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Comment

Science and society: a dialogue without communicators?

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An unavoidable dialogue

The age, if ever there has been one, when decisions on science and technology were a prerogative of experts is now over. Without making any reference to national and international reports and governmental documents – although they exist and have been important to affirm the paradigm of a science-society dialogue[1] – the strong wind of change lies in the facts. It can be detected in the citizens who express themselves through a referendum on artificial insemination laws, who discuss the effectiveness of embryonic stem cells and the ethical issues linked to their testing; in the activists who collect signatures against the production, purchase and introduction of GMOs into the environment; in the patients' associations that call for their participation in decisions not only strictly therapeutic, but also on research protocols and medical ethics. Not casually have terms such as involvement, bi-directionality and interaction become passwords in the current discussion on researchers-citizens relations. And there are also many critical aspects.

Whereas there are not any doubts that the demand for participation in the decision-making process on science and technology-related issues belongs to current affairs, it is difficult to say whether artifices and practices that want to be an answer to new passwords are anything else but rhetoric devices actually not matched by real empowerment. On the other hand, favouring an "enlarged democracy" game on these issues may not be supported by everybody. One may wonder whether science can be really decided collectively, whether it can be driven by publics knowing nothing about it, whether it risks a policy-making ruled by a popular audience, or by a sort of "techno-scientific populism". Obviously, there is not an easy solution. It is difficult to imagine how to devise and foster forms and practices of social participation in managing technoscience that are really advantageous for society. We do not know whether the chance to let people decide on research is viable or only belongs to the rhetoric of a political trend. Certainly, the answer to these questions is not a diminutive, restricted dialogue, now intrinsically impossible, but a reinforcement of the social forum. Irrespective of what the dynamics of the social control on science are, they work if communication is working, and if new science communicators do receive a training. And the latter issue is experiencing long delays and difficulties.

Science communication in the age of marketing

We believe there is an imbalance between the growing request for a science-society dialogue and the skills, the professionalism of the operators who should implement this dialogue through public communication tasks.

Whereas a range of solutions have indeed been put forward and used to promote participation,[2] the issue of the operators that may make them effective and of their training has been much less discussed.

That is partly due to what Bauer and Gregory have recently and effectively illustrated[3] in an essay maintaining that the public communication of science is going through a phase of great transformation for at least two reasons: the organisational and technological changes that have generally invested journalism and, most of all, the growth in the activities of public relations and marketing by research institutions. On the one hand, editorial offices are cutting their staff, in particular journalists dealing with science and technology and therefore – to get by as free-lancers – they need to have a number of employers, with strong limitations to their independence. On the other hand, more and more professionals in scientific communication are employed as PR persons. Without dealing in detail with the reasons that have caused a shift towards the

privatisation of science communication as a mirror of privatisation of research itself, both factors reduce transparency and the critical judgment ability of science communicators.

It is a direction opposite to the one desired by the new dialogue rhetoric, which should imply professionals able to provide citizens with instruments to reflect and to take action. Instead of watchdogs ready to give the alarm when something is either not working or not transparent in the complicated plot of science, political power and economic powers, the prevailing scientific journalism is actually more careful to the financial market and to treat publics as consumers rather than as active participants in technoscience management.

Dialogue schools wanted

The Baure and Gregory analysis can be further integrated by another difficulty, which regards learning and cultural issues.

Over the past two decades, among the consequences of the institutionalisation of the British Public Understanding of Science in the mid-eighties, there has been a driving force towards the establishment of science communication training courses all over the world. Most of the times, these schools have taught how to best translate science. The reference model is substantially a scientific journalist able to transform terms and concepts from the scientists' jargon into the language of the man in the street, a novel Prometheus able to climb the Olympus of science and to bring down the fire of knowledge to a people immersed in darkness.[4] If communicating science implies extremely different practices and skills, which do not only include the ability to disseminate, but ever more frequently an ability to favour dialogue, then the ecosystem of new science communicators is lived by highly biodiverse flora and fauna: now professional popularisers of a scientific culture are not figures easy to define or to train, because they do not carry out linear tasks in specific places. A science communicator is an 'amphibious' worker[5] travelling with their double-bottomed suitcase, as they cannot work only with the instruments of an information "simplifier". They should also carry the instruments of a journalist, yet the false bottom of their suitcase should hide cultural instruments – made of a great curiosity for history, philosophy, sociology, arts – making them able to safely handle restriction enzymes, wave functions, prions or greenhouse gases, but also to frame those topics with the cultural context they deserve.

There have been a number of important initiatives at European level to carry out an in-depth analysis of science communication training issues,[6] although generally the schools around the world cannot cope effectively with new needs.[7]

Conclusions

It is not easy to be a communicator able to facilitate a dialogue between science and society, able to be autonomous and impartial when reporting and analysing controversies between researchers and citizens. Teaching this job is not banal at all, given its several novel characteristics. Firstly, because science communication is more and more influenced by the logics of public relations and the emergent marketing of scientific institutions. Secondly, because science communication schools – although they realise many aspects of the difficulty in performing this job – cannot cope with the integration between teaching and topical themes in compliance with the demand for public involvement in decision-making on the development of science and technologies. The sum of these two factors imply a relevant risk: the end of critical journalism and science communication.

Translated by Massimo Caregnato

Notes and references

[1] Cf. House of Lords, *Science and Society*, Her Majesty's Stationar Office, London (2000).

[2] The most up-to-date reviews include M. Bucchi and F. Neresini, *Science and Public Participation*, in E. J. Hackett, O. Amsterdamska, M. Lynch and J. Wajcman (eds.), *The Handbook of Science and Technology Studies, Third Edition*, MIT Press, Cambridge, Mass (2007) 449

[3] M. Bauer and J. Gregory, *From journalism to corporate communication in post-war Britain*, in M. Bauer and M. Bucchi (eds.), *Journalism, Science and Society*, Routledge, New York (2007) 33.
[4] Y. Castelfranchi e N. Pitrelli, *Come si comunica la scienza?*, Laterza, Roma-Bari (2007) 120.
[5] On the definition and the role of an "amphibious" communicator, cf. a blog recently created on the initiative of a network of researchers and science communicators on the website http://www.anfibi.org/.
[6] Consider in particular the project ENSCOT (The European Network of Science Communication Teachers, http://www.ucl.ac.uk/sts/enscot/), the project ESConet (European Science Communication Workshops, www.esconet.org/) and the project DOTIK, www.dotik.eu
[7] N. Pitrelli, *Tra teoria e pratica nelle scuole di comunicazione della scienza*, in N. Pitrelli and G. Sturloni (a cura di), *La comunicazione della scienza. Atti del I e II Convegno Nazionale sulla Comunicazione della Scienza*, Zadigroma, Roma (2004) 99.