Locked up science

Tearing down paywalls in scholarly communication

Claudia Frick - @FuzzyLeapfrog

#35c3
Science
BUT WHY?!
Science ...?

- Education and decision-making
Science ...?

• Education and decision-making
• Health and diseases
Science ...?

- Education and decision-making
- Health and diseases
- Environmental challenges
Restricting access to science ≠ Benefit for society
72% of scientific publications are locked up behind paywalls

Access to science
“Open Access describes the goal of making global knowledge accessible and re-usable in digital form without financial, technical or legal barriers.”

Translated by @FuzzyLeapfrog from Allianzinitiative https://www.allianzinitiative.de/archiv/open-access/
Roadmap

How can we tear down the paywalls?
Roadmap

What does the most common way of scientific publishing look like?

How can we tear down the paywalls?
Put it on the internet!
Scientist
Preprint

Publisher

Journal

Submission → Peer Review

Preprint

Scientist

Scientists

@Minkorrekt (2017) https://youtu.be/BEOsvwi2_k
The diagram illustrates the workflow of a scientific publication process, from submission to publication. It highlights the different stages: Submission, Peer Review, Acceptance, Publication, Preprint, Postprint, and Publisher’s Version.

- **Submission**: The initial stage where the scientist or team submits their work.
- **Peer Review**: The stage where the work undergoes review by experts in the field.
- **Acceptance**: The stage where the work is accepted for publication.
- **Publication**: The stage where the work is officially published.
- **Preprint**: A version of the work freely available before formal publication.
- **Postprint**: A version of the work after formal publication, often for personal use or distribution.
- **Publisher’s Version**: The official version of the work published by the publisher.

The process involves various stakeholders:

- **Scientists**: The individuals involved in the research and publication process.
- **The Public**: The broader audience that benefits from the published work.

The diagram also includes elements indicating the flow of publication fees, with arrows pointing towards scientists and the public, suggesting financial considerations throughout the publication process.
Market shares of major academic publishers

42% - Others
28% - Elsevier
17% - Springer
13% - Wiley

DBS (2015) Calculations of the DEAL Project Group
# Profit margins of major academic publishers

<table>
<thead>
<tr>
<th>Profit</th>
<th>Company</th>
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<tbody>
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Alex Holcombe (2015) [https://alexholcombe.wordpress.com/2015/05/21/scholarly-publisher-profit-update/](https://alexholcombe.wordpress.com/2015/05/21/scholarly-publisher-profit-update/)
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Alex Holcombe (2015) [https://alexholcombe.wordpress.com/2015/05/21/scholarly-publisher-profit-update/](https://alexholcombe.wordpress.com/2015/05/21/scholarly-publisher-profit-update/)
Global journal subscription spendings

= 

EUR 7,600,000,000 per year

Schimmer, Geschuhn & Vogler (2015) http://doi.org/10.17617/1.3
Harvard University says it can't afford journal publishers' prices

University wants scientists to make their research open access and resign from publications that keep articles behind paywalls

▲ A memo from Harvard's faculty advisory council said major scientific publishers had made scholarly communication 'fiscally unsustainable'. Photograph: Corbis

What can I do?

1. Tear down the paywalls
What can I do?

1. Tear down the paywalls
2. Become an academic publisher
Roadmap

What does the most common way of scientific publishing look like?

How can we tear down the paywalls?
Approaches to scientific publishing without paywalls
The players

- Scientists: produce, peer-review, consume
- Funders: provide money
- Libraries: grant access
- Publishers: publish
The players

Scientists
- produce
- peer-review
- consume

Funders
- provide money

Libraries
- grant access

Publishers
- publish
The players

Scientists
produce
peer-review
consume

Funders
provide money

Libraries
grant access

Publishers
publish
Approaches for scientists

Scientists produce peer-review consume
Put it on the internet!

Secondary Publication
Scientist

- arXiv
- Institutional repositories
- ResearchGate
- ...

Put it on the internet!

Secondary Publication
• arXiv
• Institutional repositories
• ResearchGate
• ...

Scientist

Put it on the internet!

Secondary Publication

Green Open Access
Copyright transfer agreement
Copyright transfer agreement

Scientists

Copyright

Publishers
Copyright transfer agreement

Scientists

Copyright

Publishers
Conditions

Version

- Preprint
- Postprint
- Publisher’s Version
- ...

