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Editorial

The better you know, the better you make your choice.

The need for a scientific citizenship in the era of knowledge

Martin W. Bauer is right,[1] two evolutionary processes are under way. These are quite significant and, in some way, they converge into public science communication: a deep evolution of discourse is unfolding, along with an even deeper change of the public understanding of science.

Discourse is actually undergoing a twofold evolution, with respect to its method and models. In the former case, the evolution regards the practical methods of public science communication, which are now obviously exploring new larger and larger areas, beyond the typical spaces of (both official and informal) education, of arts and mass media. It is an essentially spontaneous process taking place under an external pressure: the ever larger presence of science in the various dimensions of the individual and collective life of citizens. Examples of that are the *Third Stream* of universities, the growing quantities of science in politics (from Parliamentary chambers to neighbourhood assemblies), the scientific-content advertising communication. A weighty example is the new relation between doctors and patients, ever more founded on scientific information, a prelude to the "informed consensus" that replaces the old "paternalistic authority of the doctor", typical in that relation.

The channels for science communication are also growing and getting rich and, through a trial and error procedure, the best communication practices are selected for each and every level. And so, the method used in science communication is changing.

However, what is changing is also the awareness that science communication scholars have on the subject of their studies. Consequently, a change is taking place also in the communication models put forward. Awareness is raising, in particular, on the complexity of the public discourse on science (the science communication system features a huge number of quickly evolving actors exchanging in many different ways a huge amount of information) and on the fact that it is a dialogue, not a monologue. An extremely naïve assumption has crumbled before our eyes: some used to believe science communication was a transfer of information between those who know (scientists) and those who do not know (ordinary citizens) in the equally naïve certainty that *the better you know science, the more you love it*.

Sociology and social psychology studies, to tell the truth, had long demonstrated that no realm of mass communication has silver bullets and that any dialogue among large social groups is complex and rapidly evolving. The fact that the scholars of science communication are reaching the same awareness is a symptom of the growing maturity of this young and – all in all, still small – community.

As Martin W. Bauer has rightfully pointed out, also the demand for communication from non-expert citizens is changing. Time after time, these citizens make up an array of social groups (from managers to the employees of a hi-tech company, to the bureaucrats from Brussels; from the stakeholders claiming their participation in shared environmental choices to the judges in courts who have to make decisions on life and death, as there are new opportunities offered by biomedical technologies not yet provided for by the legislation) that have different communication needs and therefore participate in many different ways in the "scientific discourse".

However, there is a general feature. Science and technology – the latter being at the same time mother and child of science – are increasingly essential elements in our life, at each and every level: individual and collective; cultural, political, social and economic. The access to scientific knowledge and to the chance to exploit it at each and every one of those levels – individual and collective; cultural, political, social and economic – increasingly is a qualifying character of democracy in an era which, not by chance, is defined as "of knowledge": *the better you know, the better you make your choice*.

Science communication is therefore a huge and growing social need. One of the founding factors of the modern concept of democracy. It is this – new and huge – need for a scientific citizenship that overwhelms any practical method and any theoretical model, more or less naïve, for a public science communication.

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Notes and references

[1] Martin W. Bauer, *The Evolution of Public Understanding of Science Discourse and Comparative Evidence*, speech delivered at the Spoleto Festival 2008 – Fondazione Sigma Tau, Spoleto (Italy), on Saturday 12 July 2008.