Open science and the disciplinary culture clash – Why is it so hard to reach a consensus?

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When it comes down to the nitty gritty detail of what open science means for an individual researcher, the disciplinary context is key. As clear and straightforward as making research publicly available is, many questions still remain for specific disciplines. **Peter Kraker** *reports back from a session on openness in the humanities where definitions of data, research work and research materials were all contested.*

Open science is a hot topic in the scientific community right now. The movement has been around for some time, but there is an ongoing discussion on what it actually stands for. That starts with the term itself. In English, "science" is usually only used in connection with disciplines studying the natural world. Therefore, open science seems to exclude disciplines studying the social realm and human culture. As a result, different terms have popped up over the years, including "open research" and "open humanities".

"Wissenschaft", the German translation of "science", is far more inclusive: it encompasses all disciplines, irrelevant of the subject they study or the methods they apply. So when we think of science as Wissenschaft, the following definition might be something that researchers from many disciplines could agree on: "Open science means opening up the research process by making all of its outcomes, and the way in which these outcomes were achieved, publicly available on the World Wide Web" (Kraker et al. 2011)

But that is probably where it stops: what exactly is the research process? What are the outcomes of this process? And how are these outcomes achieved? Each discipline has its own theories, methods, accepted practices, in short: its own culture. When pondering about how to achieve openness in science and research, there is therefore no one-size-fits-all approach. You have to take the disciplinary circumstances into account when it comes down to the nitty gritty details of open science and what it means for an individual researcher.
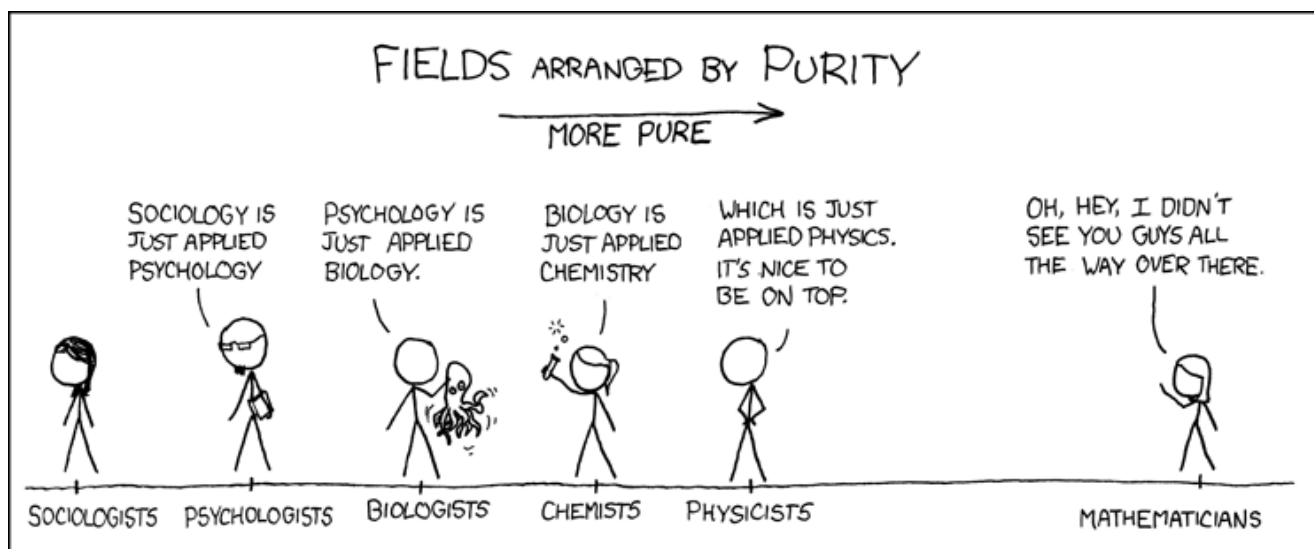

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Open data in the humanities

To illustrate this point, I would like to report about a session on open data in the humanities at the Open Knowledge

Festival this summer. The goal of this session was to devise a set of clear principles which describe what we mean by open data in the humanities, what these should contain and how to the use them. There are already guidelines on how to deal with open data, most prominently the Panton Principles for Open Data in Science. In a nutshell, the principles say:

When publishing data…

- …make an explicit and robust statement of your wishes.

- …use a recognized waiver or license that is appropriate.

- …use as few restrictive clauses (e.g. non-commercial) as possible. In the best case, data is dedicated to the public domain.

That sounds quite straightforward. But before, we even talk about the individual points listed here, we have to ask the question: what exactly is "data" in the context of the humanities? After all, in most humanities disciplines (literature, philosophy, languages, and history amongst others) the empirical method is not the predominant way of acquiring new knowledge. The humanities rather rely on historical, interpretive and analytical approaches that apply to cultural artefacts.

Iain Emsley and James Harriman-Smith therefore proposed to replace the term "data" with the term "work" as it is "a term already used to describe everything from plays to sonatas, letters, sculptures and printed objects". It is "both recognisable to any humanist and sufficiently large to cover the scope of potential cultural artefacts covered by these principles". But it was exactly this broad scope what put off many participants in the OKFest session. After all, "work" also applies to the publication that is the result of humanities research. Participants were more in the favour of "research materials". There is, however, a wide range of research materials in the humanities, and participants were quick to mention that they probably require different types of guidelines. A published work, for example, is often a research material which is annotated by another researcher. Therefore, copyright issues play an important role when thinking about how to disseminate this material in an open way. On the other hand, interviews (e.g. in oral history) may also be a research material; in this case, privacy issues have to be taken into account as well. Not to mention artefacts such as statues that can only be distributed in digitised form. The session was very productive and if you are a researcher in the humanities interested in the topic, I would suggest reading the round-up of the session on the OKFN Science page that includes the slides, the full notes and much more.

Keep calm and carry on

What we can learn from this is that open science, as clear and straightforward as it may sometimes seem on a high level, does leave many questions unanswered when it comes down to the details of day-to-day research in different disciplines. Established principles and practices from one discipline can be used as a guiding light, but usually there is no way around critically examining and re-defining them to make them work for one's own discipline. This typically requires the inclusion of many actors within the community, and a lot of discussion and persuasion. This may be hard work, but there is simply no way around it, if we want to make the dream of a more open science a reality for all disciplines.

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