FORCE2019 Workshop Report

Open Scholarship and Collective Action:
Introducing the Open Scholarship Framework

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Contents

1. Executive summary

During the FORCE2019 meeting (held in Edinburgh, October 2019), Knowledge Exchange (KE) convened a workshop to showcase and gain community feedback on its Open Scholarship (OS) Framework. This report provides an account of the event, together with background information and some recommendations for next steps towards the Framework's further utilisation, potential use cases, and other follow-up actions.

▸ It was generally agreed that the KE OS Framework is a useful paradigm for working through issues of Open Scholarship.[1] This is especially the case when seeking explanations for seemingly contradictory situations (as when apparently micro decisions are actually being made at the meso or macro level, such as how an author decides to publish their research, when they come under pressure from their peers or institution to make certain choices)

▸ "Who is meso, and what makes them tick"? was a recurring question throughout the workshop. It encapsulates everything from a large-scale commercial publisher to a three-person laboratory in a small university and could be subject to any number of (potentially conflicting) incentives, barriers, and social and technological factors

▸ Some aspects of the framework feel under-specified and could potentially benefit from some further thinking. For instance, the 'arena' dimension could, at least in some cases, benefit from being made more granular (to include legal issues, power differentials, and time considerations). The research phase dimension was also deemed not to be as useful as the other two at this point in time. Further work is required to see whether it has the potential to become more helpful in the future

▸ The extent to which the framework is a diagnostic tool as opposed to an agent for change, required some clarification for some workshop attendees. That is, using the framework does not necessarily deliver solutions directly. However, it can enable new insights and understanding that may not otherwise have arisen. This has a bearing on the information and other materials that should be developed alongside the framework, advising on its uses and limitations

▸ The framework may be used at certain phases during a wider investigation (eg to identify the main pain points or discover that a factor is less well understood than had been hitherto expected). For instance, the FAIR Data breakout group discovered they were less sure about some aspects of FAIR than they had previously thought. A more extended version of this exercise could consist of the group taking a step back from the framework to clarify its understanding of FAIR, and then picking up the discussion again, once a common understanding had been achieved

▸ Discussions during, and subsequent to, the breakouts led to a number of recommended next steps for investigation. These are available in section 5.4

Footnotes

1   The framework is described in detail in section 4

2. Background

Knowledge Exchange (knowledge-exchange.info/) is a collaboration between six national organisations, **DFG** (dfg.de/en/) – the German Research Foundation, **Jisc** (jisc.ac.uk/) – which provides digital solutions for UK education and research, **DAFSHE** (https://ufm.dk/en/the-ministry/organisation/danish-agency-for-science-and-higher-education) – Danish Agency for Science and Higher Education, **SURF** (surf.nl/en) – the ICT organisation for Dutch higher education research, **CSC** (csc.fi/) – the IT Center for Science in Finland and **CNRS** (cnrs.fr/) – the Centre National de la Recherche Scientifique, in France.

The six partner organisations are working together to support the use and development of digital infrastructure for higher education and research. Each has a national responsibility and influence on national policy, operates at the level of digital technologies and can mobilise resources that can make a difference, all invest effort in Open Scholarship including the Open Access agenda.

3. Open Scholarship and the Open Scholarship Framework

Knowledge Exchange has been working on Open Scholarship (or Open Science) for a number of years, with the objective of maximizing the potential for openness in research. Bringing experts together from the partner organisations and beyond, they have addressed a variety of issues – most recently looking at four specific areas: the Economy of Open Scholarship[2], how researchers and research contributions are evaluated (including contributions to openness)[3], Open Access monitoring activities[4] and Preprints[5].

In the course of these activities, KE has developed a framework[6] that maps the considerations for Open Scholarship across a variety of scales, phases and arenas. The three dimensions allow us to articulate the changes occurring in scholarly communication in tangible ways. The first dimension addresses the level of granularity (Macro, Meso, Micro) of actors; the second dimension is the phase of the research

(Discovery, Planning, Project Phase, Dissemination); and the third dimension is the arena (Political, Economic, Social, Technological).

Having developed these concepts and conversations with several expert groups and projects[7], the FORCE2019 conference was identified as a good opportunity to bring in a wider group of engaged experts to test and further refine them.

