




OPEN ACCESS & EARTHQUAKE SCIENCE.



Seismica : an in-progress case study



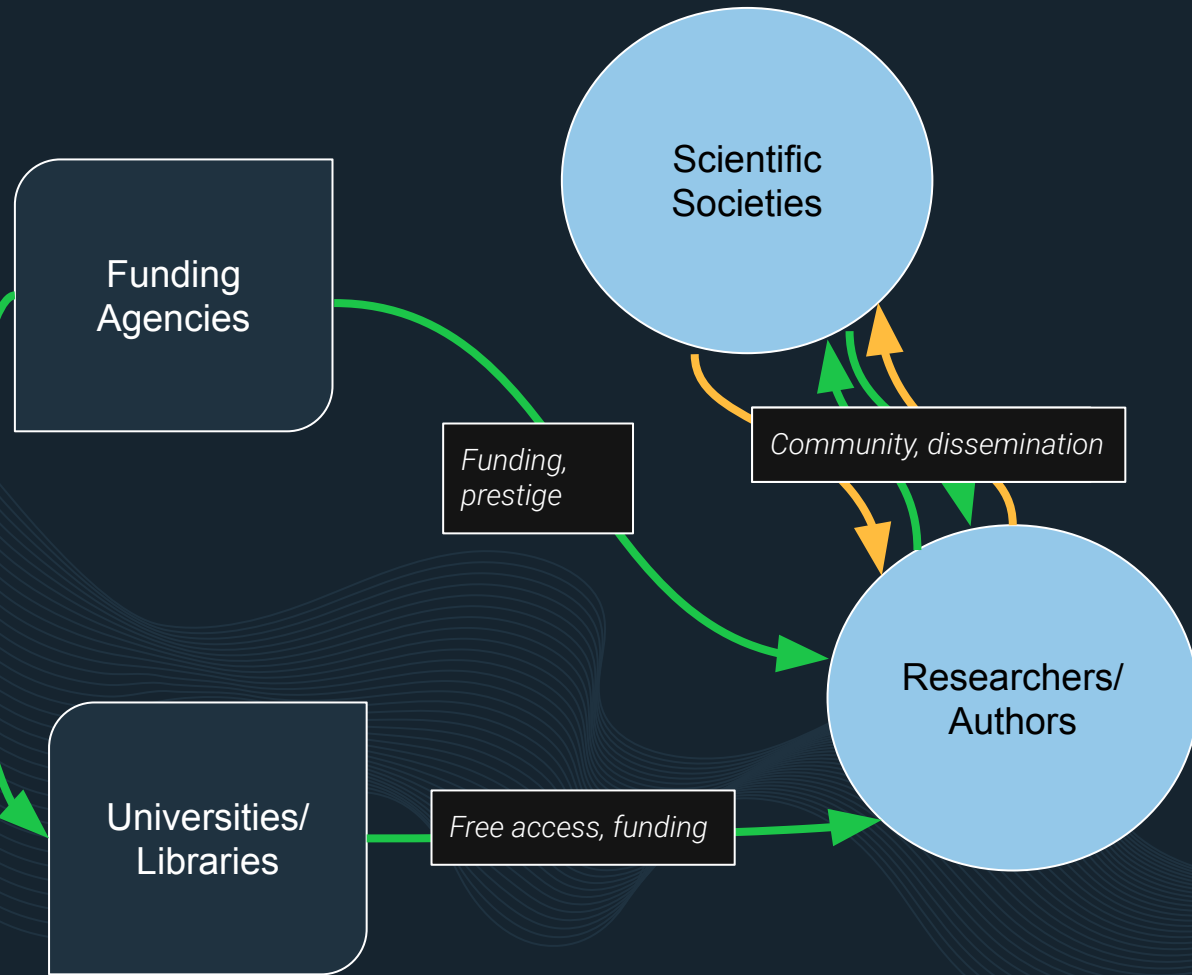
Christie Rowe - McGill
Samantha Teplitzky - UC Berkeley Library
Jessica Lange - McGill Library
& the Seismica Board (seismica.org)

