HOW LIBRARY PUBLISHERS AND OPEN SOURCE TOOLS CAN RESHAPE ACADEMIC PUBLISHING

Hugh McGuire, Executive Director, Rebus Foundation
Michelle Reed, Open Education Librarian, UT-Arlington
Heather Staines, Head of Partnerships, Knowledge Futures Group
Steel Wagstaff, Educational Client Manager, Pressbooks

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Image credit: Michael Beckwith
1. The Value of Publishers

*Disruptive changes to historical publishing processes & their implications.*
For most of human history, making even one copy of a print book has been costly.

Printing required significant capital outlays, technical expertise, skilled labor, & time.

Image credit: Jan Van Der Street, Wellcome Collection.
Publishers have historically provided value in 3 broad ways:

1. **EDITORIAL ROLE**: Find, acquire, develop & prepare new material.

2. **PRODUCTION ROLE**: Provide capital, assume risk, & oversee production.

3. **DISTRIBUTION ROLE**: Bring books to market (publicize, advertise, sell).
SCHOLARLY PUBLISHING & THE ROLE OF PUBLISHERS

Scholarly publishing is unusual.

1. **EDITORIAL ROLE:** Professional organizations & learned societies often provide peer review

2. **PRODUCTION ROLE:** Digital tools and print-on-demand services change workflows & economics of printing

3. **DISTRIBUTION ROLE:** Little market outside of libraries & group #1


**Image credit:** Jeff Miller, UW-Madison
$28,747
Average “basic” cost to produce a scholarly monograph in 2014 \([n=382]\). Print production, warehousing & distribution costs *not* included.

$4,020 – $7,872
Average cost per monograph for *production & design* alone.

$431,955
Average marketing department overhead, per press \([n=20]\).

The working hypothesis was that larger presses would demonstrate a lower per-book cost due to the economic benefits of scaling. Based on the data contributed by the individual presses, the small university presses have been able to produce monographs at a lower cost than the others.

Source: “The Costs of Publishing Monographs”

EDP is outsourced

Throughout the Editorial, Design, and Production (commonly referred to as EDP) functions, we observed the greatest amount of outsourcing. Almost all (if not all) presses engage in some amount of freelance outsourcing in these stages.

Doubt digital quality

The need to control quality – particularly with respect to aesthetics – was ... a binding constraint. Several interviewees noted they would not embrace a fully OA environment, or even a fully digital environment, because they perceived that this would compromise the visual aspect(s) of the content.
Making printed objects digital is more costly than printing digital objects.

Academic publishers, even those most committed to open access, are still often set up to make print objects first with web/digital as an afterthought.

What if we envisioned book publishing differently?
2. Pressbooks

Pressbooks is an online book publishing platform that makes it easy to generate clean, well-formatted books in multiple outputs. It is built on WordPress and is open source.

— Hugh McGuire, Pressbooks founder
Above: Each Pressbooks instance is a centrally-managed network of books. The Rebus Press network lives at https://press.rebus.community/
Above: Each Pressbooks network features a sortable catalog of publicly listed books.
5 Publishing Efficiencies Pressbooks Provides

1. Easy content import & API for books [cloning!]
2. Licensing control down to chapter level
3. Supports fully interactive, web-first publishing
4. Simple export routines [EPUB, PDF, XML, more]
5. Detailed control over print PDF production
At left: Pressbooks import page. We support importing content from several different digital file formats.
At left: Pressbooks cloning routine. Any public, openly licensed book can be quickly cloned from one Pressbooks network to another.
<table>
<thead>
<tr>
<th>Metadata Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter Short Title</td>
<td>Appears in the PDF running header and webbook navigation.</td>
</tr>
<tr>
<td>Chapter Subtitle</td>
<td>Appears in the Web/ebook/PDF output.</td>
</tr>
<tr>
<td>Chapter Author(s)</td>
<td>Choose author(s)</td>
</tr>
<tr>
<td>Chapter Copyright License</td>
<td>Overrides book license on this page.</td>
</tr>
<tr>
<td>Chapter Digital Object Identifier (DOI)</td>
<td></td>
</tr>
</tbody>
</table>