Footnotes

2   knowledge-exchange.info/event/insights-into-open-scholarship
3   knowledge-exchange.info/event/openness-profile
4   knowledge-exchange.info/event/oa-monitoring
5   knowledge-exchange.info/event/preprints
6   knowledge-exchange.info/event/os-framework
7   knowledge-exchange.info/projects/project/open-scholarship

Figure 1. Knowledge Exchange Open Scholarship Framework
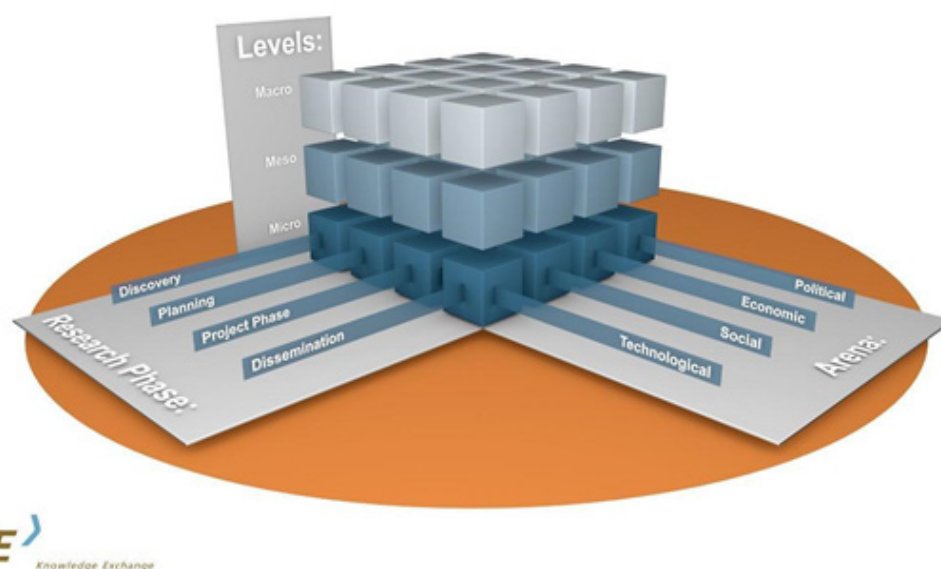
4. FORCE2019 Workshop: Open Scholarship and Collective Action

Given the time restrictions of a half-day workshop, Knowledge Exchange decided to share the findings of its four main Open Scholarship activities ('Insights in the Economy of Open Scholarship'[8], 'The Economy of Open Scholarship and the Need for Collective Action'[9], 'The Openness Profile'[10] and 'Practices, drivers and impediments in the use of preprints') but to spend the bulk of the time on the KE OS Framework itself.

There were 77 registrants for the session (including organisers). A range of stakeholders was represented, such as Crossref, publishers, libraries, the FORCE11 Board, and funders. As well as KE countries, there were delegates from India, the USA, Canada, Ireland, Austria and Australia.

The afternoon began with a general introduction to the KE OS Framework.[11] After presentations on all four recent KE activities in Open Scholarship, with details on how these fit within the Framework itself, and some preliminary thoughts on collective action, the participants were invited to join one of three group discussions. These consisted of: applying the OS Framework to analyse Plan S; applying the OS Framework to analyse FAIR data; and an opportunity to validate and test out the OS Framework itself.

The workshop programme was designed to deliver benefits for all attendees, with the participants experiencing the potential of the OS Framework by using it to address real-world Open Scholarship challenges and explore collective action opportunities. For KE, the discussions served to reinforce KE's understanding of the complex system of scholarly production.

Finally, as well as the dedicated workshop, the main FORCE2019 conference programme featured full presentations on the KE activities 'Insights in the

Economy of Open Scholarship' and 'The Openness Profile'. Further feedback from these sessions, together with other contributions made during the conference, have been included in this document.

4.1 Notes and Records

Fiona Murphy, (MMC Ltd), was appointed rapporteur for the workshop, with the remit to provide a record of events. A combination of notes was taken by KE personnel, social media, and other input from participants, together with other feedback from the wider FORCE2019 meeting and other relevant conferences taking place at around the same time.[12] A draft report was collated and synthesised, and reviewed by KE and other experts for accuracy, appropriate development of findings, and data safety before being finalised.

Footnotes

8   http://repository.jisc.ac.uk/7296/11/KE_Insights_into_the_ Economy_of_Open_Scholarship_A_collection_of_Interviews_ June_2019.pdf

9   http://repository.jisc.ac.uk/7542/2/Open_Scholarship_and_ the_need_for_collective_action_Oct_2019.pdf

10 https://repository.jisc.ac.uk/7713/1/KE_Openness_Profile_-_ Defining_the_Concepts_Jan_2020.pdf

11 The full agenda is shown in Appendix A.

12 These include the Research Data Plenary (Helsinki, 23-25 October) and DeiC (Fredericia, 30-31 October).

4.2 Workshop Presentations

4.2.1 Introduction: Bas Cordewener

The introductory session opened with a show of hands to see how various roles were represented in the room. Roles included researchers (c.5), librarians (c.10), research supporters (c.30), publishers (c.20), technologists and others (c.5).

