

Parallel Session 26: Interactions between science communication and science policies

SCIENCE AND SOCIETY: A DIALOGUE FOR THE FUTURE

Tigeras Sánchez, Pilar¹ Perez del Val, Jaime²

^{1, 2} Consejo Superior de Investigaciones Científicas. Coordinación Institucional en la Comunidad de Madrid. Serrano 113. 28006 Madrid. España.

¹ macael@orgc.csic.es

² j.perez@orgc.csic.es

Abstract

If we admit the importance of the scientific advances in the development of society we have to conclude that society itself must participate in the decision making. Thus, in Spain it would be very convenient that the parliament would approve a Spanish Plan of Science and Society, with similar objectives to those of the European one but adapted to the Spanish reality.

A detailed analysis of the actual situation of the Spanish system of science and technology will not be carried out in this presentation; however some references will be made and some solutions for the short and long term will be provided.

The objectives are the promotion of a scientific culture and education, to bring together science to the citizens and to analyse the ethical dimension of science and the new technologies. This is why the idea of a dialogue has been included in the title, a democratic, sincere dialogue, free of any “a prioris” to be held between the scientific community, the social agents, the state administrations and the political parties.

The different studies performed by the European Union, the OCDE, and other institutions indicate that our system presents considerable deficiencies mainly linked to a low level of investment and expenditure in public and private R and D, which results in a deficient technological level, a scarce number of patents and in the insufficient development of the information society.

There is still a long way to go, but there are positive elements to propose a Spanish Plan of Science and Society, working seriously on particular aspects and coming to important agreements with the citizens.

Key Words: Science Policy, Civil participation

Text

Science Policy

Science policy considered as the formulation of avenues to transfer new knowledge for the improvement of society is nowadays more necessary than ever, since it is becoming increasingly more important for the well being and progress of a country. The main objectives pursued by the acquisition of

scientific knowledge should end up in achieving greater life expectancy and a better quality of life in our societies.

Spain had a late start in the development of modern science, and it was only in the early 80's when a totally new system of science and technology was finally structured with the approval of the Law of Science and Technology, of the National R and D Plan and its corresponding budgets. Unfortunately, the initial push lasted less than a decade and we are still in the last positions within the 15 EU countries, in what concerns R and D expenditures, with a 1.03% of GDP compared to the EU mean of 2% and almost a 3% of GDP investment in the US.

The European Commission, who is aware of the disadvantage of the EU relative to the USA, has proposed the goal of investing 3% of its gross national product by 2010, and has demanded a considerable effort from the member states. Therefore, there is a need for a sustained, large increase in investment in R and D in Spain which would also allow an increase in the number of researchers in our country.

Impact of Science on Social Development

Scientific and technological advances have a strong impact on society, and therefore it is paradoxical that, in Spain, the science and technology system is not sufficiently taken into account. It appears that we think only about researchers in those cases in which the media focus on public disasters such as the Aznalcollar mine spill in Doñana, the Prestige, the "mad cow disease", or the controversies on the effects of electromagnetic radiations on public health and the experiments with stem cells as a new therapeutic strategy. It is then when we turn to them demanding immediate solutions, without having previously developed and facilitated suitable policies for their development and appraisal.

According to Steven Pinker, society would appreciate much more the achievements in science and technology if more scientists shared their enthusiasm with the general public and would take more seriously, the very hard job of making it perceptible.

Thus, it is necessary to convince politicians about the design and application of a Plan for Science and Society which should take into account, among others, the following recommendations:

Promotion of education and scientific culture with the government taking the necessary measures for a better education and training of students, and a suitable preparation of the educators.

To bring science policy closer to the citizens, for which there is a need for the cooperation of the press and social communication media, who should be suitably informed to make accessible to society the scientific advances in a rigorous and clear manner. It is, therefore, advisable to encourage from the public sector, the inclusion of science issues in television, radio, newspapers and magazines.

Science and technology have to be considered as priorities in the political activity due to their social and economic impact. Thus, it is advisable to establish " help desks" to provide scientific information for the parliament and

government following the examples of other European countries and the US, in order to guarantee the transformation of scientific and technological advances into direct social benefits.

Measures must be taken to progress towards gender equality. Women represent half of the student population in our universities whereas they hold only 13% of senior positions in academia and even a lower percentage in industry.

Scientific indicators concerning social impact of science should be introduced in all institutes and centres of statistics studies (INE, CIS..).

In short, we must encourage the participation of citizens and the social society in debates concerning science, technology and innovation in order to capture their thoughts and interests. Within this context, this forum represents an important initiative in the long road for a true dialogue between science and society.

PCST International Conference - www.pcst2004.org