At left: Licensing and authorship options at the book and chapter level.
Publishing Webbooks

Each webbook has its own URL. Books can have unique themes, licenses, and permissions. Each book homepage includes:

1. Title, author, description, license
2. Cover image
3. Download options
4. Table of contents
5. Additional metadata [not shown]
Organizing a Book

Books include front & back matter, parts, & chapters and have a drag-and-drop chapter organization interface.

Individual chapters can be published/hidden from the web and included/excluded from exports separately.

Black Hawk held: In reason
land cannot be sold,
only things to be carried away,
and I am old.

Young Lincoln’s general moved,
pawpaw in bloom,
and to this day, Black Hawk,
reason has small room.

**POST POEM QUIZ:**

**Above:** A [Pressbooks webbook](https://pressbooks.com) with the Hypothesis annotation layer enabled. Both the book & annotation layer can contain links, images, rich media, and more. Private annotation layers can be used for editorial review.
At left: Pressbooks export page. We support one-click creation of nearly a dozen different formats.
At left: Pressbooks PDF export theme options.
3. Rebus Community

Making books to build communities, building communities to make books
Rebus Community Mission

To build a global community (people, practices, tools) that works together to create, publish, adapt, & maintain open educational resources and open textbooks.
We’ve worked the past two years with a group of about 35 selected open textbook projects, developing a model — process, tools, people, openness — for publishing open textbooks.
We’re now starting to scale up, preparing to support any OER project that wants to work with us (for free), and providing more robust support to institutions (for fees).
Our Job

1. Provide the framework & infrastructure needed for individual authors & teams to successfully publish their OER projects.

2. Make it easier for program administrators to support successful OER publishing projects on their campuses.
publisher (n.)

mid-15c., "one who announces in public."

Image Credit: S.N. Cook
Rebus Services for Anyone Making OER

1. A home page on the web for your OER project
2. Platform for building and collaborating with a team
3. Process for publishing
4. Documentation, explanations, help desk
5. Orientation webinars for new projects
6. Platform for formatting & publishing content in, PDF, ebook, web (Pressbooks)*
7. (soon) Print-on demand and ebook distribution

* free for 2 books per institution, then cost for use
Paid Rebus Services for Institutions

1. A customized 12-session publishing training program for cohorts of OER projects

2. Ongoing webinar check ins with the cohort

3. Premium Rebus staff support for projects/questions

4. *Optional:* Platform for formatting & publishing content (Pressbooks)

5. *Optional:* (soon) print-on demand & ebook distribution
Publishing-ish Things Rebus Will Not Do

1. Gatekeeping
2. Editorial input
3. Adverts in the New York Times
4. Organize book tours
Interested?

https://rebus.community

hugh@rebus.foundaton

Image Credit: Dutch National Archive
4. PubPub + Hypothesis

Creating Communities, Imagining Different Knowledge Futures
Open Tools in the Researcher Workflow
• Reconsider the digital reading experience to understand how people read & why they engage with content
• Explore where and how publishers can provide value throughout and after the publishing process
• Support the development and evolution of new ideas for authors and readers
• Introduce transparency & openness in the drafting and review process
The worlds of Design and Science are inextricably linked.
Science is informed by Design.
Design is a science.
The interactions between the two are powerful, subtle, often unrecognized.

The *Journal of Design and Science* (JoDS), a joint venture of the MIT Media Lab and the MIT Press, forges new connections between science and design.
Explore 300+ communities: PubPub.org/explore
Open Review
I'm thrilled to announce the first draft publication of DATA FEMINISM - a book by myself and @laurenfklein for @mitpress. We published this first draft on @pubpub and welcome your comments and suggestions as part of our open review process.