The KE 2019-21 Strategic Priorities were set out as:

1. Changing Evaluation in the context of Open Scholarship

2. Scholarly Communication and Publication Models of the future, including Plan S principles, and implementation

3. FAIR data and software supporting reproducibility of research

4. The data science ecosystem

Over the next strategic cycle, these will be explored using the KE Open Scholarship Framework, and considering social, technical and economic factors.

4.2.2 The KE Open Scholarship Framework: Cameron Neylon

Neylon explained that the KE Open Scholarship Advisory Group (KEOSAG) worked with the Knowledge Exchange Group (KEG) to develop a report and recommendations that include the KE OS Framework. They were motivated by the desire to get past the variants of questions along the lines of:

▶ If funders/publishers/institutions could just fix the incentives/policy/evaluation/economics then we would rapidly adopt open access/open data/citizen science/good research data management

This led to discussions around:

▶ What do we mean by incentives/policy/economics/ evaluation?

▶ Whose problem is it to fix – publishers/funders/ institutions?

And led to some – partly problematic – responding statements, such as:

▶ If *they* could fix it, *we* would act

▶ If *someone* else acts then *everyone* will act

Figure 2. Neylon's slide showing one of the provocative questions contained in his presentation
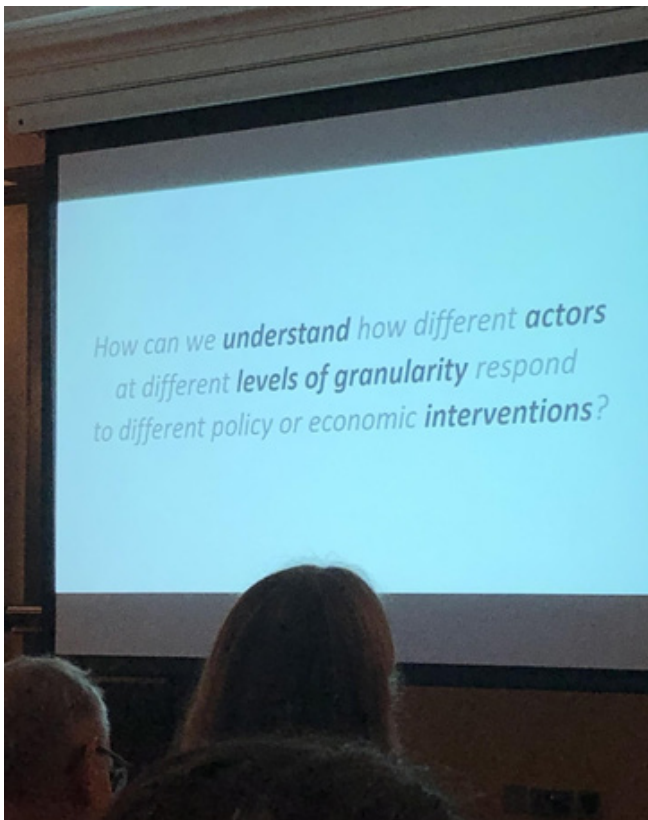
Neylon noted that the OS Framework helps in focusing on issues such as "Where does this particular service or piece of infrastructure fit?" and "When we use a particular term, are we talking about the same thing?". It can also help in identifying discrepancies in ambitions, objectives and perceived benefits regarding Open Scholarship by different stakeholder groups. It acknowledges the influence of not only the technological arena but also the political, social and economic arenas on Open Scholarship issues. The Framework supports looking at Open Scholarship in a broader and more complex and challenging context.

Ultimately, the goal is to understand how best to use the full range of economic, organisational and technological strategies, including commercial for-profit providers, to maximise the overall collective and public good that arises from investments in scholarship. Part of the challenge is to balance this objective in combination with appropriate research evaluation practice, openness policies and an Open Scholarship supportive infrastructure.

A reference was made to 'The Economy of Open Scholarship and the Need for Collective Action'[13]. As many of the challenges in navigating the transition to Open Scholarship are economic, either in the sense of being directly financial, or in the sense of being related to incentives, KE invited experts to write a book to enhance community understanding of the mechanisms and processes in the economic arena that can enable Open Scholarship to reach its full potential.

The conclusion from the book is that it is challenging to capture the full details of the economy of Open Scholarship in terms of existing models. Application of economic theory and analysis techniques to Open Scholarship needs further exploration and development.

The book also highlights the importance and consequences of the diversity of actors involved. These can be described as 'micro', 'meso' and 'macro' actors. One of the key-findings, underpinning the importance of the various KE activities addressed in the FORCE2019 workshop is that insufficient attention has been paid to the incentives, actions and influences of meso-actors: groups, communities or organisations such as universities, disciplines, scholarly societies or publishers.

