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Massimiano Bucchi: ‘We have all witnessed a spectacular, unprecedented experiment of science communication’

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Massimiano Bucchi, professor of Science and Technology in Society and Director of Master SCICOMM, University of Trento, has been visiting professor in Asia, Europe, North America and Oceania. He is the author of several books (published in more than 20 countries) and papers in journals such as *Nature*, *Science* and *PLOS*. Recent books include *Newton’s Chicken: Science in the Kitchen* and *Handbook of Public Communication of Science and Technology* (3rd ed. 2021, ed. with B. Trench, Routledge). From 2016 to 2019, he was editor-in-chief of the international journal *Public Understanding of Science*. He regularly contributes to newspapers and TV programmes. In this interview, he remembers his editorship and points to challenges he sees for Science communication now and going forward.

Q. *How did you want to develop the journal?*

A. Under Martin Bauer’s editorship, the journal had further and remarkably improved its visibility and standing in terms of key publishing indicators. It had also increased the number of issues published per year, attracted more submissions, expanded its global coverage and put more emphasis on solidly grounded empirical research. My vision for the journal was to continue and consolidate that momentum.

Solid, empirically based research papers should have continued to be the backbone of the journal. At the same time, and as the field was becoming more specialized, we also needed strong, influential theoretical contributions.

Other goals were more specific, but in my view, equally important. For example, developing the journal presence in social media for data exchange and sharing, information on initiatives, collaborative research, rethinking and revitalizing book reviews. Pursuing these last two goals was possible mainly thanks to the valuable work of Cristina Rigutto and Brian Trench.

Q. *How did the field evolve during your editorship?*

A. I think the field is developing in interesting ways, with a richer diversity of contributions from different parts of the world as well as a promising revival of theoretical papers.

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As one could expect, papers on specific issues like climate change represented a relevant proportion of submissions.

Q. *In your first editorial in 2016, you referred to the ‘crisis of mediators’ in the current media landscape where digital media platforms disrupt some of the established practices of science communication. How do you see this situation now?*

A. I think we have all witnessed a spectacular, unprecedented experiment of science communication during the past couple of years, with several science researchers and experts becoming key actors of communication across all media, from television to printed media to social media. On the one hand, this reflects how serious the crisis of mediators has become. On the other hand, this has given an opportunity to scholars in our field to understand how difficult it is for scientists and experts to take up this new central role of communication and the responsibility it involves. However competent in their specific field, most of them were clearly unprepared for this responsibility, having very little awareness and intelligence of the publics they were addressing and of the consequences their statements could have for citizens’ perceptions, attitudes and behaviour. Also, a substantial disconnection from their institutions and institutional public engagement emerged in most of the cases.

Q. *Issues of trust and credibility have been common topics in science communication recently. It seems that science itself, at least particular practices in scientific publishing have boosted also flows of misinformation. How do you see the role of this ‘information disorder’ in relation to the Covid-19 pandemic?*

A. I am not particularly fond of fashionable labels like ‘information disorder’ and so on. The challenge is broader and more substantial and is a quality challenge. How do we assess the quality of science communication as viewers and readers? We used to solve this problem through the channel reputation, but now we cannot rely on this shortcut anymore. As I mentioned above, the pandemic crisis confirmed the centrality of this challenge and how unprepared are not just citizens, but also the experts who are increasingly under the spotlight. Visibility and celebrity are used sometimes as shortcuts in science communication, taking for granted that famous scientists always offer high-quality content, but this is not always guaranteed, as we know. In general (not just for science communication), there is a striking paradox. We complain about low-quality information, but most of us are not willing to pay for quality. How can we expect big tech platforms like YouTube or Facebook to care about the merits of the content? They are running a completely different type of business that is totally independent from the quality of content, as long as it produces clicks, targeted advertisement and data from users. So, I see a much greater challenge to quality than so-called ‘fake news’ and so on, but which is not much understood or addressed, in science communication and beyond.

Q. *Yes, I think that this pandemic has shown us that the situation is much more complicated than the usual accounts of ‘fake news’, ‘post truth’ and ‘death of expertise’ claim. Surely, we have seen the increase in conspiracy theories and various sources of disinformation around Covid-19 and vaccinations. But we have also seen the rise of self-branded experts with alarmist discourse and the explosion of preprints, which reflect the erosion of standards in scientific publishing and science communication. It has become increasingly difficult to distinguish verified scientific knowledge from misinformation and experts from false prophets.*

The circulation of misinformation and disinformation is particularly visible in social media. Also it seems that experts and health authorities are often heavily criticized in Twitter and other social media platforms. However, comparing representative opinion

surveys with social media data and discourses may lead to a conclusion that we easily overestimate the role of social media in representing public opinion. At least we have found this in our research in Finland. How do you see this situation in Italy?

- A. It is exactly the same, and we have considerable evidence of this. First, and particularly on issues that relate to their health (like in the present pandemic), citizens rely mostly on institutional sources of information and traditional media and very little on social media. Also, minority positions tend to be overestimated for at least two reasons: (1) they make news and (2) their proponents are very vocal on social media. So, for example, in Italy, which has one of the highest percentages of vaccinated against Covid-19 on the vaccineable population internationally, critical and anti-vax positions (2%–3% of population) tend to be largely overestimated. This has important methodological consequences for our field: the assumption of some researchers that social media discussion can be taken unproblematically as a proxy of public opinion and debate is highly questionable.

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Author biography

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