

## Comment

### JCOM — FIVE YEARS IN THE FUTURE

## As requested: brief, frank, and informal

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*ABSTRACT: Scientific journalism ought to pay attention not only to the “products” of science, but also to the ways in which it operates in any given historical and political context. A critical analysis of the presently dominant rhetoric of innovation and unlimited growth is necessary to shed light on the relationship between science and democracy. Equally profitable would be a thorough investigation of past and present controversies on the role of scientists in decision-making.*

Nowadays science is more and more indistinguishable from technology, and innovation has become a buzzword, including in the official documents of the European Union. As described by Commissioner for Research Máire Geoghegan-Quin, innovation is a process devoted to channeling scientific research into the creation of products destined to the market for satisfying [or creating] consumers' needs. Consistently, science is often “advertised” in terms of unceasing and surprising achievements, which will improve our well-being in ways which are still unimaginable: from the expansion of our life span, to the defeat of all kinds of illness, to modifications in our close and remote environments, and ultimately in our own biology.

Substantially the rhetoric is the same (or rather an amplification) of that found in Vannevar Bush's “Science the Endless Frontier”. However, almost 70 years have elapsed since 1945 and the social context in which science operates nowadays hardly resembles that of post WWII. Therefore, there is an urgent need to revisit that rhetoric also on the basis of what we (should) have learnt from past experiences. In particular, that when we venture on a new path, such path is largely unknown and will actually take shape under our own feet, while we walk it. This is particularly true at a time when the relationship between research and its applications is somewhat reversed and we are able to create new things and intervene in “natural” processes even before we fully understand what we are doing.

Technological development is fast and undoubtedly promising in many areas, with, for example, the IoT (Internet of Things), smart cities and planet(s), nano-materials, bio-bricks, geo-engineering, and the like. Its speed and pervasiveness require a deep reflection on its implications not only in terms of possible unexpected (and perhaps irreversible) consequences, but also impacts on our democratic institutions.

I think that scientific journalism must be dedicated to investigate the products of the techno-science as well as its processes, assumptions (explicit and implicit), and objectives (spoken and unspoken). In other words it must inquire not only about “what” is being done, but also “how”, “what for” and, perhaps most important, “whom for”. Such attention is already present in the JCOM and I would like to see it expanded in the coming years, in particular with regard to new and emergent technologies and to innovation more generally.

Another connected topic, which I would find appropriate and useful is that of the role, or rather the roles, of scientists in the present, rapidly changing socio-political context. The recent L’Aquila trial where seven experts were condemned for failing to perform an accurate and inclusive risk assessment and adequately inform the population, is but one recent example of the need to re-discuss the idea of “science speaking truth to power”. A JCOM editorial by Giancarlo Sturloni has already addressed the issue, challenging the idea of an attack on science. It might be worth to explore on which grounds such idea was defended and taken up in many scientific circles, and whether it generated a thorough debate beyond the expression of a generic solidarity for colleagues in trouble.

As ever, ethical issues deserve attention. Cases such as Einstein’s letter to President F.D. Roosevelt in 1939, or the 1941 Heisenberg-Bohr meeting so cleverly represented in Michael Frayn’s “Copenhagen” could be taken as exemplary for discussion of past as well as present stringent dilemmas.

In summary, I would find it timely and useful to address the issue of the relationship between science and democracy with continuity and depth. In a way, they are both faced with a credibility crisis and I believe that a response framed in the rhetoric of unlimited growth is inadequate and possibly misleading.

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