Footnotes

13 http://repository.jisc.ac.uk/7542/2/Open_Scholarship_and_the_need_for_collective_action_Oct_2019.pdf

Values and motives may clash when a meso-actor's individual incentives do not align with one another while moving towards Open Scholarship. Division of responsibilities, particularly when new work and roles are needed (eg who will be responsible and gets credit for curation and review of digital data resources) presents challenges. Differing financial incentives or revenue sources (eg in debates over the appropriate costs of scholarly publishing and who should pay these) are a common problem.

The KE activities addressed at the FORCE2019 workshop complement the conceptual outcomes of the book, exploring developments to build a supportive infrastructure enabling communities to engage in the shift towards Open Scholarship.

4.2.3 Insights into the Economy of Open Scholarship: Gwen Franck

Targeting the economic segment of the KE Open Scholarship Framework, this project identified a set of "shared" challenges faced by initiatives that have been set up to facilitate open scholarship.[14] Representatives from ten organisations were interviewed.[15]

Key learning points and solutions included:

▸ Where staffing is an issue, the creation of a common pool of marketing, secretarial, legal and technical expertise that could be drawn upon when required

▸ Frequently, a single, charismatic figure will found an organisation but is then pulled in too many directions simultaneously, and is unable to run it effectively

▸ Grant funding is important to enable staff work on innovation

▸ The for- or not-for-profit decision is critical, although some initiatives operate a mixed economy, with paid consulting work supplementing the main service. Formal status does have implications for eligibility for grants and project participation, and affects the reputation in the community, which is not always predictable for its founders ahead of time

▸ Small size can be both an advantage and a disadvantage, with nimbleness and flexibility balancing against the safety of larger, more established entities

Footnotes

14 The shared challenges were: HR and staffing; Non-profit or for-profit status; Infrastructure decisions (inhouse development or outsourcing); (Open) licensing; Sustainability and scalability; Marketing; Influence on research workflows and the overall position in the research landscape.

15 Organisations and interviewees were: Open Library of Humanities (OLH) (UK), Martin Paul Eve; OpenEdition (FR) Pierre Mounier; Opasnet (FI), Jouni Tuomisto; ASAPBio (US), Jessica Polka; ScienceOpen (GER), Stephanie Dawson; HRČAK (HR), Jadranka Stojanovski; Helsinki University Press (HUP) (FI), Leena Kaakinen; Impactstory (US), Heather Piwowar; Figshare (UK), Mark Hahnel; Zenodo (CH),Tim Smith.

4.2.4 The Openness Profile: Clifford Tatum

The primary purpose of work on the Openness Profile study is to understand current practices in relation to open research and to explore whether the development of an Openness Profile – a lightweight, persistent-identifier-asserting mechanism that enables research contributors to collect evidence of their open scholarship endeavours – would reinforce early adopter behaviours and lead to wider understanding, take-up and uses. The Openness Profile is positioned as a bottom-up approach that would document contributions to open scholarship and link them to the relevant person's ORCID record. As well as self-identifying researchers, it would include many people who contribute to open scholarship ("research supporters") who are typically not listed as authors or incentivised to be so credited. This would ideally lead to some disruption of authorship as the primary mode of being recognised for contributions to open scholarship.

This activity is still ongoing. The Openness Profile working group recently completed the research phase of the project, whereby a diverse range of stakeholders was interviewed as a means to test the Openness Profile concept from a variety of standpoints. An interim report on the findings has been published in January 2020, to document the research outcomes. These findings also inform planning for the next phase, a stakeholder workshop to be held in Spring 2020. As well as an individual approach, a group profile is being considered, using the Research Activity Identifier (RAiD) being developed by the Australian Research Data Commons.

The logic behind this bottom-up approach is that rather than being an end in itself, openness is about changing culture and this in turn will improve the quality of research.

The KE Open Scholarship Framework can be used to explore the range of activities and diversity of contributors throughout the project phases. Perceiving the impenetrability between the high-level policy (macro) level and the practitioners (micro) level, it is the meso level, such as institutions, that are expected to foster the necessary cultural change. The Openness Profile is designed to increase visibility of contributions to openness, and thereby provide actors in the meso level (which are often responsible for hiring, promotion and evaluations) with a structure for identifying and recognizing relevant practices, and further developing expertise in this area.

4.2.5 Accelerating Scholarly Communication via Preprints: Andrea Chiarelli

This session presented an investigation into preprints undertaken by Research Consulting on behalf of Knowledge Exchange[16]. It involved a review of the preprints landscape and literature, together with interviews of 38 stakeholders in order to ascertain the status of preprints and some preliminary thoughts to feed into the collective action discussions.

