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Comment

SCIENCE JOURNALISM IN THE AGE OF CROWD: INTERVIEWS

Climate change as a 'grand narrative'

Interview by Filippo Bonaventura

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ABSTRACT: Climate change is a multi-faceted issue. It relies on deep scientific bases, but merges with politics, economics, ethics and culture in a complex and strongly nonlinear social debate. This interview focuses on the relationships between public communication on climate change (with emphasis on the so-called 'new media') and the decision making processes. It argues that more productive and sustainable forms of communication on climate change are needed due to problems related with validation of information in the Web.

Climate change gives probably some among the most interesting and critical examples of the complexity of public communication on scientific issues. Having scientific roots, climate change is nevertheless inextricably woven with other social issues: it is, in this sense, a 'grand narrative'. A strong social debate is needed for this purpose. Nowadays the Web is the main agora in which this debate is performed, but also – and especially – in which scientific knowledge on climate change has been reconstructed by means of integration of diverse experties. The Web plays a major role in the (scientific, but also political, cultural and ethical) process of decision making on climate change. This is mainly due to an active public participation and a re-definition of science journalism's role. We delved into these topics with Anabela Carvalho (University of Minho), Chair of the Science and Environment Communication Section of the European Communication Research and Education Association (ECREA).[1]

Climate change has become one of the most talked about topics in recent years. Which are the most active figures today in the communication about climate change? How this communication is performed? How much it relies on emotional reactions?

Climate change has indeed gained a significant level of attention in multiple fora, including traditional and new media. If you plot the peaks of media attention, they mostly coincide with high-profile political events and especially international summits. Both this kind of quantitative analysis and qualitative research on media discourse have shown that politicians tend to be the main definers of the meaning of climate change. In the last decade, this has included both George W. Bush and Al Gore, who have opposite views on the issue, as well as Stern, Tony Blair, José Manuel Barroso and others.
The Internet has been contributing to important changes in communication on climate change and allowing a much wider set of individuals and organizations to express their views in a public forum with a potentially far reach. In many countries, the volume of content on climate change that is put online has increased immensely in the last few years. In the USA, the Pew Center Project for Excellence in Journalism (PEJ) began a New Media Index in January 2009 and has pointed out that global warming has been one in November 2010 of the top five topics in blogs in ten different weeks, with no parallel in the traditional media. There is a large variety of views and claims represented in blogs, tweets and other social media. The PEJ claims that several of the peaks of talk on climate change were dominated by deniers but some were generated by 'believers', such as when the American Geophysical Union announced that 700 scientists were preparing to be more active in communication on climate change.

Last year, there was a lot of momentum around the Conference of the Parties to the United Nations Framework Convention on Climate Change that took place in Copenhagen with a wide range of people, institutions and civic groups calling attention to the seriousness and the urgency of climate change. However, in the weeks that preceded Copenhagen and later, there was an organized campaign by climate change deniers to spread disinformation and generate suspicion of scientific knowledge. This often involved little rational or well-grounded arguments but played instead with emotional aspects such as hate, insult or satire.
Some of those that have tried to mobilize attention to the gravity of climate change have also often overdramatized the problem by making it look more immediate and inevitable than what it is and thus appealed excessively to fear, which is not an effective strategy in terms of long-term engagement of citizens. More productive and sustainable forms of communication on climate change are needed.

The Web is changing the ecology of information on climate change. Beside big scientific and nongovernmental institutions (Greenpeace, WWF, IPCC...) lots of different actors – often solitary and non-famous – are rising, who actively communicate. What is, in your opinion, the role of these figures? What is their importance in the collective discussion about climate change?

Some web content is produced by isolated individuals that are particularly motivated in one way or the other, but there are also powerful organizations involved. Some of them fund a range of groups with akin ideological views and therefore manage to multiply the number of voices speaking online against the scientific consensus. In the so-called 'Climategate' case, there is clear indication that the amplification of the claims associated with the hacked emails resulted from web-based communication by a number of groups, including many funded by the Koch family foundations such as Americans for Prosperity, The Heritage Foundation and the Cato Institute, all of which oppose political regulation. As those largely unfounded claims were then picked up by journalists in many different media, organized distortion of information paid off. This is a clear example of the Web being used with great effect to promote climate-denialism. However, there are also large numbers of individuals and organizations producing useful contributions to the understanding of climate change through the Web. The small group of scientists that is responsible for the Real Climate website, for instance, has been providing valuable information, contextual data and clarification of research, which has certainly helped citizens and journalists alike.

The Web is, in general, particularly suitable for creating and managing debates. In the case of climate change, is the presence of many different voices good for society or not? Does such diversity enrich or confuse the debate about climate change?

The development of the Web was accompanied by many hopes of democratization of communication. While it has partly fulfilled that promise by enabling people to produce and disseminate content, new power imbalances have been created as the production of regular content requires human/financial resources that are unevenly distributed. New inequalities and new 'market' biases have appeared. The sheer number of websites that attempt to discredit the scientific consensus on climate change is proof of that. As the number of available sources has increased exponentially, it has become harder – but ever more important – for most people to filter them out. One of the ways of minimizing these problems is by promoting new media literacy at school and in other arenas. Increasingly, citizens need to develop skills to evaluate the consistency and credibility of online communication and to undertake a critical consumption of information.

