Open Source Publishing Tools and Community Infrastructures

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A post from Feeding the Elephant: A Forum for Scholarly Communications.

Several Feeding the Elephant posts back, Catherine Cocks wrote about university library publishing as a response to the rising costs of journal subscriptions and an effort “to return control of scholarly output to scholarly communities.” That conversation is a good opportunity to take a closer look at the ecosystem of open source tools and platforms that libraries, university presses, and others are using to disseminate scholarship outside the realm of commercial publishing.

In July 2019, John Maxwell and a team of researchers from the Canadian Institute for Studies in Publishing at Simon Fraser University produced Mind the Gap: A Landscape Analysis of Open Source Publishing Tools and Platforms, a report funded by a grant from the Andrew W. Mellon Foundation awarded to the MIT Press. The report surveys the landscape of the different open source software (OSS) for publishing currently in use (as of 2019) and makes recommendations for ensuring its continued sustainability. Readers who have heard colleagues mention Fulcrum or OJS and would like to learn more will find this report a readable and informative overview of the open source publishing ecosystem and its various opportunities and challenges. For organizations like scholarly societies or university libraries looking to implement OSS for a specific project, this report’s listing of 52 tools and platforms and the authors’ discussion of the different layers of community infrastructure needed to support open source scholarly publishing should be mandatory reading.

As the report’s authors caution, the great variety of the types of tools (many of which were designed with a specific use in mind) and the relative recency of the majority of tools surveyed makes them difficult to compare or rank, both on function and sustainability. Readers can peruse the profiles and helpful charts plotting the tools along different spectra from journal to book publishing, central to distributed hosting, and workflow stages, though they will need to seek out examples of implemented projects on their own. Perhaps more interesting is what the report has to say about the wider scholarly communications ecosystem and its prospects for continued sustainability. Below, I list some of the key take-aways from the report that may be of interest to Feeding the Elephant readers:

1. Some tools have been around for a long time; most are very recent. Of the master list of projects initially identified, 85 appeared to be active, and 52 were ultimately determined to be within the scope of the report. Two of the oldest projects listed are Open Journal Systems (OJS), established in 2002, and the bibliography manager Zotero, established in 2006; half of the listed projects have emerged since 2015, and over a dozen of those since 2018. As mentioned above, this spread makes the entire field hard to compare, since cutting-edge functionality does not always align with long-term sustainability, and vice versa.
2. **The development and adoption of OSS for scholarly publishing are closely tied to values arguments.** Proponents see OSS as part of an “ethical imperative to keep academic work open and in free circulation” (5), in line with the wider Open Access (OA) movement. They are also motivated by the fear of enclosure by profit-driven commercial publishers. (The **acquisition of bepress**—an institutional repository and publishing system started at UC Berkeley—by Elsevier in 2017 was a galvanizing moment.) Finally, as the OSS landscape continues to develop, there is a “growing ecosystem awareness” (6), at least as it relates to the fear of enclosure of not just content, but of the larger scholarly infrastructure.

3. **Open-source publishing systems are both standardizing scholarly practices and driving innovation.** In the case of journals, OJS, the nearly two decades’ old application that manages the submission and editorial workflow for online journals, has helped to define how we think about the specialized labor of journal publishing, as well as the basic form of the online journal. Conversely, in the case of books, opportunities for publishing interactive scholarly works are myriad and have led to lots of experimentation with both form and scholarly practice. Examples of platforms that extend or rethink what it means to publish book-length works include MIT’s **PubPub**, which facilitates communication among research teams and communities; the University of Minnesota Press and CUNY’s **Manifold Scholarship**, which captures commentary, annotation, and revisions; **Omeka** and **Scalar**, which allow for non-linear content organization and multiple media integration; the University of Michigan Library’s **Fulcrum**, which affords media-rich companion websites for print and ebooks; and there are many others. A number of these tools allow users to experiment with non-traditional modes of review, including collaborative review, open review, and post-publication review, shaping how scholars produce and readers experience and interact with book-length research.

4. **Funding, software, and software development questions are only the starting point for evaluating open source tools.** Equally important are the external stakeholders who will determine whether a project continues to be developed and used. As the report’s authors pointedly ask: “Who will care enough to fund, contribute, promote, use, and ultimately further the useful life of these projects?” (3) The list of abandoned projects is a cautionary tale for funders and development teams that fail to consider these stakeholders. (More research tracing the legacies of no longer active projects in more recent ones—whether parts of the code and functionalities, or the actual developers and users—would augment our understanding of how different stakeholders shift their care and attention between projects.)

5. **Lack of coordination and integration between projects is the major gap in the open source publishing landscape.** The authors identify siloed development and the lack of overall organization as the two larger-scale themes that define the prospects for the OSS publishing ecosystem. They note that when we apply a research-funding model to prioritize knowledge creation and innovation over long-term infrastructural investment, stability, and collaboration among projects, we risk promoting unsustainability. Instead, the authors ask us to imagine a community-supported infrastructure that “prioritize[s] community governance, collaboration, and integration across a wider ecosystem” (22), where projects are not forced to
compete for the same resources but instead address different, interlocking parts of a larger system. While tremendously difficult to achieve in the current climate, getting these projects to talk to each other and developing them in coordination will ultimately strengthen the communities of developers and users whose continued attention and care for these projects is what keeps them alive.

We would love to hear about your experience of open-source software and how we can support the long-term health of our scholarly infrastructure. Reply to this post or tweet us @HNetBookChannel.

Have something to say? Email the Elephant about writing for us. We welcome submissions from stakeholders on all sides of scholarly publishing.