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## ***Report: Scientific Knowledge from, for and through Cultural Diversity***

*The 8th International Conference on the Public  
Communication of Science and Technology*

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*Under the theme of “scientific knowledge and cultural diversity,” Barcelona brought together in the first week of June 2004 more than six hundred people from every continent at the 8th International Conference on the Public Communication of Science and Technology. This open network of professionals extends to more than fifty countries and embraces the different aspects of science communication, including journalism, museology, research into scientific communication, and policies for scientific culture promotion, among others. On this particular occasion, the need to establish effective dialogue between the different forms of local knowledge and scientific knowledge was discussed and developed. The aim was not only to preserve cultural diversity but also to contribute to developing human knowledge and instilling a culture of peace. Various experiences demonstrated the essential role of the scientific communicator in this context.*

**Keywords:** *science communication; public communication of science and technology; PCST; cultural diversity; local wisdom; native knowledge; science journalism; scientific culture; policies on science communication*

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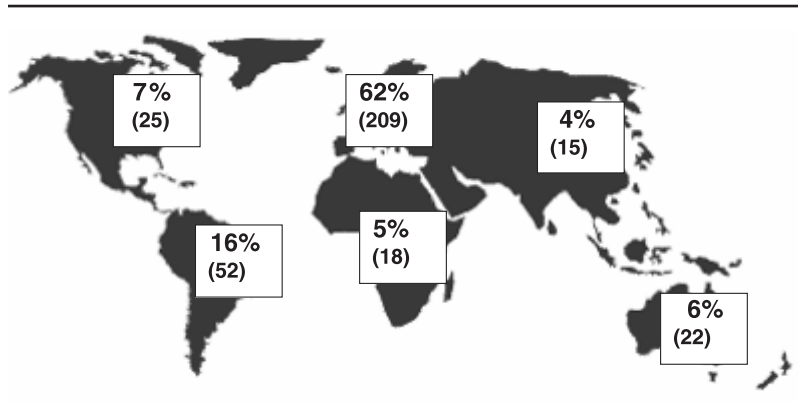
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*“The important thing is not to inform but to communicate.”*<sup>1</sup> With these words, Federico Mayor Zaragoza, President of the Culture of Peace Foundation and former General Director of the United Nations Educational, Scientific and Cultural Organization, opened the eighth conference of the international network, Public Communication of Science and Technology (PCST-8). He emphasized that the objective of communication should not be that of simply making information public but that it was essential to establish effective relationships of understanding between the different groups of people involved in this information.

On this occasion, the biennial meeting of the PCST network was held in Barcelona on June 3–6, 2004, organized locally by the Observatori de la Comunicació Científica (Science Communication Observatory [OCC]) of the Pompeu Fabra University and the Commissioner for Scientific Culture of the Barcelona City Council. In addition, the conference took place within the framework of the Barcelona Forum of Cultures 2004, an international event focusing on dialogue between the cultures which, between May and September, gathered together millions of people from all over the world in this Mediterranean city.

### ***The PCST Network: History and Future Prospects***

Under the theme “Scientific Knowledge and Cultural Diversity,” PCST-8 brought together more than six hundred people from every continent (more than 50 countries) and from a range of professional sectors, including journalism, museology, institutional communications, research, and policies for promoting scientific culture, among others. This network, one of the first of its kind and probably the one with the greatest scope, originated in Poitiers, France, in 1989, at the First International Meeting on Scientific Communication. Since then, the network has met in Madrid (1991), Montreal (1994), Melbourne (1996), Berlin (1998), Geneva (2001), Cape Town (2002), and Barcelona (2004). The number of participants and countries represented has grown progressively, and at the same time, the network has been consolidating its structure and defining its objectives. Currently, the network’s activities mainly focus on international conferences, at which dialogue and cooperation are fostered, and on its electronic discussion list (see <http://www.pcstnetwork.org>), which keeps the network’s activities constantly updated. At the closure of PCST-8, it was announced that the network will be taking a big step forward, expanding its activities with the creation of an entity aimed at studying and preparing a documentary archive for reference and reflection in the sphere of scientific communication. This entity has been



**Figure 1: PCST Network as Geographical Distribution of the 341 Abstracts That Responded to the Open Call**

NOTE: PCST = Public Communication of Science and Technology. Copyright Quark 2004 Reprinted with permission.

given the provisional name of Knowledge Society Academy, Science, Culture and Communication. The academy will essentially be an online operation but will also have a founder headquarters at Pompeu Fabra University.

