CHIST-ERA Workshop on Open Science in Transnational Research

Abstracts

Alea Lopez de San Roman	**The EC policy on Open Science** The presentation will focus on the European Commission´s policy on Open Science. It will elaborate on how the Commission is advancing Open Science via the Framework Programme for Research and Innovation (Horizon 2020), relevant policies and actions (including the Copyright and the Open data Directives, the European Open Science Cloud or the Open Science Policy Platform). In Horizon Europe, the Commission wants Open Science to be the modus operandi for doing research. The presentation will also address the European Commission's proposal and implementation plans for Open Science in the new Framework Programme 'Horizon Europe'.
Euan Adie	**Monitoring the implementation of an open science policy at the transnational level** Research metrics is unfortunately not an exception to the "fast, cheap, good - pick two" rule of thumb. "Cheap" in this context is low burden for researchers (the burden being time & effort spent filling in surveys, interviews and case studies). Open Science is broadly defined, many aspects are new, so the relevant off the shelf indicators do not necessarily cover everything we are interested in. Transnational research metrics can be challenging when dealing with regions with different scholarly infrastructures & norms (e.g. global south scholars being poorly served by the large citation indexes) but this should not be an issue for CHIST-ERA. Planning an approach becomes easier when the scope is clearly defined so trade-offs can be identified and then decided, so questions (some will be easy!) to consider are: * By open - which aspects do we care about the most? Open access, open data, open collaboration, other? * And - are we most interested in compliance, trends, impacts or (most probably) some combination? In order of difficulty... 1) Compliance: are projects complying with a minimum standard of openness e.g. all outputs published in OA repository or journal 2) Trends: beyond basic compliance what is happening in the open science, are CHIST-ERA project outputs particularly suited to new ways of working with or presenting research, code & data 3) Impact: did anything useful happen, after we made it open? When looking at impact, is there a focus on any particular kind(s)?

Could be e.g.

* Economic: patents, start-ups etc.

* Instrumental: changes to plans, decisions, behaviours, practices, actions, policies

* Conceptual: changes to knowledge, awareness, culture, attitudes, emotions

* Capacity-building: changes to skills and expertise

* Enduring connectivity: changes to the number and quality of relationships and trust

... the set of possible approaches and indicators varies for each.

The EU Open Science Monitor (currently run by CWTS Leiden) is a precedent:

* See https://antiphishing.vadesecure.com/2/TWF0aGIIdS5HSVJFUkRAYWdlbmNlcmVj aGVyY2hlLmZyFZSQzgwNDQzMg%3D%3D/ec.europa.eu/info/research-and-innovation/strategy/goals-research-and-innovation-policy/open-science/open-science-monitor_en

* Looks at trends and impacts, but relies on case studies for the latter

* I think OSM is a best effort answer at a v difficult question, some of the data sources are shaky and it seems like a lot of work! But approach is sound and is possibly a useful baseline

* CHIST-ERA has an advantage over OSM in that number of projects is known and manageable (e.g. for human data collection or assessment) and the subject area is more defined (which makes checking data quality, comparisons & benchmarking easier).

Other comments:

* What reporting is already done by projects, and how could the open science specific monitoring by tied into this to avoid needless duplication of effort?

| Marin Dacos | Transnational cooperation for Open Science policies: French perspective

The French National Open Science Plan has been announced in July 2018 and is being implemented at all levels. Its ambition is to open up publications, share and structure data, develop skills and develop strong international links. Among other things, it has created a National Open Science Fund, a "flash" call for research data, created an open science barometer, and contributed to the creation of the Council of national open science coordination. |

| Mustapha Mokrane | The emergence of minimal European standards for Open Science from a heterogeneous landscape

Data sharing and data stewardship are increasingly part of the contemporary Open Science discourse. Consensus on 'good' data management practices, which are aligned with the Open Science concept, exist and are in constant evolution. Endorsement and implementation however can vary greatly between scientific domains and depending on which stakeholder (research funders, publishers, repositories or researchers). This talk will concentrate on two examples – the CoreTrustSeal certification for trustworthy data repositories and the FAIR data |

Principles – and how they are emerging as 'minimum standards' (good practice) for European initiatives such as the European Open Science Cloud (EOSC), recommended by funders like Science Europe, and endorsed by research publishers.

Simon Worthington	Publishing Computational Research and Open Science Publishing

'The best way to predict the future is to invent it' – Alan Kay, 1972 Xerox PARC

The 'computational publication' is now becoming a technical reality as a response to the problems Open Science is trying to solve, such as — replicability, reproducibility — by providing real-time access to software, code, and data in research publishing such as in editors like Jupyter Notebook, or as 'runtime environment' content packages such as the o2r project. (Konkol, Nüst, and Goulier 2020) I quote Alan Kay here as the model of digitally connected publications with simulations embedded is now new, it's half a century old, but it's taken this long to become a reality. Kay published his 'Dynabook' research paper in 1972. (Kay 1972)

The 'computational publication' in one instantiation of Open Science Publishing and can be used to see what infrastructure is needed to support this type of research publishing and collaborative working — which is digitally connected to the whole research cycle.

So what is needed to support the 'computational publication' and what is on the horizon for research infrastructures? Here is a sample list of associated Open Science Publishing areas, products, projects, and initiatives: Jupyter Notebook/computational papers, Open Research Knowledge Graph, data mining and open APIs (ContentMine), TIB AV Portal, Vivo, Infrastructure as Code/Terraform, and Containerized publications/o2r/PopperCI, etc.

References

Konkol, Markus, Daniel Nüst, and Laura Goulier. 'Publishing Computational Research -- A Review of Infrastructures for Reproducible and Transparent Scholarly Communication'. ArXiv:2001.00484 [Cs], 2 January 2020. http://arxiv.org/abs/2001.00484.

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