Data Feminism · MIT Press Open
bookbook.pubpub.org
Introduction

Intersectional feminism isn't just about women nor even just about gender. Feminism is about power – who has it and who doesn't. And in a world in which data is power, and that power is wielded unequally, data feminism can help us understand how it can be challenged and changed.

by Catherine D'Ignazio and Lauren Klein

Updated Jan 12, 2019 (6 Older Versions) 171 Discussions (#public) 2 Contributors

You are viewing a saved version

This chapter is a draft. The final version of Data Feminism will be published by the MIT Press in 2019. Please email Catherine and/or Lauren for permission to cite this manuscript draft.

Introduction

Christine Mann Darden first passed through the gates of NASA’s Langley Research Center, in Hampton, Virginia, in 1967. In the city of Hampton, and across the United States, tensions were running high. In Los Angeles that June, a massive protest against the Vietnam War ended in violence when over a thousand armed police officers attacked the peaceful protestors, sparking national outrage. One month later, in July of that year, even more violence
Just finished going through all of the community review comments for #DataFeminism and seriously, our community is filled with such smarties. Smarties who are also kind and generous and well-read beyond belief. THANK YOU 💕🔥 cc @kanarinka

3:02 PM - 15 Jan 2019

2 Retweets 64 Likes

Andrew Piper @_akpiper · Jan 15

Replying to @laurenklein @kanarinka

I've assigned it for my #DH grad course, will it still be up in a few weeks? And if only everyone was "generous" academia would be a better place :)

1 Retweet 6 Likes
Austin Choi-Fitz @achoifitz · Feb 19

My new book #TheGoodDrone is forthcoming @MITPress. We’re inviting anyone to comment before it goes to press (thx @PubPub). Let’s democratize the review process on #movements #humanrights #technology!

thegooddrone.pubpub.org// Here’s the TL;DR for the book, in a thread [1/7]
This report offers a framework for how libraries can begin to embrace their role in the maturing space of digital humanities publishing, particularly as they seek to support what we call “expansive digital publishing” — challenging digital publications that can span disciplinary and institutional boundaries; use many different technologies; have multiple scholarly outputs; grow over time; operate over the long-term or are multi-phase; aim to engage with multiple audiences; and, in general, use digital tools and methods to explore or enable scholarship that would be more difficult to achieve through traditional publishing.

This project grew out of an effort to support a series of “expansive” publications at Duke University Libraries. With support from the Andrew W. Mellon Foundation, we invited a wide range of stakeholders in digital scholarly publishing to workshop these ideas and help us articulate many of the issues outlined in this report. Our exploration included how libraries can work with a network of presses, humanities institutes, and foundations to support expansive digital publishing from start to finish, including how to address planning; resource allocation; discovery; evaluation; and preservation and sustainability.
MIT Open Access Task Force

In July 2017, Provost Martin Schmidt, in consultation with the vice president for research, the chair of the faculty, and the director of the libraries, appointed an ad hoc task force on open access to MIT’s research. The OA task force is coordinating an institute-wide discussion of ways in which current policies and practices might be updated or revised to further MIT’s mission of disseminating the fruits of its research and scholarship as widely as possible.

In Sept 2018, the OA task force released a white paper examining efforts at MIT, in the United States, and in Europe to make research and scholarship openly and freely available. The paper provides a backdrop to the ongoing work of the task force: identifying new, updated, or revised open access policies and practices.
The Persistence of “Dumb” Contracts
by Jeffrey M. Lipshaw, Professor at Suffolk University Law School
Jan 05, 2019  Updated: Jan 21, 2019