### ***Who are the Members of the Network and What Do They Do?***

The open-call system for abstracts to be presented at the conference provides a general overview of who the people are that currently make up the PCST network and what themes they are working on.

Thus, a study of the 341 abstracts that resulted from the open call shows that the network has a presence in every continent in the world, although at the moment, European countries still clearly predominate (see Figure 1). The countries that contributed the most abstracts to the open call were Spain (ninety-five), the United Kingdom (thirty-two), Brazil (thirty), the United States (twenty-three), Italy (twenty-three), Australia (nineteen), Mexico (eighteen), South Africa (seventeen), France (twelve), Portugal (ten), Germany (nine), India (seven), and Belgium (five). The other twenty-three countries that responded to the call sent fewer than five abstracts each. This breakdown also allows us to corroborate the fact that hosting the conference has a

significant local impact in the country responsible for organizing it (Spain, South Africa, France, Australia, etc.).

According to the professional field in which they work, the breakdown of authors of the abstracts was as follows: university (203; 59.6 percent), research centers (70; 20.5 percent), museums and science centers (23; 6.7 percent), entities involved in promoting science (20; 5.9 percent), mass media (11; 3.2 percent), associations and foundations (9; 2.6 percent), and others (5; 1.5 percent).

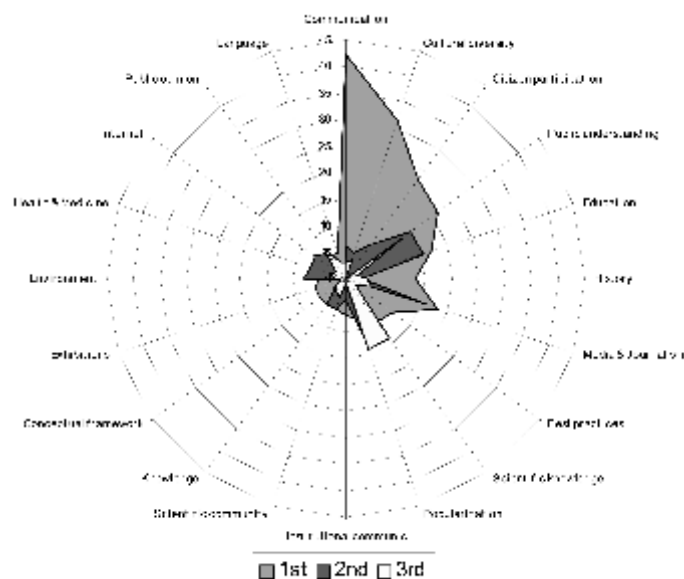
Finally, an analysis was made of the keywords chosen by the authors to define their abstracts. Specifically, the form allowed a maximum of three keywords to be selected, which had to be placed in order—in first, second, and third place—in accordance with their ability to define the abstract. Thus, by placing all the words selected from the authors in first, second, and third place in a radar-type graph, we obtained a good impression of the main areas of interest of the members of the network (see Figure 2). Curiously, the shape that emerged from this representation is very reminiscent of a boat. Taking advantage of this analogy, we can conclude that the main mast of the PCST network rises up from the term *communication* (the most quoted word in first place). In second place came the expression *public understanding of science* and the term *education*, forming a wide boom, while *mass media* and *journalism* jut out sharply like a big oar. In third place, the authors overwhelmingly selected the expressions *scientific knowledge* and *popularization*, which clearly define the centerboard of the PCST.

In other words, in Barcelona the PCST dealt with a series of themes that could be defined by the keywords *communication*, *public understanding of science*, *education*, *mass media*, *journalism*, *scientific knowledge*, and *popularization*. As can be seen from the graph (Figure 2), these central issues were debated from the perspective of the central theme of the congress (cultural diversity) and the different subthemes (social participation, history, etc.).

Meanwhile, also worth highlighting is the fact that although a large number of authors of the abstracts work in the sphere of museums and science centers, curiously enough, when it came to defining the thematic focus of their proposals, they did not select the keyword *science museums*. Finally, other words on the list proposed in the form were either not selected by the authors (ethics, gender, etc.) or were used very circumspectly.

### ***Program Highlights***

Following the planned program, the conference was structured around three main thematic areas.



**Figure 2: Main Areas of Interest**

NOTE: Radar-type graph showing distribution of the keywords selected from the authors in first, second, and third place to define their abstracts.

### *Native Knowledge and Modern Science*

This subtheme started off with an initial plenary session moderated by Vladimir de Semir (chair of the PCST-8 and current chair of the PCST network) and was participated in by Germano Bruno Afonso (Federal University of Paraná, Brazil), Enric Banda (Fundació Catalana per a la Recerca, Spain), Yuwanuch Tinnaluck (ASEAN, Thailand), and Patrick Luganda (Climate Journalists in the Greater Horn of Africa, Uganda).

