff do research in all fields of knowledge.

When CNRS came to this place in 1994, it was decided that the main meeting rooms would take the names of famous scientists, who were distinguished not only for their scientific achievements, but also for their engagement in civil society. You may have noticed, in the corridor, the statue of Jean Perrin. We are meeting in the Joliot Curie room today and some of you will work tomorrow in the Jean Perrin room, next door.

So as these rooms resonate with the names of the proponents of Science in Society, I wish that their example inspires this seminar.

The French institutional research landscape is in the process of changing. To revitalize French research, the government decided to create 2 agencies, a funding agency and an Agency for evaluation, to empower the universities by giving them autonomy and to remodel the research performing organizations like CNRS.

So, CNRS is now organized in Institutes mainly based on disciplines and in transverse Programs for promoting interdisciplinarity. This is quite a classic situation in science policy: science institutions must all the time adapt their structures to emerging ideas.

The management of the culture and structures of science institutions has greatly contributed to the success of science today: there is no single issue of interest for our societies that does not involve a contribution from science. There is no question that science has improved our lives a lot. And it is the classic science policies that have permitted science to play its role in society.

But new questions are now coming up for CNRS and the other science institutions that can be summarized by the following question: In what way is science accountable to society? If we consider the Lisbon goal in which society is ready to allocate 3% of GDP for research and development in Europe, this means that at the same time society demands to know more about the impact of the scientific projects that these resources will support.

Surveys in Europe have shown that since the 70's, the perception of science in the public has moved from a very positive position that "science is progress", inherited from previous centuries, to more ambiguous position that involves the perception of both the benefits and the risks of science and technology. So Society wants to know more about science.

We can imagine this is due to reciprocal pressures and impacts between science and society. And this interaction may lead to happy changes – or perceived as such, as in the case of industries facilitating the mobility of mankind or in the case of health improvement for example – and to difficult situations which may turn into catastrophes in other cases. Rabelais, a French writer, wrote in 1532 that "science without conscience is but the ruin of the soul".

Any new theory in science or new technology introduces potential changes in society. A consequence for us is that we have to re-examine the many ways in which science makes inroads into society, and not to focus exclusively on the way science is produced. This is the reason for the title of the seminar: "*Roadmapping science in society*".

I know that some interesting thoughts and proposals concerning Dialogue have been recently published by OECD and also at the European level. These proposals are useful, but have not yet led to the definition of new lines of action for the scientific institutions themselves.

If society trusts scientists by financing their work, scientists must report back to society. And this is what the work of this Seminar is all about:

- We need a better rational approach towards reporting, elaborating on what our intuition and our conscientiousness tell us that we must do,
- We have to devise the actions that are best adapted to getting a responsible answer to those newly arising questions.
- And we must involve the scientists themselves in the thinking and action processes, so that these processes become an integral part of the work of the scientists and their institutions.

This is the reason that "*Impact, Evaluation and Accountability*" were proposed as the focus of the Seminar, the three words together. They are concrete words that speak directly to the scientists and their institutions.

- First, Impact: Impact analysis is not, of course, based on solid theories, but is a subjective and necessarily incomplete description of the way that science production makes its inroads. But at the same time, it raises lot of thought-

provoking questions on stakeholders and partners, on channels, on goals that have - or have not - been reached, that can or cannot be reached, etc.

- Second, Evaluation: The evaluation of research is one of the foundations on which science institutions are built and the instance that tells them how they are performing. Should it be different for roadmapping activities? At what time scale should we work? How can we elaborate a smart set of criteria? etc.
- Third, Accountability: Being accountable creates a salutary pressure on one's work, particularly in science. What kind of accountability is needed here? Is it related to specific societal situations? To whom must we report?...

What is expected from this seminar is to launch the debate and come up with the first, but certainly not definitive, answers to these questions. I feel that it is the responsibility of each and every research institution to try to provide these answers, but I am convinced that a common effort, associating different cultural and national contexts, is a better and more efficient approach, especially in Europe.

For me, this is part of a new emerging field of interdisciplinary research which is the science of science policy, the goal of which is to provide a scientifically rigorous, quantitative basis from which policy makers and researchers can assess the impacts of our countries scientific and engineering enterprise, improve their understanding of its dynamics, and assess the likely outcomes..

Marja Makarow will tell us how ESF prepared this Seminar and through which mechanisms its conclusions will be transformed into action.

The proposals that will come out of this seminar will be discussed in October both in the ESF Governing Council in Strasbourg and at the EuroHorcs General Assembly in Dublin, as they are part of the Roadmap of these two associations. They will then be used by the member organizations of Eurohorcs and ESF when preparing their strategy. And beyond Eurohorcs and ESF these proposals may help in the preparation of FP8, which will start in 2010.

I am confident that, in this seminar, you will be able to bring into light some key elements mapping out the inroads of science in society, and propose actions that will permit our organizations to better understand and better fulfil their role as interfaces between science and society.

I wish you a productive Seminar here in CNRS, and a nice stay in Paris.

Arnold Migus