Green Open Access
Conditions

Version
• Preprint
• Postprint
• Publisher’s Version
• ...

Place
• Personal website
• Funder’s repository
• arXiv
• ...

Green Open Access
## Conditions

<table>
<thead>
<tr>
<th><strong>Version</strong></th>
<th><strong>Place</strong></th>
<th><strong>Time frame</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Preprint</td>
<td>Personal website</td>
<td>Embargo period of 6 months</td>
</tr>
<tr>
<td>Postprint</td>
<td>Funder’s repository</td>
<td>12 months</td>
</tr>
<tr>
<td>Publisher’s Version</td>
<td>arXiv</td>
<td>4 years after publication</td>
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<td>…</td>
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... and many more
Conditions

Time frame

Embargo period of
- 6 months
- 12 months
- 4 years after publication

Green Open Access

Seriously?

@islieb (2018) https://islieb.de
Conditions

Ask your librarian
Next time

- Open Access Journal
- No paywall
- Creative Commons Licence

Creative Commons https://creativecommons.org
Gold Open Access

Submission → Peer Review → Acceptance → Publication

Preprint → Article Processing Charge → Library

Publisher → Postprint → Publisher’s Version

Scientist → Scientists

Scientists → The Public
Approaches for scientists

Scientists produce peer-review consume

Hybrid Open Access
Green Open Access
Gold Open Access
Platinum Open Access
Joining forces

Scientists
produce
peer-review
consume

Funders
provide money

Libraries
grant access
Project DEAL

• Commissioned by the Alliance of Science Organizations in Germany / Allianz der deutschen Wissenschaftsorganisationen
• Driven by scientists and librarians
• Implementation of nationwide consortium agreements with major academic publishers

Project DEAL https://www.projekt-deal.de
Publish & Read
• Participating institutions have **access to the entire portfolio of journals** from the publisher
Publish & Read

• Participating institutions have access to the entire portfolio of journals from the publisher.

• All publications with a corresponding author from the participating institutions will be published Open Access with the publisher.
Publish & Read

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Up to 16,500 publications per year with Elsevier

State of the negotiations

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<tr>
<td>Elsevier</td>
<td>DEAL currently suspended the negotiations</td>
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</table>
Joining forces

Scientists

Libraries
Joining forces

... stop their cost-free work for Elsevier.

authorship, peer review, editorship
Scientists

... stop their cost-free work for Elsevier.

*authorship, peer review, editorship*

Libraries

... cancel subscriptions to Elsevier journals.

200 German institutions are currently without Elsevier subscriptions.
Joining forces

Scientists

... stop their cost-free work for Elsevier. *authorship, peer review, editorship*

... use alternative ways to get access.

Libraries

... cancel subscriptions to Elsevier journals.

200 German institutions are currently without Elsevier subscriptions.

... support alternative ways to get access.
Joining forces

Scientists

... stop their cost-free work for Elsevier.
*authorship, peer review, editorship*

... use alternative ways to get access.

Libraries

... cancel subscriptions to Elsevier journals.

200 German institutions are currently without Elsevier subscriptions.

... support alternative ways to get access.

Brembs (2016) [http://bjoern.brembs.net/2016/12/so-your-institute-went-cold-turkey-on-publisher-x-what-now/](http://bjoern.brembs.net/2016/12/so-your-institute-went-cold-turkey-on-publisher-x-what-now/)
Publishers and Sci-Hub

Filed a lawsuit ✓
Publishers and Sci-Hub

Filed a lawsuit

Requested blocking
Swedish ISP blocks Elsevier after blocking request for Sci-Hub

The Swedish Internet provider Bahnhof is forced by the academic publisher Elsevier to block access for users to file-sharing platforms such as Sci-Hub. In the absence of a legal alternative, Bahnhof is following the request, but is defending itself in its own very special way.

5. November 2018, 10:28 Uhr, Sebastian Grüner
Dear scientists ...
Dear scientists ...  

Talk to your librarian
Unlocking science

Tearing down paywalls in scholarly communication

Claudia Frick - @FuzzyLeapfrog

#35c3

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Acknowledgements

I thank all my colleagues and friends for their feedback and input for the talk, particularly this one special colleague for reviewing my English slides and my pronunciation. I also thank @islieb for the comic strip especially made for this talk.