The benefits of preprints mentioned in the presentation were fast dissemination and increased feedback opportunities. Noted concerns were mainly around quality assurance issues, and the main discovery mechanism appeared to be Twitter. Currently, the majority of researchers are not routinely posting or using preprints, and sometimes publishers/journals manage the actual process on their authors' behalf.

Chiarelli commented that the KE OS Framework is a useful tool with which to explore the role and rationale for preprints, with the macro level supplying funding and policy, and the preprint servers themselves sitting at the meso level. The Framework facilitates the development of questions that can be used to discuss business

Footnotes

16 https://repository.jisc.ac.uk/7525/1/Knowledge_Exchange_Accelerating_Scholarly_Communications_Sept_2019.pdf

models around preprint servers, and potentially build some cross-sector recommendations. In short the framework prompts the question: "have we thought about everything?". Some possible gaps that could be explored include the need for a more developed understanding, at the meso level, of what is required to instil preprints as an integral part of the scholarly communications ecosystem.

Perhaps the most interesting observation emerging from this session was the gap that Chiarelli observed, namely possible responses to the why question. To unpack this, while many people are supporting preprints by developing products and features, he suggested that more attention needs to be paid to why others should use them beyond the ethical ("open science is good and the right thing to do"). In other words, further activities seeking to integrate preprints into scholarly communications "as usual" should develop a clearer understanding of the social, or people side, and how lasting behavioural change can be prompted. This may involve gaining further insights into the question "what problem do preprints solve, that is, what is their value proposition?"

4.3 Breakout Sessions
4.3.1 Breakout Group I: Plan S
This group was facilitated by Frank Manista and Saskia Woutersen, with Serge Bauin taking notes. Using the KE Open Scholarship Framework, Manista and Woutersen are seeking to build a comprehensive list of potential barriers towards Plan S and Open Access becoming the standard and norm for dissemination of academic and scientific research.

With these objectives in mind participants discussed Plan S implications at a range of levels for stakeholders within the research communications ecosystem, working out what the challenges are, how the KE OS Framework could be used to help, what indicators could be used, and how to mitigate researchers' concerns about Plan-S implementation.

The group worked on various questions, such as whether the Framework could help clarify specific barriers for Plan S implementation.

The size of publisher or journal was deemed to be important as this affects the power relationship when negotiating potential transformative agreements. Time also emerged as a potential factor, particularly for learned societies. Perhaps these two factors are connected and, together with legal considerations, could form part of a more detailed treatment of the Arena dimension of the Framework.

Stakeholders should include funders, and the relative priorities of the meso (institutions) and micro (authors/ researchers) players need to be mediated.

Some of the difficulties in working Plan S through the Framework could be connected with the fact that Plan S is a meso initiative that is trying to act as a macro factor (COAlition S relates to a comparatively small number of countries).

A future iteration of this exercise could involve explicitly using the Framework to trace the incentives (academic and financial) and resources (also financial, skills and infrastructures) required for Plan S to run smoothly.

Several other potential players - some potential allies, such as COAR and Zenodo - and some rivals, such as SciHub - were briefly explored. These, together with a revised exploration of Plan S, could be objects of future Framework exercises.

The "pre-mortem" managerial strategy was suggested as a possible accompaniment to subsequent iterations.[17]

Many of the discussions were unable to progress beyond a certain point as delegates faced the effects of regulations and norms (particularly on issues such as copyright law) on individuals' ability to act. Distinguishing between common practice (such as using SciHub) and what is actually approved, legal practice (where SciHub is avoided), proved problematic.

4.3.2 Breakout Group II: FAIR Data

This group was facilitated by Josefine Nordling and Melanie Imming. Notes during the session were taken by Laurents Sesink. This group used an innovation canvas and post-it notes as an aid to the discussions (see Figure 3). It was the smallest group in terms of participants, but it reported back a lively, useful session that fell under the following headings:

▸ Interoperability:
  › Too much diversity among services, a need to harmonise the services more in order to increase the interoperability
  › Semantic technologies
  › More standards need to be used

▸ Technologies:
  › Research should not be technology-driven, rather driven by directly research related aspects

▸ Domain-specific:
  › Domain-specific concepts around data management needed

▸ Funding:
  › Strategic funding needed in order to increase FAIRness

▸ Training & skills development:
  › New skills and professions (data stewards, data wranglers etc.) are needed, which calls for FAIR data training
  › Making data interoperable requires in many cases technical skills which most researchers do not possess

▸ Incentives:
  › Lack of well-functioning incentive mechanisms

▸ Infrastructure availability:
  › There is still a lack of fundamental research data management service provisioning within some domains and/or countries

The group identified a severe gap at the meso level, the institutional level. Indeed, there was a question around whether 'meso' itself consists of just a single level, given that it could refer to a single institution, to something bigger (eg a consortium), or to something smaller (eg a department or research group). It was agreed that more guidance and financial contributions are needed to create or foster meso communities (universities) in order to deliver change and answer the question 'Who is meso'?

