The five schools or currents of thought in Open Science: an interview with Benedikt Fecher

Interview / Entrevista

Since 2017, Benedikt Fecher has headed the "Knowledge & Society" research programme at the Alexander von Humboldt Institute for Internet and Society. The programme addresses issues at the interfaces of science and digitisation and education and digitisation. Benedikt is also co-editor of the blog journal *Elephant in the Lab*, which critically examines the scientific system. He is also a member of the editorial board of *Publications*, an open access journal. In his research, Benedikt deals with questions concerning the governance of science and innovation, in particular with the topics of impact and third mission, open science/open access and research infrastructures. In 2017, Benedikt was awarded his doctorate by the UdK Berlin. In his doctoral thesis, he dealt with the preconditions for the open provision and reuse of research data in academic research. During his time as a doctoral candidate, he was involved in establishing a research data repository in his capacity as an employee of DIW Berlin. From 2012 to 2017, he was also a research associate in the "Open Science" lead project at HIIG, which received an award for being an "outstanding place in the Land of Ideas" in 2016 from Deutsche Bank and the German Federal Ministry of Education and Research. In 2016, Benedikt was also scientific adviser on the topics of open access, research data and libraries at the Leibniz Association and DARIAH-DE Fellow at the Max Planck Institute for the History of Science. Since 2019, Benedikt has been a member of the interdisciplinary working group "Implications of Digitization for the Quality of Science Communication" of the Berlin-Brandenburg Academy of Sciences and Humanities. Together with Prof. Dr. Sascha Friesike, in 2013, proposed to structure

Open Science into five schools of thought, namely: the public school, the democratic school, the pragmatic school, the school of infrastructure and the school of metrics.

Figure 1 - The five schools or currents of thought in Open Science
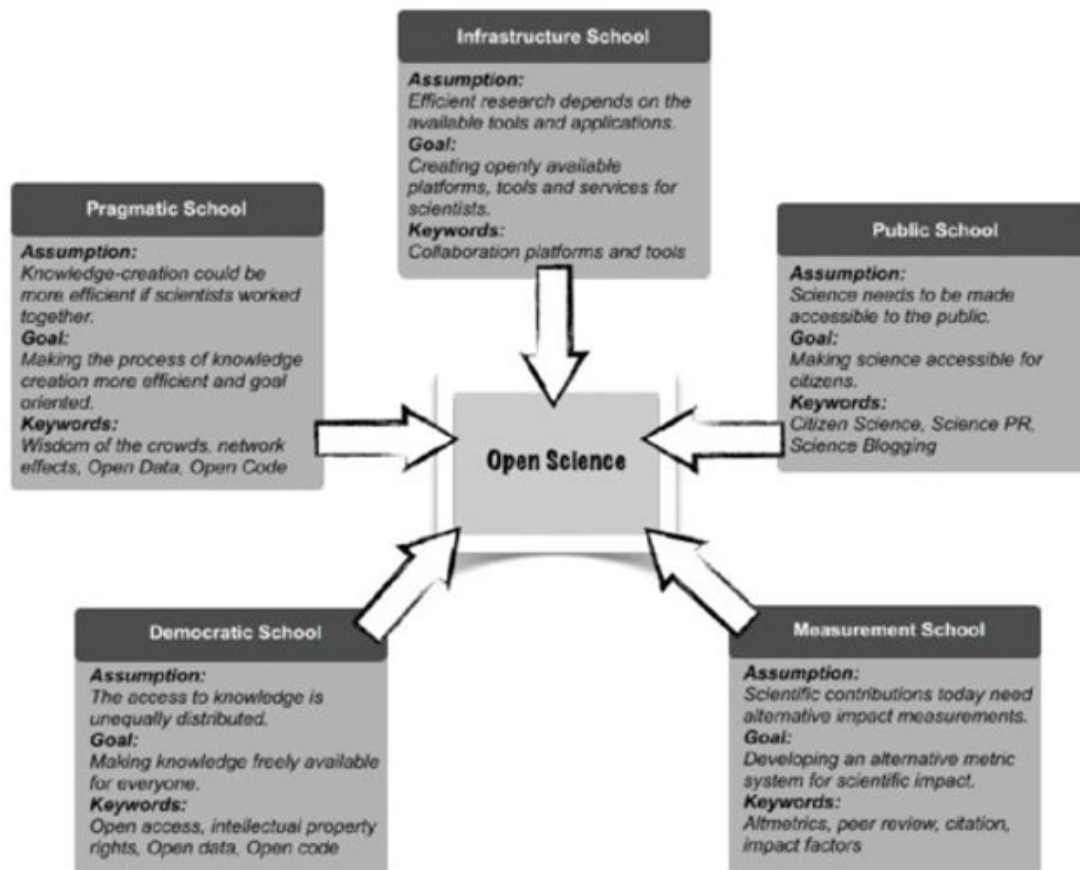
Fecher and Friesike (2014)

To learn more about the author, go to:https://www.hiig.de/en/benedikt-fecher/

Kindly, Benedikt Fecher gave a brief interview to Information Science Express - CIEXpress, about the five schools of thought of Open Science and the future of science. The author commented on changes that have occurred since its seminal publication, the schools that have evolved the most, made recommendations for early-career authors, and much more. Check it out!

