ELEPHANT
IN THE LAB

INTERVIEW

THE BIGGEST CHALLENGES FOR SCIENCE COMMUNICATION IN THE DIGITAL AGE

Short title	Science communication in the digital age
Long title	The biggest challenges for science communication in the digital age
Authors	Alexander Filipović [1]
Author affiliation	[1] Zentrum für Ethik der Medien und der digitalen Gesellschaft (zem::dg), Munich, Germany
Author bios	Alexander Filipović is communication and media ethicist in Munich. He holds the endowed professorship for media ethics at the Munich School of Philosophy. The interests of the ethicist, theologian, and communication scientist include the ethics of journalism, TV entertainment, and digitalization. A particular focus of his lectures and publications lies on the changes and challenges of the digital transformation of our media. Together with Klaus-Dieter Altmeppen, he heads the zem::dg - Center for the Ethics of Media and Digital Society. He also coordinates the Network Media Ethics, runs a blog, and with colleagues edits the media ethics journal Communicatio Socialis.
Author social links	Alexander Filipović: ORCID- ResearchGate- Twitter
Date published	August 2018
DOI	10.5281/zenodo.1400555
Cite as (APA)	Filipović, A. (2018). The biggest challenges for science communication in the digital age. *Elephant in the Lab*. DOI: https://doi.org/10.5281/zenodo.140055

What are from a media ethics perspective the biggest challenges for science in the digital age?

One of the biggest challenges in science communication is to create trust. In times, in which relations to truth have become uncertain (buzzwords being e.g. "fake news" or "post-factual age") and the classical and large institutions of liberal democracy like politics and the media are increasingly less trusted, science has to take care that the same does not happen to it as well. One of the possibilities for science to develop or maintain trust is a good communication about what is being done, and how. Scientists still enjoy a high degree of trust with respect to the truthfulness of statements, but there are also tendencies towards the opposite. For each question there is a contradicting assessment, and for each study there is another study, which yields different results. The structures in which scientists work and arrive at their results are not known to everybody or indeed they are largely unknown. Thus, the maintenance of trust is one of the biggest challenges, and it is relevant from a media ethics point of view, as this is a question regarding the communication of science ethics.

How has digitalization changed the ideals and the practice of science ethics? How large is the gap between practice and ideals?

I think that scientists through digitalization have more possibilities to communicate and be transparent about how they work, and how they arrive at their results. Furthermore, making use of e.g. social media or blogging, they have the opportunity to partake in the societal discourse. However, I think that not too many scientists use these possibilities, and I would say that still too few do that. This is an example of how ideals and reality diverge. On the other hand, the communication departments of scientific institutions are getting ever larger and more professional. Although there is sometimes also a need for action there, it is the case that some institutions pursue quite intensive public relations. At this, there is a risk that communications are too strategic, and that public relations of science are so active that journalism in contrast to that is rendered quite helpless.

Which opportunities and which risks do digital media pose for the enforcement of ethical standards in science?

The opportunities are that transparency is introduced and that scientists can come across as individuals. This makes it clear that their communication is authentic, or that what they do as scientists is authentic. I do not see serious risks from digital media for the enforcement of ethical standards in science. There is merely the risk that everybody looks for those studies which support their own point of view, and then cites these. This can have the consequence that the crudest opinions can be voiced and supported, as for each question there is a study to be found online. Nevertheless, I would assess the opportunities for science communication to be far more positive than the potential risks.

Keyword "fake news": Is science affected by it, or can it make itself free from it?

Of course we all know that scientists also make mistakes and can be wrong - these are no fake news, however. If they deliberately work in an incorrect way or make up results, this is not a new aspect of digitalization, but rather a problem which has always affected science. Science being used and indeed abused for certain reports and pieces of information, that has already been there before. And when science is adopted or results are presented in a distorted manner, then this is chiefly not the fault of science itself.

Are more strict institutionalized sanctions and incentives necessary to guarantee ethical behaviour in science? Which alternative suggestions would you have?

There should never be just *one* ethical perspective. An ethical perspective which only aims at structures and organizations is as incomplete as one which only aims at individuals. The ideal goal is always something like an ideal self-control of the scientific actors and institutions. To begin with, scientific institutions have the duty to make sure that good scientific practice is maintained. Scientific societies and universities, e.g. through their ethics committees, are responsible for this. Myself, I chair the ethics committee of a scientific society, the German Communication Association (*Deutsche Gesellschaft für Publizistik und Kommunikationswissenschaft*). If we come to know that members of our society do not follow the rules of good scientific practice, we become active, cautioning members or excluding them. At this, the challenge sometimes lies in the way specialist societies and universities collaborate. Primarily, it is the university or respective research institution at which the scientist is employed, which has the obligation to become active. However, there can also be a division of labour between scientific societies and universities, which then has to be coordinated and adjusted. With respect to that, scientific societies and universities have to take care together that their members know the ethics guidelines and the rules of good scientific practice. In that sense, this is a part of education. On the other hand, it is the duty of the individual members to know the guidelines and to act and conduct research in accordance with them. In case this should not work, specialist societies have the task of watching over this, and in a next step the larger entities are responsible for taking appropriate action.

As you effectively have a double point of view, on the one hand as a scientist, and on the other as a member of a scientific society, what would you say has changed qualitatively in the digital age, especially with respect to the role of ethics committees? Are there any particular control mechanisms which were established as a reaction to digitalization?

There are no particular newly introduced control mechanisms. That something has changed can already be seen from the fact that, using the new technologies, there has been something like a surge of plagiarism cases. It was only with crowdworking and the electronic searchability of large amounts of data that the detection and communication of many plagiarism cases was even possible – including many supposed cases. This in some instances leads to a heated atmosphere, which can make the work of ethics committees more difficult. On the other hand, it is to the advantage of ethics committees, when texts are easily accessible online and it can be found out easily through searches, whether plagiarism has indeed taken place. In this sense, for controlling bodies there are now more possibilities to conduct investigations, as well as is the case for people who are merely after denouncing scientists. Sometimes this leads to a difficult situation, as stating a suspicion can already do great damage to the scientists involved.

In light of the fact that recently there have been many cases of plagiarism and trust in scientific institutions and ethics committees has somewhat declined, how can trust in science be restored or preserved, and which opportunities and potentials does digitalization offer in this regard?

I am not sure, whether there really is a loss of trust, this would have to be empirically investigated. What I think is that science still enjoy a high degree of trust, but trust is always subject to debate and is always precarious. Trust is a matter of experience, i.e., the result of a certain experience made. This would allow to conclude that people should ideally collect many positive experiences with scientific institutions, such that their expectations are confirmed. For example, this would be the experience that scientists do no deceive and do not do anything deliberately wrong, as well as that control institutions fulfil their function. The absolutely best measures to establish trust would be to make sure that in science indeed no mistakes are made, that the ethics committees are consulted otherwise, that no plagiarisms occur, but rather proper scientific work is done, and that the conditions of employment in scientific institutions are good, right, and not precarious. These are all factors which will decide, whether trust is placed in science. And, importantly, also scientists themselves have to take care that accessibility and

transparency are established, by communicating what they do scientifically via blogs and social media. I believe this can strengthen trust and scientific integrity.