This Article is an exploration of the similarities and differences, for lawyers, not just of language and code, but also those aspects of human thinking and interaction that will continue to be the most difficult to replicate on a machine.
One of my first impulses in examining the CRFP and in perusing the registers’ digitized pages, was to imagine a performance. The impulse to imagine came from the peculiar way the registers’ printed categories work with the manuscript numbers that were added to each page on a daily basis. Like any form, the general categories—*Billets à répétées* at the top: *Frais journaliers... Pensions, Cages, &c...* following reliably below. They visually anchor the numbers that change regularly: tickets sold, price of places, dates of performances. Balancing the impulse to attempt a close reading of them with a fear of the perils of calculation, I instinctively took something like a formalist-performance approach to understanding the pages and pages of digits which
Edition for the 200th anniversary (2018) of Mary Shelley’s Frankenstein published by the MIT Press in 2017

Frankenbook published in January 2018 on PubPub

Additional annotations from the editors

Multimedia embeds in the text and annotation

Labels added to annotations for tailored reading

Functionality for use in classrooms

Community discussion around the text

Currently has 420 discussions and over 7,000 visits
Preface

The event on which this fiction is founded has been supposed, by Dr. Darwin, and some of the physiological writers of Germany, as not of impossible occurrence. I shall not be supposed as according the remotest degree of serious faith to such an imagination; yet, in assuming it as the basis of a work of fancy, I have not considered myself as merely weaving a series of supernatural terrors. The event on which the interest of the story depends is exempt from the disadvantages of a mere tale of spectres or enchantment. It was recommended by the novelty of the situations which it develops; and, however impossible as a physical fact, affords a point of view to the imagination for the delineating of human passions more comprehensive and commanding than any which the ordinary relations of existing events can yield.

I have thus endeavoured to preserve the truth of the elementary principles of human nature, while I have not scrupled to innovate upon their combinations. The *Iliad*, the tragic poetry of Greece,—Shakespeare, in the *Tempest* and *Midsummer Night's Dream*,—and most especially Milton, in *Paradise Lost*, conform to this rule; and the most humble novelist, who seeks to confer or
Welcome

Visible Thinking is an online, multimedia publication of Duke University that features the faculty-mentored work of our undergraduates across the full spectrum of majors, certificates, and other interdisciplinary and immersive activities that anchor research experiences. A hallmark of Duke’s undergraduate liberal arts education is a faculty-mentored scholarly experience. Our students traverse a rich array of research opportunities domestically and internationally, engaging every major area of knowledge production.

The focus of Visible Thinking is therefore interpreted in the broadest sense, and includes scholarly articles, research posters, visual, embodied, and aural expressions from the arts, documentary pieces, short stories, commentary on critical issues of the time. It is an ecosystem of signature works capturing the Duke Excellence—compelling communication;
Collaboration

- **Create your own community**
  - Anyone can [create a community](#) or contribute to an existing one for free and at any time

- **Stay connected**
  - Sign up for our [newsletter](#)
  - Twitter: [@pubpub](#) & [@knowledgefuture](#)

- **Provide us feedback**
  - All of our code is openly available on [GitHub](#)
  - You can reach our team at [team@pubpub.org](mailto:team@pubpub.org)
Hypothesis
Annotate the web, with anyone, anywhere.
A mission-driven non-profit

Early Momentum

Open Source

Layers

Open Standards

Supported by Partners

Early Momentum

Free

Better Team

No Conflicts

More Credibility

Better Approach

W3C-Supported

Great Press

More Focused

Simplicity

Independent

12 Principles

Layered

Better Go-to-Market

More Users

More Credibility

Better Team

W3C-Supported

Great Press

More Focused

Simplicity

Independent

12 Principles

Layered

Better Go-to-Market

More Users
Free full-feature tool: Hypothesis

- Private Notes
- Public annotations
- Collaboration groups
- Linked Data connections

Cross format: HTML, PDF, EPUB, Data

Cross platform: PubMed, Repositories, Aggregators
- Robust API
- Community driven
- Open Source

1. Sign up to annotate.
   You need a free account to start annotating.
   - CREATE A FREE ACCOUNT

2. Add Hypothesis to your browser.
   Install our Chrome extension or add the bookmarklet to your preferred browser.
   - CHROME EXTENSION
   - HYPOSETHESIS BOOKMARKLET