It was pointed out that the results of a discussion will very much depend on who is in the room at the time, as well as their understanding of the issues in question. Indeed, the session itself completed elided the fact that not only are publishers also meso players, but their incentives and business models can vary to the point of contradiction: some publishers are primarily mission-

Footnotes

17 A pre-mortem — also known as a premortem — is a managerial strategy in which a project team imagines that a project or organisation has failed, and then works backward to determine what potentially could lead to the failure of the project or organisation.

Figure 3. On the canvas, each of the post-it notes represent challenges in operationalizing FAIR data, and they have been clustered together in related groups.
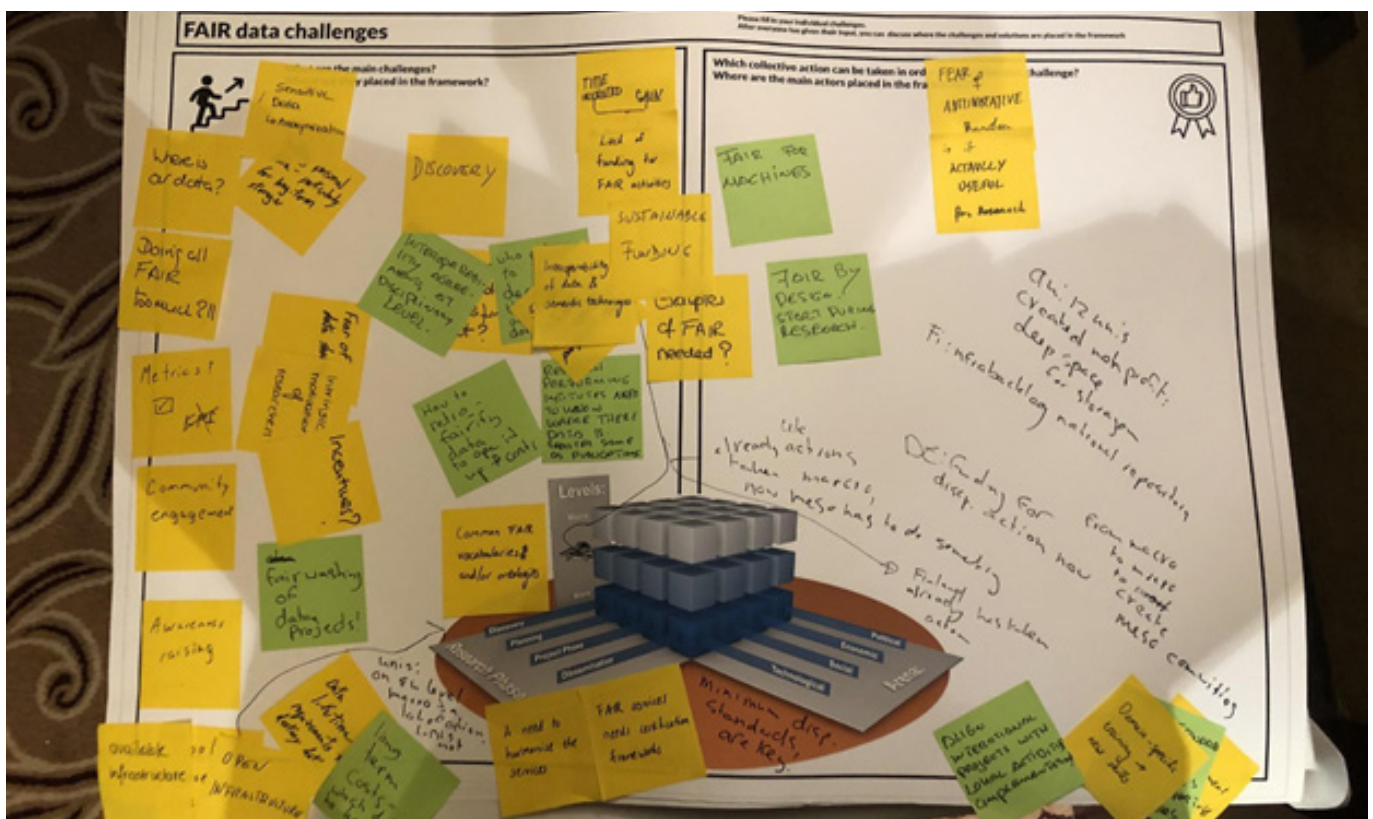
driven towards improving scholarly communication, while others pursue shareholder profits.