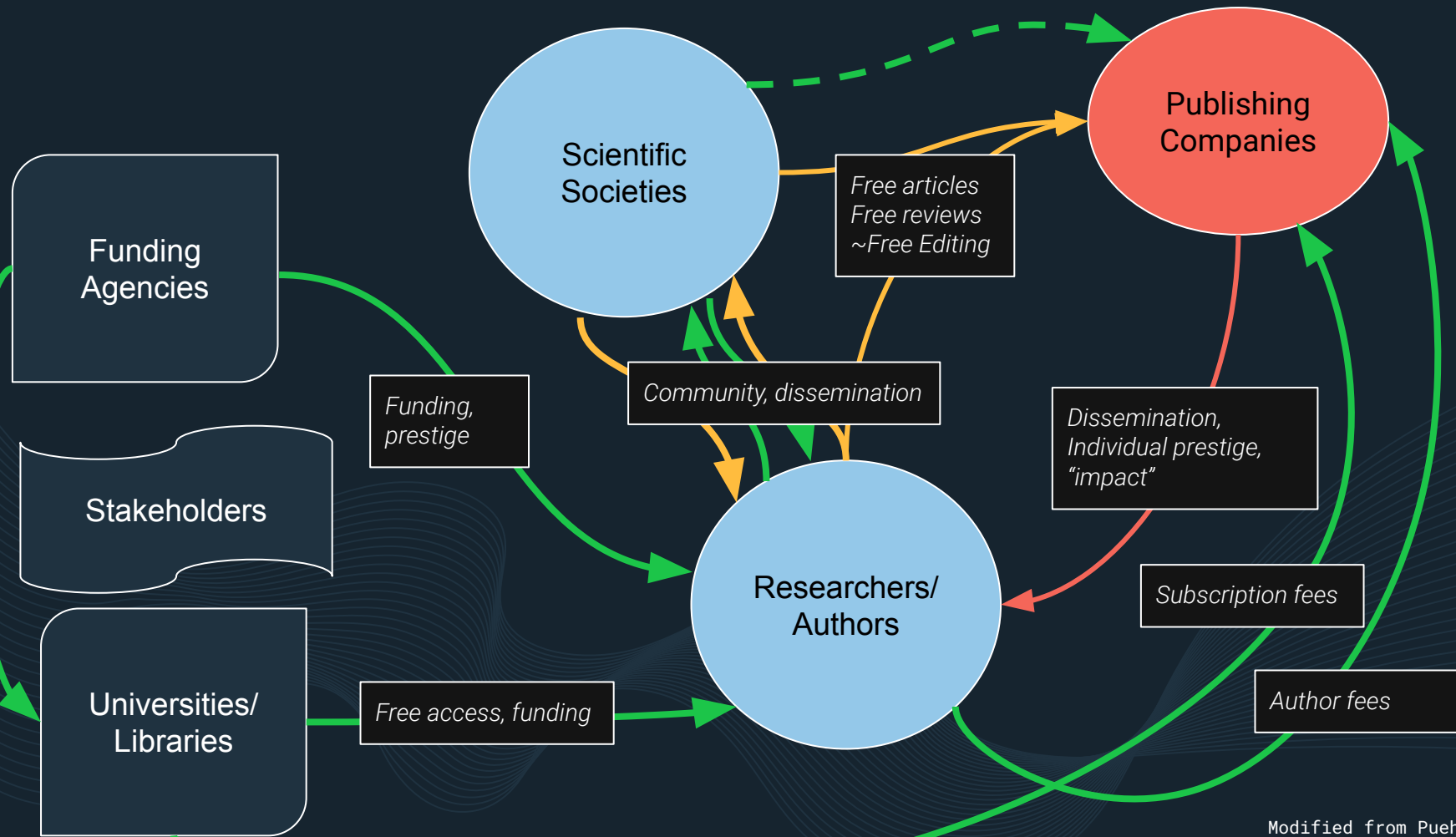
A brief history of research communications

