

## PCST IN ITALY

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Despite significant peaks in the production of - and interest for - popular science in Italian history, Italy does not have a tradition of promotion of public understanding comparable to countries like Great Britain or United States. A short but intense season of flowering of popular science took place at the end of Nineteenth century, when eminent Italian scientists like Michele Lessona and Paolo Mantegazza tried to arouse public interest for science with several books and periodicals aimed at the general literate public, some of which were met by a remarkable success – Mantegazza even succeeded to launch an Italian equivalent of *Nature*, *La Natura*, albeit for a very short period.

The reason for this difficulty in establishing a solid tradition can be traced back to factors like the lack of public school literacy (in 1901, almost 75% of Italians remained unable to write and read, compared to only 5% and 3% of the French and English population) and the difficulty in building a strong national scientific community open to collaboration and discussion both within itself and with the public.

Awareness of the need to communicate with the public resurfaced among scientific and policy institutions only since the 1990s. In connection with similar European initiatives, a law for the promotion of scientific culture was passed in Parliament and small scale science weeks and events launched in several parts of the country.

Later, the dramatic emergence of several public issues connected to science and technology (Bse, Gmos, cloning, radioactive waste disposal) enhanced the perception of natural scientists and policy makers that more should be done in terms of public engagement.

In terms of public opinion and media coverage, the Italian scenario appears promising but not devoid of contradictions. Italian citizens are among those placing higher trust in science and scientists across Europe, display average level of scientific literacy and great enthusiasm for many different forms of science communication. Science festivals are growing, some of them recording audiences of hundred thousands visitors; there are two science supplement in the daily press and at least six popular science magazines with a readership among 300,000 and 6 million; many radios have started or expanded a daily science programme; Italian main science TV show, Superquark, is running since the early 1980s with a current audience of 5 million – something difficult to find elsewhere in Europe. Still, like most European and Western countries, Italy faces a sharp and worrying decline in the interest of young generations to study science subjects at the University – the decline is particularly acute in fields like physics, chemistry and mathematics. With 1,2% of its GDP dedicated to R&D activities, Italy ranks among the EU countries with the lowest rate of investments in this area. This is due mostly to the lack of business investments in R&D. While public spending has remained stable and in line with the EU average, private research investments – traditionally modest - have further declined in recent years. Mostly based on small scale business, with scarce integration with the University system, Italian private sector has difficulty in developing a coherent strategy for research and innovation; policy measures aimed at fostering the integration of local innovation platforms - like technological parks – have not yet obtained significant results.

In the area of public communication of science and technology, a new sensibility seems to be emerging. Within the past few decades, most Italian research institutions have developed activities aimed at the general public: *café scientifiques*, open days, exhibitions displaying their results and achievements. Initiatives have been promoted to reward and encourage researchers communicating with the public with all the tools made available by modern communication technologies – some of them with worldwide participation, like the recent Einstein Relativity Challenge organized by Pirelli in connection with the international year of physics (<http://www.pirelliaward.com/einstein.html>).

Several courses in scientific journalism have also been launched that try to train future science communicators. However, most of these courses seem to be focused on the level of practical writing and communicating skills, rather than building a

broader sensibility for science in society issues which is probably required to face increasing policy challenges in this area. In addition, the international debate which has shifted priorities from public communication of science to dialogue between science and society, from public understanding to public engagement, from top-down disseminating science to discussing the role of science in democratic societies, seems to have had so far a modest impact on Italian public debate and policy agenda.

Relevant exceptions are represented by activities conducted in Italy but within an international framework, like last year's First Italian Science in Society Forum. Within the context of a broader initiative launched by the European Commission, Italian citizens had the opportunity to raise questions and issues with regard to science in society (research priorities, citizen involvement tools) both during an online forum and in a final public event with members of the scientific community and policy makers. Together with those from five other similar activities selected by the European Commission in France, Greece, Austria, Sweden and Slovenia, the results were then further discussed in the final meeting of the Forum in Brussels last March. A small but growing – and crossdisciplinary - community of natural scientists, policy makers and social scientists is also becoming increasingly active, with a view to bridging the gap between the Italian situation and the overall international trends. This community has also tried to support the establishment of solid monitoring tools of public attitudes and media coverage with regard to science as a necessary step in promoting a thorough and informed debate and policy action in this area. In 2000, a first systematic monitoring of public attitudes to a specific science issue (biotechnology) was established and is still continued on a yearly basis. Since 2005, this monitoring has been extended to become a Science in Society Monitor. Each month, the perceptions and attitudes of Italian citizens with regard to a science/technology related issue of policy significance (nuclear energy, nanotechnology, evolutionism) are surveyed by interviewing a representative sample of 1000 subjects ([www.scienceinsociety.org](http://www.scienceinsociety.org)). The results are then published and discussed in the Italian main daily press science supplement (Tuttoscienzetecnologia of newspaper *La Stampa*), in one of the leading science magazines (Quark) and in the leading national TV science programme (*Superquark*).

Along the same line, a Science in Society network of Italian universities is being formed (starting from the University of Torino, Trento and Padova) – with a view to strengthen also cooperation at the EU level with other universities institutions like the Royal Society – aiming at building a new sensibility for public communication and science in society issues among the new generations of scientists. The core idea is that the new challenges of public dialogue on science and technology do not only require the training of specific PCST professionals – for whom, among other things, Italy would offer a very limited labour market. On the other hand, being a researcher today – and even more, tomorrow – requires an ability to understand broad communication and science in society processes; Ph.D.s trained at the institutions of the network will then have the possibility of integrating their curriculum with seminars and activities in this area.

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He has carried out research and given seminars at several prestigious international institutions, such as the Royal Society of London, ETH Zurich, University of California Berkeley, Royal Swedish Academy of Sciences, University of Edinburgh, University of Tokyo, Museu da Vida Rio de Janeiro, Austrian Academy of the Sciences and received several recognitions for his work, including the Mullins Prize awarded by the Society for Social Studies of Science (1997) and the Lelli prize for the best dissertation in sociology (1998).

Webpage: [www.soc.unitn.it/sus/mb.htm](http://www.soc.unitn.it/sus/mb.htm)





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