Amongst the participants, several national (macro) use cases began to emerge. These included Germany (already funding for evidence based action), Finland (major research funder demanding open science to be an integral part of research), Australia (12 universities have invested in the non-profit Deep Space storage system), France (national repository, HAL). In contrast, in the UK there is a sense that the macro level has been taken care of, with comparatively stringent UKRI data policies.

The exercise surfaced the insight that the definitions and vocabularies for FAIR were less well understood (or defined) than had been supposed. Participants wanted to think through what FAIR means in practice at the domain or subject level, and to have a clearer understanding of human vs. machine readable requirements. Furthermore, if incentives for researchers were more explicitly aligned with FAIR (that is, "FAIR data by design"), it would enable better research.

4.3.3 Breakout Group III: The KE OS Framework

This group was facilitated by Clifford Tatum and Cameron Neylon, with notes by Bas Cordewener.

The issue of preprints was used as an example to walk through the Framework and find its strengths and weaknesses. This process demonstrated that, rather than focusing only on the blocks/levels themselves, it is the flow between these, the dynamics, which is of most interest. Hence, when individuals (micro) make a decision to adopt the preprint approach, then the dominant mode of recognition and rewards (meso/micro) is disrupted.

The Framework approach surfaced various existing conflicts in the rationale of preprint posting and its practical implementation: researchers are pushed to reach the highest impact (micro: researcher career, meso: the university's research ambitions) and pushed to publish open access (macro: policy, meso: university or peer-group pressure; micro: principally engaged in Open or not). These actions in distinct Framework levels cause friction and are in competition.

There are big differences in the levels of trust researchers exhibit towards each other, based on their geographical location and other factors. This affects their willingness to collaborate openly. It was therefore suggested there is perhaps a gap in the Framework's ability to reflect how decision behaviours map across different levels in various national and international locations and situations.

It was observed that the drive for and effect of change are much more driven by the macro level, for example, the G7 declarations/policies, than the more granular levels. However, although there was some feeling that high-level, international agreement on policies should cause the lower levels to adapt, real-life experience indicates that the 'macro' is too far away (too highly conceptual, too ambitious, etc) to really influence the meso/micro levels.

Perhaps another limitation in the Framework is the seemingly equal distance between micro and meso, and between meso and macro levels. In some situations (disciplines, countries) the levels may look very different and the interactions between them vary from what the model suggests. The blocks also do not suggest that the whole idea is that the levels need to get together. Further exploration is needed to understand how to build the connections between the Framework blocks.

The Framework supports better understanding of complex situations rather providing any solutions per se. Whereas the levels dimension (micro, meso, macro), is quickly grasped, and immediately useful in querying issues, the arena dimension (technological, social, economic, political) seems to require a more in-depth exploration and it is possible that the research life cycle dimension (discovery, planning, project, dissemination) will not always be required, or may come into its own when the other aspects of the Framework have been more thoroughly investigated.

A key example of this complexity is the power dimension in academia: that is, differences in "power" or status among actors. (For example: a librarian without a PhD title could be compared with an individual academic with the scientific prestige attached to that "higher" role.) In addition to title or position within an organisation, power dynamics are also associated with geographic location, socio-economic status, and gender, among other factors. The Framework was not specifically constructed in order to identify such differences, but the issue itself, as illustrated by this breakout discussion, must have attention paid to it. Two questions about how to address power dynamics emerged:

1. Could the Framework be adapted to include power dynamics?

2. Or should an analysis of power dynamics follow the Framework diagnosis of a particular situation?

The discussion moved on to the question whether the Framework enables thinking about the differences between hierarchical power and network power – and how power structures might be successfully shifted. Referring back to the preprint example:

▶ Preprints have started to speed up research communication

▶ "Powerful" parties, such as global, commercial publishers, have begun to move into and operate in this space

▶ The result is that for some stakeholders this is a positive development, and for others it is not

Behind this analysis, however, lies the fact that an increasingly networked, digitised academic ecosystem is in danger of being permanently controlled by a few, under-scrutinised companies unless research-led initiatives are able to cooperate in articulating and building consensus, momentum and investment around a sufficiently compelling, implementable roadmap for Open Scholarship. The Framework has potential for scenario planning and possibly for tracking impact of research outputs. Both of these are important for developing new evaluation tools.[18]

Finally, ideas around how to progress these concepts were aired. A key challenge is that, while there needs to be more clarity and deeper understanding around open scholarship, it would be a mistake to try and unify too closely around it, as this would result in the loss of diversity (for example, of domains, contributions, roles). The myth of the lone, brilliant scientist needs to be dispelled. Going forward, support from KE and other players could be leveraged to build community-appropriate practices. Perhaps the Framework can assist in identifying them and enabling this activity.