### *Science Communication: Historical Perspectives and New Trends*

With a plenary session moderated by Luisa Massarani (Museum of Life's Study Centre, Brazil), this subtheme included the participation of Bernadette Bensaude-Vincent (Université Paris X, France), Jon Turney (Penguin Press, UK), Bernard Schiele (University of Quebec at Montréal, Canada), and Young Hwan Choi (Korea Science Foundation).

### *Science Communication and Social Participation*

The session that opened this subtheme was moderated by Lisbeth Fog (co-chair of the PCST-8 and vice chair of the World Federation of Science Journalists). Participants were Eduardo Posada (Colombian Association for the Advance of Science), Jenni Metcalfe (E-Connect Science Communication Consultants, Australia), Hans Peter Peters (Research Center Jülich, Germany), Cheng Donghong (Chinese Association of Science and Technology), and Prakash Khanal (secretary of the World Federation of Science Journalists, Nepal).

One of the key conclusions to emerge from the conference was that an understanding of cultural values and respect for traditional knowledge are both vital to the successful communication of science. Science and local knowledge are not that far away from one another, but we need to share space and time between scientists and native people.

### *A New Form of Participation*

In addition to the three plenary sessions, we experimented with a new format for the parallel sessions. This new endeavor was designed to seek greater audience participation in this kind of session. The authors who had responded to the open call and passed the scientific committee's review sent in the texts of their works some weeks before the conference. These texts were then posted on the PCST-8 Web site (<http://www.pcst2004.org>) so that everyone could consult them in advance. During the actual session, a "relater" (a student in the Pompeu Fabra University masters in scientific communication course) summarized the main points of the authors works, following which the moderator, authors, and audience began a process of reflection and debate based around a central issue, taking the works of the authors as a reference. Finally, the relaters drafted some conclusions, which were also posted on the Web site for general consultation.

An evaluation of this new format was carried out by Nria Gell, from the Autonomous University of Barcelona and also by the scientific committee of the PCST network. It concluded that, generally speaking, this system effectively allowed greater audience participation and that the opportunity given to young people (the relaters) to work in collaboration with the seniors (the moderators) was also seen as very positive. However, the need to fine-tune certain aspects of this new format was also noted.

In addition to these parallel sessions (a total of twenty-five), three workshops were held and one hundred posters exhibited, with the enthusiastic participation of the general public.

### *Health Museums and Science Journalism in the World*

Two activities were held before and after the main conference. On June 2, the workshop New Models on Health and Life Museums was held, organized jointly by the Hospital de la Santa Creu i Sant Pau and the OCC. The aim of this meeting was to explore the different functions attributed to health science museums (dissemination, education, conservation of historical heritage, etc.) and to reflect on future prospects.

On June 6 and 7, a seminar titled Science Journalism in a Diverse World was held, organized jointly by the Spanish Foundation for Science and Technology and the OCC. Some of the most eminent figures in the sphere of international science journalism took part in the seminar. The seminar began with a review of the role that specialist journalism has historically played in science. This was followed by a debate on the function science journalism should serve in a diverse world that is geared, in an irregular way, toward the knowledge society.

Information relating to the conference and its activities is available to the general public on the PCST-8 Web site (<http://www.pcst2004.org>), as well as in a monographic issue of the journal *Quark* (<http://www.imim.es/quark>), titled Scientific Knowledge and Cultural Diversity, published in Spanish and English. Here, too, you can find information about the forthcoming network conferences: Seoul, Korea, 2006 (<http://www.pcst2006.org>), and Los Angeles, California, 2008. The latter venue does not yet have a Web site, as the proposal from the United States was actually selected during the conference in Barcelona.

### *Note*

1. These words were originally spoken in Catalan: "El més important no és comunicar, sinó comunicar-se."

*VLADIMIR DE SEMIR was chair of the eighth international conference on the Public Communication of Science and Technology (PCST-8) currently chair of the PCST network (2004-2006). A journalist, he is director of the Science Communication*

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*GEMMA REVUELTA was head of the PCST-8 local organizing committee. Holder of a bachelor's degree in medicine and a master's degree in science communication, she is deputy director of the Science Communication Observatory (<http://www.upf.edu/occ>) and associate professor of science communication at the Pompeu Fabra University (Barcelona, Spain). She also is director of scientific culture promotion at the Barcelona Culture Institute.*