Sorry @MInkorrekt
... but this picture was just too damn good.

@islieb (2018) https://islieb.de

@MInkorrekt (2017) https://youtu.be/BEOsyyiw2_k
Roads to Open Access
Hybrid Open Access

Submission → Peer Review → Acceptance → Publication

Postprint

Publisher's Version

Scientist → Scientists

Subscription/Single article purchase

Additional fee

Publication fees

Scientists → The Public

Scientist
Conditions

**Version**
- Preprint
- Postprint
- Publisher's Version
- ...

**Place**
- Personal website
- Funder's repository
- arXiv
- ...

**Time frame**
Embargo period of
- 6 months
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Article Processing Charge

Scientist
- Scientists

Library
- Scientists
- The Public
Further information
Subscription fee per publication

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<tr>
<td>Global journal subscription spending</td>
<td>EUR 7.6 billion per year</td>
</tr>
<tr>
<td>Total estimated articles output</td>
<td>2.0 million papers</td>
</tr>
<tr>
<td>Calculated expenses per article (rounded)</td>
<td>EUR 3,800</td>
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Schimmer, Geschuhn & Vogler (2015) [http://doi.org/10.17617/1.3](http://doi.org/10.17617/1.3)
### 2017 financial performance

<table>
<thead>
<tr>
<th></th>
<th>2017 (£m)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>2,478</td>
<td>2,320</td>
</tr>
<tr>
<td>Adjusted operating profit</td>
<td>913</td>
<td>853</td>
</tr>
<tr>
<td>Profit margin</td>
<td>36.84%</td>
<td>36.76%</td>
</tr>
</tbody>
</table>

Subscription sales generated 72% of revenue
A librarian’s life without Elsevier

Still ruht der See ....

Johannsen (2018) http://hdl.handle.net/2128/19822
Mittermaier (2018) http://hdl.handle.net/2128/19682
Arndt (2018) http://hdl.handle.net/2128/19837
Joining forces

UCLA Memorandum

To: All Faculty

Dear Colleagues:

As you may know, the UC Libraries are negotiating a new contract with the scholarly journal publishing giant Elsevier. We are deeply concerned with these negotiations because of the amount of money involved and the control Elsevier exerts over the intellectual efforts of UC’s faculty, researchers, and staff.

UC is collectively paying Elsevier more than $11.5 million for its journals, products, and services. In addition, countless UC faculty members, researchers, and staff members write and review articles published in those journals and serve on their editorial boards. The company’s profit margin is 40%, much of it earned from your intellectual capital and unpaid work. This current situation is unsustainable for the UC system.

While these negotiations are going on, we urge you to consider:

- Declining to review articles for Elsevier journals until negotiations are clearly moving in a productive direction.
- Looking at other journal publishing options, including prestigious open access journals in your discipline.
- Contacting the publisher, if you’re on the editorial board of an Elsevier journal, and letting them know that you share the negotiators' concerns.
- Using UC's open access policies to make your final pre-publication manuscript publicly accessible.

We will update you if there is any substantive news to report from the negotiations. Elsevier has begun contacting journal editors at some campuses, and its message doesn’t fully represent all sides of the issue or what is being discussed in the negotiations. If you receive the Elsevier message and would like to discuss it, please contact Joseph Bristow (bristow@senate.ucla.edu or 310-825-4173) or Ginny Steel (steelG@library.ucla.edu or 310-825-1201).

The UC Libraries are working on alternative access methods should they become necessary; while we very much hope that will not be the case, we will nevertheless notify you immediately if negotiations reach that point.

Thank you for your attention to this important issue.

Sincerely,

Scott L. Waugh
Executive Vice Chancellor and Provost

Joseph E. Bristow
Chair, Academic Senate
Distinguished Professor, English

Ginny Steel
Norman and Armenia Powell University Librarian

@jeffguhin (2018) https://twitter.com/jeffguhin/status/1072636553191665665
LUMCON canceled all subscriptions

LUMCON = The Louisiana Universities Marine Consortium

“So a couple of weeks ago, LUMCON made a bold move. We canceled all of our paid journal subscriptions. Every. Single. One. Of. Them.” - @DrCraigMc is showing us that the “L” in @LUMCONscience also stands for “Leader”