Preprints Servers as a Hub for Early Stage Research Outputs

Preprints are a key feature of open science workflows. They permit researchers to report their work early in the process, with the benefits of rapid dissemination, a chance to build collaborations, and the opportunity for feedback that improves the quality of the reported research. The approaches of different preprint servers vary tremendously depending on their overall aims and the field in which they operate. This presentation focuses on how preprints relate to the rest of the research cycle, including data publication and journals.

To be properly embedded in a research cycle, preprints should provide easy access to other research outputs. They can act as a hub that makes sense of the data, code and other research materials that are made available as part of an open workflow. The traditional focus of journals on a PDF article format has principally been followed by preprint servers, mainly as a way to avoid extra work for authors and provide a low barrier to entry. This approach, however, can hold back the development of innovative ways of presenting work and have a negative effect on crucial links to other sources.

In this presentation, we compare the strategies taken by various preprint servers. We will look at the how each link to supporting materials (data, software code, pre-registration documents, etc.) and published papers. Our conclusions will show that there are a range of strategies, and authors and readers should not expect a uniform way for such elements to be integrated, if at all. In addition, even if tools are available, the uptake by authors is relatively low.

An overall approach to linking research elements to preprints has not yet emerged—neither in terms of the technology to do so, nor incentives for authors. This is a result of varying expectations between fields, the different backgrounds and aims of those running preprints servers, a lack of standards for linking research outputs across platforms, and a focus on the journal article PDF as the main output of research. To move forward on this issue will take coordination between a number of actors, including preprint servers, data repositories, funding bodies, and not least scholars themselves.

For preprints to enhance and support open scholarship, they should be a venue that brings together disparate strands to tell an emerging story. A greater focus on interoperability and open reporting is required to more fully achieve this aim.