3. Start annotating.
   Go to any page (or open a PDF or EPUB file in your browser), select text, and annotate.
Publishing Examples
Ribosome structures to near-atomic resolution from thousand cryo-EM particles

Xiao-chen Bai, Israel S Fernandez, Greg McMullan, Sjors HW Scheres
Medical Research Council Laboratory of Molecular Biology, United Kingdom

Abstract

Although electron cryo-microscopy (cryo-EM) single-particle analysis has become an important tool for structural biology of large and flexible macromolecular assemblies, the technique has not yet reached its full potential. Fundamental limits imposed by radiation damage, poor detector performance, and beam-induced sample movement have been shown to degrade attainable resolutions. A new generation of direct electron detectors may ameliorate both effects. Apart from exhibiting improved signal-to-noise performance, these cameras are also fast enough to image samples in a manner that is not affected by drift and can thus reduce radiation damage. Here, we present a novel algorithm to correct for contrast variation in cryo-EM images that uses the improved signal-to-noise performance of new cameras to enhance the accuracy of feature detection. Using this algorithm, we derive ribosome structures from a large number of images, allowing the determination of precise atomic resolution structures for each large subunit.
HYPOGLYCEMIA

Recommendations

- Individuals at risk for hypoglycemia should be asked about symptomatic and asymptomatic hypoglycemia at each encounter. C

- Glucose (15–20 g) is the preferred treatment for the conscious individual with blood glucose <70 mg/dL (3.9 mmol/L), although any form of carbohydrate that contains glucose may be used. Fifteen minutes after treatment, if SMBG shows continued hypoglycemia, the treatment should be repeated. Once SMBG returns to normal, the individual should consume a meal or snack to prevent recurrence of hypoglycemia. E

- Glucagon should be prescribed for all individuals at increased risk of clinically significant hypoglycemia, defined as blood glucose <54 mg/dL (3.0 mmol/L), so it is available should it be needed. Caregivers, school personnel, or family members of these individuals should know where it is and when and how to administer it. Glucagon administration is not limited to health care professionals. E

- Hypoglycemia unawareness or one or more episodes of severe hypoglycemia should trigger reevaluation of the treatment regimen. E

-Insulin-treated patients with hypoglycemia unawareness or an episode of clinically significant hypoglycemia should be advised to raise their glycemic targets to strictly avoid hypoglycemia for at least several weeks in order to partially reverse hypoglycemia unawareness and reduce risk of future episodes. A

- Ongoing assessment of cognitive function is suggested with increased vigilance for hypoglycemia by the clinician, patient, and caregivers if low cognition or declining cognition is found. B
Annotations as First Class Research Objects

- Added dates when annotations were posted
- Added dates when Publications Committee approved annotations
- Added Suggested Citation
- Includes links to ADA resources, external sites, additional figures and other information

For alignment with the annotation to table 6.3, this recommendation has been updated to state the following:

Glucagon should be prescribed for all individuals at increased risk of clinically significant hypoglycemia, defined as blood glucose <64 mg/dL (3.0 mmol/L), so it is available should it be needed. Caregivers, school personnel, or family members of these individuals should know where it is and when and how to administer it. Glucagon administration is not limited to health care professionals.

Annotation published April 11, 2018.
Annotation approved by PPC: March 10, 2018.

Demand for Law and the Security of Property Rights: The Case of Post-Soviet Russia

Abstract

Studies of property rights overwhelmingly focus on whether states expropriate private sector actors or whether private sector actors will use state institutions. By contrast, I argue that firms’ decisions to rely on the state for property rights protection are shaped by their perceptions about how effective state institutions actually are. Instead, firms adopt illegal strategies based on violence or corruption. Whether firms adopt legal strategies to avoid expropriation or illegal strategies based on violence or corruption depends on their perceptions about the effectiveness of state institutions: (1) that the state is capable of law enforcement and solving disputes, (2) that the state is capable of law enforcement and solving disputes, and (3) that demand-side factors of law. The Effect of Law on Demand for Law and Security of Property Rights: The Case of Post-Soviet Russia.