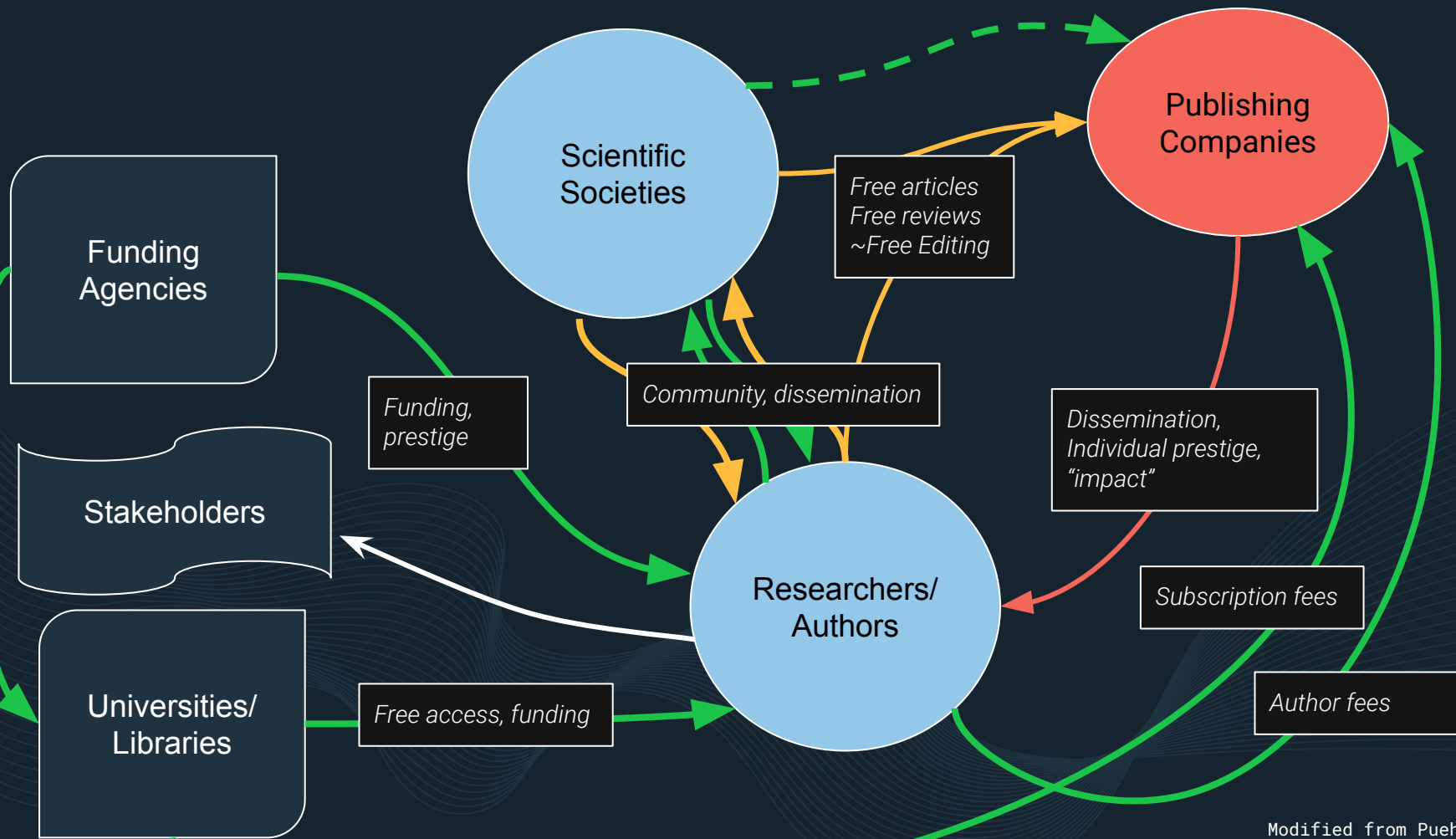
- Transcription of society meetings
- 1752 - peer review
- 1960s-1980s: society journals -> publishing companies.
- 1990s: The internet should make things cheaper and easier
- 2000+: prices go up and up
- Now: Funders mandating Open Access