Footnotes

18 As an example of values-related evaluation, the HuMetricsHSS initiative (http://humetricshss.org) was mentioned. HuMetricsHSS was organised by Humanities and Social Science scholars (HSS), and it aims to transform evaluation of HSS research evaluation on the basis of agreed values.

4.4 Recommendations for Next Steps

The recommendations below emerged from the workshop itself, from other sessions at FORCE2019, and further reflection and feedback from participants, and from the process of compiling this report.

- Investigate a range of use cases. These could include
    - › National level FAIR Data initiatives (eg France, Australia, UK, Finland, Germany, as captured in section 5.3.2)
    - › Posing scenario questions, eg: what would an ideal, open-research-friendly research ecosystem look like?
    - › Checking a selection of meso level players, eg learned societies, publishers, institutions, research groups, and clarifying whether they have more in common with each other, or with micro or macro entities - this could have implications for where the cut-off is between meso and macro

- Some types of issues, questions and scenarios worked better than others during the workshop. For instance, on a simple, logistical basis, it was difficult to hold two breakout sessions in the same room (this was due to circumstances beyond the organisers' control). In addition, the Plan S/ Framework discussion was complicated by different levels of understanding and shades of opinion about Plan S
    - › Consider capturing this empirical information and building a knowledge base (online?) to enable users to become more expert in how to use the Framework when holding analysis sessions

- The "social" aspect emerged as meriting more attention. A developed concept of "power" and "trust" could be particularly useful in the absence of trained social scientists during the Framework exercise, as was surfaced by Breakout Group III in Section 5.3.3. Could the Framework be used both to identify social problems and imbalances, as well as to construct potential solutions (eg disrupt over-influential players through social lobbying?)

- Complement the approach taken by the KE OS framework with principles arising from other existing frameworks and models that could also contribute to the thinking in this space. These include the Toyota Production System (the forerunner to LEAN), the **not-for-profit business model canvas** (http://weblog.tetradian.com/2011/07/16/bmcanvas-for-nonprofits/) and the "pre-mortem" strategy

- Work through the stages required to join findings from the Framework with potential Collective Actions as investigated elsewhere by Knowledge Exchange. Is there an iterative workflow that can be codified and used to create a positive change loop?

5. Appendix A: Pre Conference Workshop Programme

Part 1 - Introduction. Scoping the topic, shared information level

Start	End	Item	Presenter
13.00	13.10	Welcome, KE intro, refer to input materials, overview programme	Bas Cordewener
13.10	13.20	Introduction round	Bas Cordewener
13.20	13.40	The KE Open Scholarship Framework	Cameron Neylon

Part 2 - Examples & Results. Results and objectives KE work on Open Scholarship, within the KE OS Framework dimensions

Start	End	Item	Presenter
13.40	13.49	Economy of Open Scholarship and the need for Collective Action	Cameron Neylon
13.50	13.56	Insights into the Economy of Open Scholarship - a collection of interviews	Gwen Franck
13.57	14.03	Research(er) Evaluation - The Openness Profile	Clifford Tatum
14.04	14.10	Accelerating scholarly communication? The transformative role of preprints	Andrea Chiarelli
14.10	14.20	Comments, Q&A, feedback	All
14.20	14.30	Preview on PART 3, Coffee	Bas Cordewener, all

Part 3 - Exploring potential and validity - parallel groups. Using the OS Framework: Does it help? Does it reveal clues? Is Collective Action key? Does it work?

Start	End	Item	Presenter
14.30	15.40	Discussion 1: Objectives/challenges derived from Plan S	chair: Frank Manista
			co-chair: Saskia Woutersen
			note taker: Serge Bauin
14.30	15.40	Discussion 2: Objectives/challenges derived from FAIR principles	chair: Josefine Nordling
			co-chair: Melanie Imming
			note taker: Laurents Sesink
14.30	15.40	Discussion 3: Exploiting and/or challenging the Framework	chair: Clifford Tatum
			co-chair: Cameron Neylon
			note taker: Bas Cordewener
15.40	16.00	Report back on discussions/conclusions, close	note takers, Cameron Neylon, Bas Cordewener

6. Appendix B: Social Media Responses

Some tweets from experts involved in the work and from the audience using the hashtag #KEOSF

Andrea Chiarelli @drAChiarelli · Oct 15

#OpenScience should serve everyone - not only those who take an active interest in working openly, says @g_fra #force2019 #KEOSF

christy caldwell @christycaldwell · Oct 15

"We SAY we want culture change, but ACT like we just want behavior to change." #KEOSF #force2019

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Andrea Chiarelli @drAChiarelli · Oct 15

@frankcmanista introducing our afternoon workshop focusing on #PlanS at #force2019 #KEOSF

💬 1   ↻   ♡   ✉