1) What has changed in Open Science after the publication of "Open Science: One Term, Five Schools of Thought"?

A lot has changed compared to 2013. The political demand of a movement has long since become a recognized principle of science governance that shapes the research agendas of entire countries. I would even argue that the fundamental goals of Open Science have remained the same. Namely, to use technology to make science accessible, transparent, inclusive and efficient. However, we also see that the term can be instrumentalized. A good example is the rise of golden open access business models of publishers, where authors now pay instead of readers. While it is good that the articles of these authors are now accessible, this model poses new problems. For example, only financially strong institutions can buy into this model. It therefore remains important to observe and analyze the developments around Open Science. At the end of the day, I believe, as my friend Jon Tennant used to say, that Open Science is nothing more than science done right – accessible, verifiable, and oriented towards the common good. We need to take a critical and informed look at the question of who, when, and how science must be open to in order to live up to these goals. Openness is not an end in itself.

2) Did you expect the great impact of this publication on the world stage?

When we worked on this article in 2013, we didn't think it would be read by so many colleagues worldwide. The article was part of a book project that my colleagues Sascha Friesike and Sönke Bartling initiated. Our aim of this opening chapter was to organize the somewhat messy discourse surrounding Open Science. As we did so, digging through hundreds of articles and policy documents, we noticed that while "open science" is an omnipresent and much-discussed term, it is understood very differently by different actors. Our article was well-read perhaps because the framework we offered helped to better understand and analyze this movement and its goals. It also came out at the right time, when the topic was gaining momentum.

3) After such a long time, in your opinion, which of the schools has evolved the most and which one needs more attention from the scientific community?

I think for each of the schools of thought something interesting could be said about how they have changed and further developed in recent years. In the case of the "Public School," for example, the hyper-focus on science during the pandemic, showing how important science can be to societal decision-making processes but also how vulnerable it can be. What comes to mind with the "Democratic School" is the establishment of open access business models that grant access to outputs but discriminate in access to authorship. In the case of the "Infrastructure School", the multitude of start-ups and initiatives that attempt to support open practices along the research cycle. The interesting question here will be to what extent non-commercial and public good-oriented infrastructures can prevail over commercial ones. I think we should be careful not to reproduce dependencies on a few large publishers for new relevant outputs such as data, software, or teaching materials. I find the "Measurement School" particularly exciting. Many of the problems in intra-scientific scholarly communication and external science communication have to do with misaligned and path-dependent incentives. We need to address the question of what good science means for modern knowledge societies of the 21st century, how to determine and recognize it. After all, recognition is a hard currency in the scientific reputation economy.

4) Today, do the five schools of thought still fully represent Open Science?

The schools of thought are not stable for all eternity. The discourse has evolved over time and also the schools could need an update, for example, with regard to the question of which phenomena and practices they comprise. I think the question of what problems openness can actually solve is the key to deciphering Open Science. In my opinion, these are still almost always issues of comprehensibility, accessibility, efficiency and inclusivity.

5) In which schools should we fit Open Education and Digital Preservation?

Open education certainly resonates with the democratic school, because it is about the access to outputs (e.g., lecture materials, videos, etc.) and even more with the public school, because it is a form of science communication. In general, teaching is an often underestimated but great way to have a societal impact. My lay perspective on digital preservation is that it is about the permanent availability of digital materials (e.g., scholarly outputs) and that this is primarily an infrastructural problem, in the sense that issues of location, licensing, and documentation of those outputs are paramount. However, I am neither an expert on Open Education nor on Digital Preservation.

6) How are you currently practicing open science?

I try to make my research accessible and comprehensible. My articles are all available online, usually as preprints and as final open-access versions. I only publish with publishers that have a decent open access model. I always try to disclose my data; which works well for our quantitative studies but for our qualitative studies due to anonymization issues. In my research team at the Alexander von Humboldt Institute for Internet and Society, we also try to be open to society and create meaningful transfer projects for our research topics. On our blog "Elephant in the Lab", we invite authors on important and current issues in the science system. We organize an annual summer school, called Impact School, where young scientists can learn how to develop meaningful impact with their work. And I try to leave my mark on science policy and science management with my research, where it might be useful to do so.

7) What difficulties did you encounter?

I have not experienced many difficulties myself because I am fortunate to work at an institution that supports and promotes Open Science.

8) What do you suggest for young researchers?

Develop a strategy! It is important that you engage with Open Science and consider what kind of openness is appropriate for your research and beneficial to you and others. Not everything works equally well for everyone. Think about at what point in a research project it makes sense to involve others and share materials, and how you can ensure that your results are comprehensible.

9) And what do you suggest for researchers who are struggling to change?

Most researchers understand themselves that open science is a tautology. Openness is deeply rooted in the scientific method and the ethos of science. Norms such as universalism, communalism, or organized skepticism are, in a sense, versions of openness. For me, it is a question of reason to adopt Open Science. And it is reasonable to discuss what kind of openness is adequate for the specific discipline or type of research. In my experience, it is important that institutions and scientific communities promote these discussions.

References

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