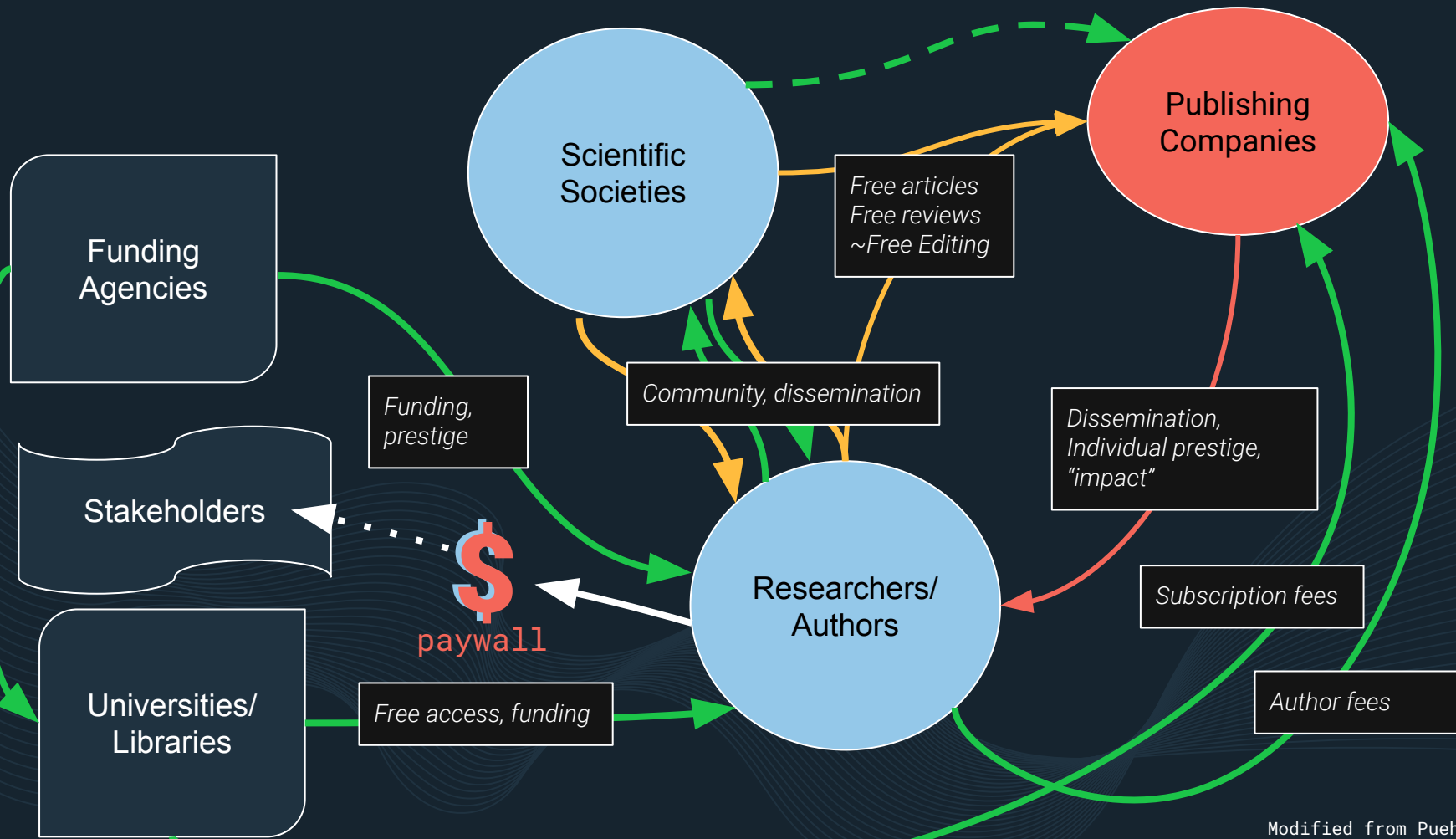


Photo: Nicholas G McDonald "The Olde Geologist"









Why open access

Public pays, public should be able to read (increasingly required by funders).

Advance research where subscription costs are prohibitive

Accelerate innovation in the private sector

TYPES OF OPEN ACCESS.

GOLD

Final Journal copy freely distributed.
Author pays journal.

GREEN

Preprint/
Accepted paper
can be freely
distributed in
open repository

DIAMOND

No fees.
Freely
distributed.