Source: Annotated article in American Political Science Review.
Add Context and Links to Citations

- **Author Context**

- **Source Excerpt**

- **Translation of Excerpt**

- **Links to Data in QDR repository**

- **Full Citations for Annotations**

**Source Excerpt Translation (Supplementary Source 1):** There are around 29 thousand legal entities in the private security market. (Borodkin, 2008)

**Source Excerpt (Supplementary Source 2):** На 1 января 2009 г. в ОВД состоит на учете 29,8 тыс. охранно-сыскных структур. (MVD, 2009)

**Source Excerpt Translation (Supplementary Source 2):** As of January 1, 2009, there are 29.8 thousand security-detective companies registered with the organs of internal affairs. (MVD, 2009)

**Data Sources:**
- https://data.qdr.syr.edu/file.xhtml?fileId=2664
- https://data.qdr.syr.edu/file.xhtml?fileId=2645
- https://data.qdr.syr.edu/file.xhtml?fileId=2801


**Full Citation (Supplementary Source 1):** Borodkin, Aleksey, “Razoruzhennaya okhrana (Disarmed guards),” *Den'gi*, November 24, 2006.

**Full Citation (Supplementary Source 2):** Press release from the Ministry of Internal Affairs (MVD) from 4.02.2009
Any Questions?

PubPub

heather@knowledgefutures.org

Hypothesis

dwhaley@hypothes.is
5. Mavs Open Press

*University library publishing services with an emphasis on open.*
Mavs Open Press: **Journal Publishing Services**

- Obtaining an ISSN for the journal and DOIs for articles
- Assisting with all aspects of technical setup and production of each issue, including in some cases layout and copyediting;
- Providing a publishing platform that simplifies the peer-review process and includes options for blind or double-blind review;
- Hosting open-access digital content on a secure server with frequent backups and built-in redundancies;
- Consulting on copyright questions;
- Maximizing discoverability of your journal through search-engine optimization and robust metadata; and
- Preserving and archiving the digital content in perpetuity.
Mavs Open Press: Book/OER Publishing Services

- Obtaining an ISBN;
- Providing design and layout services so that the book can be printed on demand, if desired;
- Offering access to and training for easy-to-use tools;
- Consulting on copyright questions;
- Maximizing discoverability of your book through search-engine optimization and robust metadata; and
- Preserving and archiving the digital content in perpetuity.

https://library.uta.edu/scholcomm/mavs-open-press
MARKING OER COURSES: BEST PRACTICES AND CASE STUDIES

About this Project

Marking OER Courses: Best Practices and Case Studies will expand the "Texas Toolkit for OER Course Markings" (a SPARC-affiliated project) to help higher education institutions across the country implement course marking for open and affordable educational resources. This practical guide will provide case studies, summarize relevant state legislation, provide tips for working with stakeholders, and analyze technological and process considerations.

The book will consist of two main sections. The first will provide high-level analysis of the technology, legislation, and cultural change needed to operationalize course markings. The second will present tangible case studies for those interested in how others have implemented course markings.

Please note that new members will not be added to this project until they have introduced themselves and expressed interest in participating in a specific portion of the project in the activities section. See the Call for Proposals below for additional information about joining the project team.

Left: The Marking OER Courses: Best Practices and Case Studies project on Rebus Community.
Marking OER Courses: Tools

- Rebus Projects for recruitment and communication
- Google Drive for collaborative authoring
- Pressbooks for hosting and dissemination
- Hypothesis for peer review

https://projects.rebus.community/project/rBBwMCEK49MBWf6XwYqVTt/marking-oer-courses-best-practices-and-case-studies
OPEN ENABLED

disruption, transformation, efficiency, connection