

Peer review of *Pubfair* framework:

Ross-Hellauer, T.; Fecher, B.; Shearer, K.; Rodrigues, E. (2019). *Pubfair: a framework for sustainable, distributed, open science publishing*. White paper, version 1: Sept. 3, 2019. Confederation of Open Access Repositories (COAR).m Retrieved September 23, 2019 from <https://www.coar-repositories.org/news-media/inviting-community-input-pubfair/>

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Highlights

“Science” is only one type of knowledge. There are nine faculties at the University of Ottawa; only one is named “science”, and this is typical at a large university. I strongly recommend replacing “science”, “scientists” and “open science” with more inclusive terminology such as “open scholarship” or “open knowledge”, “scholar” or “researcher” in the title and throughout the document. The Pubfair framework is an excellent beginning for a needed profound transformation in how scholars work together and disseminate research. This is the kind of approach most likely to achieve significant savings based on current spend on scholarly publishing, and these savings will be needed to support innovation in scholarly production and dissemination. My recommendation is to proceed with an iterative approach and an initial focus on helping scholarly communities with unmet needs for new forms of review and publishing, such as scholars who create and share datasets or tools using artificial intelligence, digital humanists, and scholarly bloggers. The specific needs for community input whether through review or collaboration in the planning process will vary by discipline and type of product. The work of defining needs and identifying potential solutions should be led by the scholarly community in consultation with repository managers. This is a reversal of the proposed leadership / consultation approach in the framework document. Finally, while I recommend an immediate start to this approach, my advice is to see this as a long-term radical transformation that will likely take decades to complete.

Details

Scholarship includes, but is not limited to, science. I suggest changing the title and wording throughout the document to more inclusive terminology such as “open scholarship” or “open knowledge”. To illustrate why this matters: the University of Ottawa (uO) is an indirect membership of the Confederation of Open Access Repositories (COAR) through our membership in the Canadian Association of Research Libraries (CARL). uO has 9 faculties: Arts, Education, Engineering, Health Sciences, Law, Medicine, Sciences, Social Sciences, and the Telfer School of Management. If this framework for “open science publishing services” is to become a reality, is it intended to serve only one of our 9 faculties? This seems unlikely. This conflation of “science” with “knowledge” or “scholarship” is not unique to this group but reflects a broader trend in the open movements. The problem is much larger than mere semantics, it reflects a tendency in our society to devalue types of knowledge other than science. I argue that this is a danger to our collective knowledge of all types, including science.

For example, would it be wise to practice science without ethics or logic? Ethics and logic are branches of philosophy. Readers of this review will probably agree that governments should base policy on scientific evidence. However, politics per se is not science, and achieving and maintaining a goal of basing policy on scientific evidence requires understanding of history, political science, society, and communications. I discussed this in a recent conference presentation called *knowledge as a human right* (Morrison, 2019a).

The Pubfair conceptual model of building a framework to transform scholarly publishing building on a distributed network of repositories is a timely initiative and worthy of support. This is the kind of approach most likely to facilitate *transformative* transition in terms of both technology and economics. Houghton et al. (2009) conducted the most comprehensive study of the potential for transformation for a single country (the UK), comparing potential costs of 3 models: gold open access publishing, green open access archiving, and a third more transformative approach involving a new publishing system building peer review on top of archives. The transformative approach was calculated as having the potential to substantially reduce costs and was seen as the most cost-effective approach. However, at the time the UK did not think the country was ready for this transformation and opted for a focus on gold and maintenance of a pre-existing green system.

Much has changed in the past 10 years. The number of open access repositories listed in the vetted OpenDOAR list has grown from 1,419 on June 20, 2009 to 4,150 on June 30, 2019. OpenDOAR lists repositories on 5 continents. The largest metasearch service for repositories and open access journals is the Bielefeld Academic Search Engine (BASE). From 2009 to 2019 (June 30 each year) BASE grew from 1,730 content providers and just over 25 million documents searched to 7,211 content providers and just under 150 million items searched. (Morrison, 2019b).

Scholarly works and their dissemination appear to be undergoing a period of rapid transformation in a way that has not been addressed by traditional approaches to evaluating scholarship, the traditional publishing business, or even the open access movement. In the digital humanities, scholars are creating collections of electronic works and developing innovative means of searching, processing, and displaying material. Scholars in a wide range of disciplines from art to engineering are using artificial intelligence to create new knowledge and practical tools. The disciplines themselves are undergoing change with new forms of scholarship often overlapping what used to be separate disciplines. A few researchers, like me, are publishing open research using blogs and likely other formats and sharing open data; more would likely follow suit if they could be confident that they would receive appropriate recognition for doing so when it comes time for tenure and promotion.

Given this context, for practical reasons I recommend an iterative approach, beginning with scholars who are interested in exploring alternatives and motivated to do so because current approaches do not meet their needs. There may be common themes across disciplines and types of research, but it will also be important to recognize differences based on the type of

work and the nature of the communities that would need to configure or re-configure to accomplish this work.

Four examples:

- Peer review of open datasets might focus on quality and completeness of data and documentation, and/or adherence to relevant standards, reference to related work, and/or importance of the dataset. Qualified peer reviewers need some expertise in quantitative data and the relevant domain; comments from those who might benefit from results would be helpful as well. The ideal outcome might involve collaboration in the process of developing datasets rather than peer review after publication, to avoid duplication or fully benefit from triangulation from different approaches to the same underlying problem.
- Peer review of a digital humanities dataset and portal for users might focus on the quality of metadata, quality and comprehensiveness of content, usability and accessibility of the users' portal, preservation planning, interoperability with relevant databases, or how licensing for re-use has been addressed. Here, different aspects of review involve different types of expertise, from content subject knowledge to user experience to electronic preservation. The benefits of collaboration in the planning process appear obvious.
- Peer review of tools developed through AI to support the work of health professionals and/or to help patients monitor their own conditions may require triangulation using other methods to ensure accuracy of results, user experience analysis of the tools and/or periodic evaluation of the ongoing accuracy of AI assuming ongoing machine learning.
- Peer review of scholarly and research blogs such as *Retraction Watch*, my scholarly blog *The Imaginary Journal of Poetic Economics*, and my research blog *sustainingknowledgecommons.org* might focus on the accuracy, originality, and/or importance of the contributions. In this case, review by subject experts is essential, and technical advice, which may be provided by different reviewers, is useful. Individual authors or groups of authors may or may not see collaboration in the planning process as useful. As a researcher-blogger, I can see situations where different types of blogs and authors would benefit from different types of review.

These examples are just a few of many possible new types of scholarship made possible by the digital environment. The optimal form of review and publishing such new types of works is, at present, unknown. This is another reason to seek an iterative approach and look for leadership within the communities of scholars pursuing these approaches. To understand what kind of review is most helpful for the community, it is necessary to understand in depth the nature of the research and/or creative works that are being developed.

Finally, this transition is a major cultural shift in how academics might work in future. It will take time to figure out the questions that will arise in the process, and more time to develop solutions. In summary, while I see this as a long-term transition, an approach along the lines of

Pubfair is the right direction and steps should be taken to move in this direction as soon as possible.

Thank you for providing the opportunity to comment and best wishes for *Pubfair*.

About me

I write as a researcher focused on the transition of scholarly communication from the demand (subscriptions / purchase) to the supply side to support a global open access knowledge commons. My research project, funded by Canada's Social Sciences and Humanities Research Council from 2014 – 2021, is called *Sustaining the Knowledge Commons*. My comments will be posted in the uO institutional repository and cross-posted to my open research blog, sustainingknowledgecommons.org.

References

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