The debate about climate change has strong political connotations: like almost all the scientific issues related to environmental topics, it has to be embedded in the society's system of values. In this sense, how much are citizens sensible to the public communication made about climate change? How much, and in which ways, does the public perception depend on the kind of communication which is performed?

Climate change is a multi-faceted issue. While science is important for the detection and understanding of the problem, climate change is also a matter of political options, economic preferences, social and cultural values, ethics, etc. The meaning of climate change is constructed in communication practices and, as you suggest, these different dimensions intersect in multiple ways.
The media play a particularly important role for public perception of issues that, like climate change, have a strong science basis. Multiple surveys have shown that the media, and especially television, are the public's main source of information on climate change. Studies have also shown that the mode of communication on scientific knowledge of climate change influences people's views: for instance, when news stories have more contextual information on the state of scientific research the perceived certainty of knowledge increases.
Besides knowledge, there are a series of other relevant dimensions in people's relation to climate change, all of which are dependent on communicative practices that take place in the multiple media that surrounds us: for example, risk perceptions, perceptions of responsibility and trust in the different social actors that are relevant in debates on climate change.
The impacts of mediated communication should not be thought of in linear terms. For instance, studies have shown an association between levels of concern with climate change and levels of use of sources of information on climate change. We cannot say that the concern is caused by such sources in a unilateral fashion as it is possible that the influence goes the other way as well: more concern leads to more consumption of information. It is likely that this is a process of mutual reinforcement. Nevertheless, there is also evidence that mediated messages can lead to some changes in people's understandings of issues.
In any case, communication is crucial in the construction, sedimentation and transformation of the meanings of climate change, with important implications for politics and citizenship.

Viceversa, are there any examples in which citizens' behaviours worked as a driving force for the production of relevant information about climate change?

Stories about behavioural change initiated by citizens are very important and badly needed but relatively uncommon in the media. Journalists tend to give preference to official sources such as governments or research institutions. This is one of the areas where the Web makes a positive influence as it allows civic groups that are developing new ways of dealing with climate change to gain some visibility. Currently there is a wide range of groups that address climate change in creative and potentially influential forms, such as the Transition movement and Carbon Rationing Action Groups. They use the Web for disseminating information and for engaging people with climate change and have been gaining some traction in various countries.

The 'Climategate' scandal in 2009 dampened citizens' trust on the transparency in the relation between scientific institutions and the political environment. How strictly, in your opinion, is scientific community bounded to different political and economic stakeholders? And what should it do to achieve more public credibility?

The pseudo-scandal associated with the University of East Anglia's hacked emails highlighted a series of problems both in journalistic practice and in the ways scientists relate to the media. First, journalists from many types of media, including reputed outlets, jumped too quickly on the bandwagon created by the climate deniers. There was excessive attention to the issue and, most seriously, excessive journalistic dependence on interested bloggers and alike. Due to multiple reasons, most journalists did not go through the emails, relying instead on the interpretation that various groups were offering on the Web. There have been several inquiries to the IPCC and no major fault was found on the side of scientists. Yet, the conclusions of these inquiries did not receive the same projection as the denial claims.
On the side of scientists and the IPCC, there were multiple mistakes with a slow and insufficient response to the claims that blogs and the traditional media were making about the hacked emails. Scientists need to farther their skills and work with communication professionals in order to react to this kind of disinformation campaign more effectively by speaking promptly and unequivocally about the

state of scientific knowledge. This means also being clear about uncertainties and explaining their significance and implications.

What is the science journalist's role in such a rich communication ecosystem, which is so capable of producing and sharing information? What are the behaviours adopted by science journalists in this context? And in particular, what kind of tensions are there between scientists and science journalists? What originates them?

In an information-saturated environment, the role of the journalist is ever more important. The work of selection, verification and interpretation of information is a key responsibility of this professional class. Unfortunately, the working conditions have been deteriorating for most journalists as the size of newsrooms contracts and workloads increase. The current economic crisis and the widespread reduction in workforce has aggravated the fact that demands on journalists' time have been growing tremendously as they are asked to produce multimedia material and blog entries for institutional websites, amongst other content, alongside conventional news pieces. This means that journalists have fewer opportunities to research, compare and make sense of different claims, and can more easily fall prey of organized campaigns to push a certain issue or viewpoint.
In the field of science journalism, there are specific challenges related to the different professional norms that characterize journalism and science-making. Journalists prefer a clear-cut story with human interest to a full account of the details of an abstract knowledge claim. While there are different styles of communication, this does not have to amount to a conflict between journalists and scientists. There are actually signs of scientists tuning to news values and adjusting their communication with journalists accordingly. However, episodes like pseudo-'Climategate' have negative impacts on that relationship and it is likely that some scientists become more reluctant to come publicly to the fore about their work and findings. Both sides need to work to improve this state of things.

Notes and references

[1] http://www.ecrea.eu/divisions/section/id/16.

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