GOLD OPEN ACCESS

Gold OA Journal

Flat author fee, all papers are free to read

Average Author fee in natural sciences

~ \$1850 USD

Hybrid Journal

Lower author fee for papers behind paywall, additional fee for OA papers

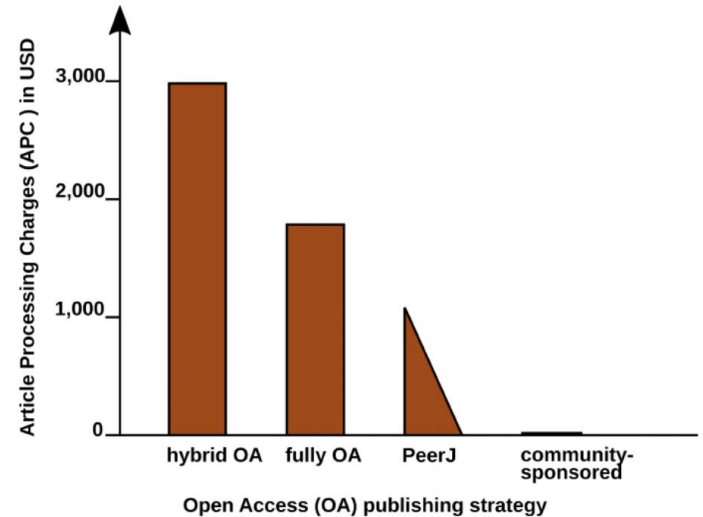
Average in natural sciences

~ \$2800 USD

price POINT.

Author fees scale with journal reputation, not costs (Solomon & Björk 2016)

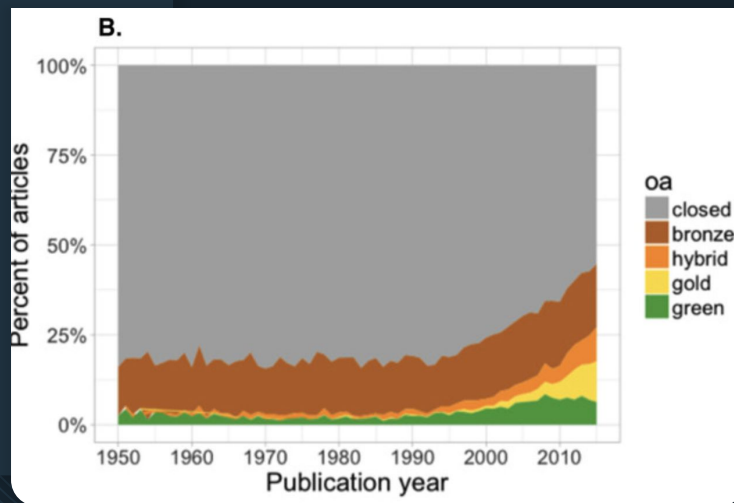
Hybrid journals charge 65% higher author fees than Gold OA journals (Pavan & Barbosa 2018)



Data from Solomon & Björk, plot in Krewinkel & Winkler 2017

It's GROWING.

28% of new papers are published Open Access

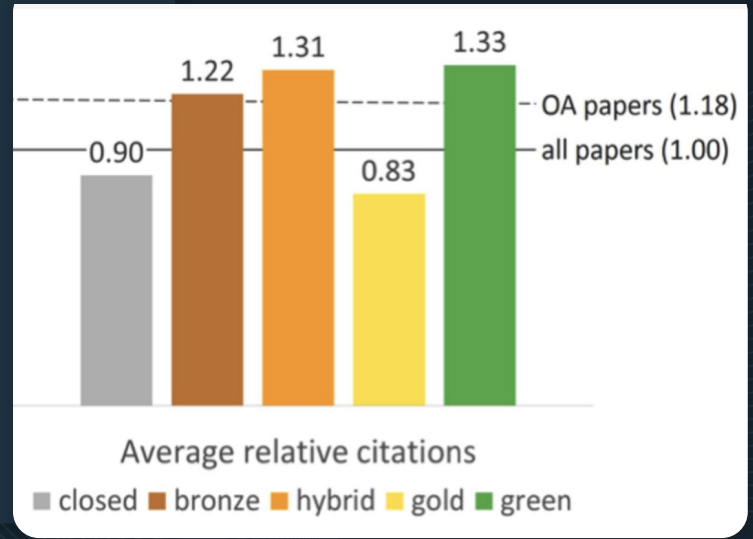


Piwowar et al. (2018)

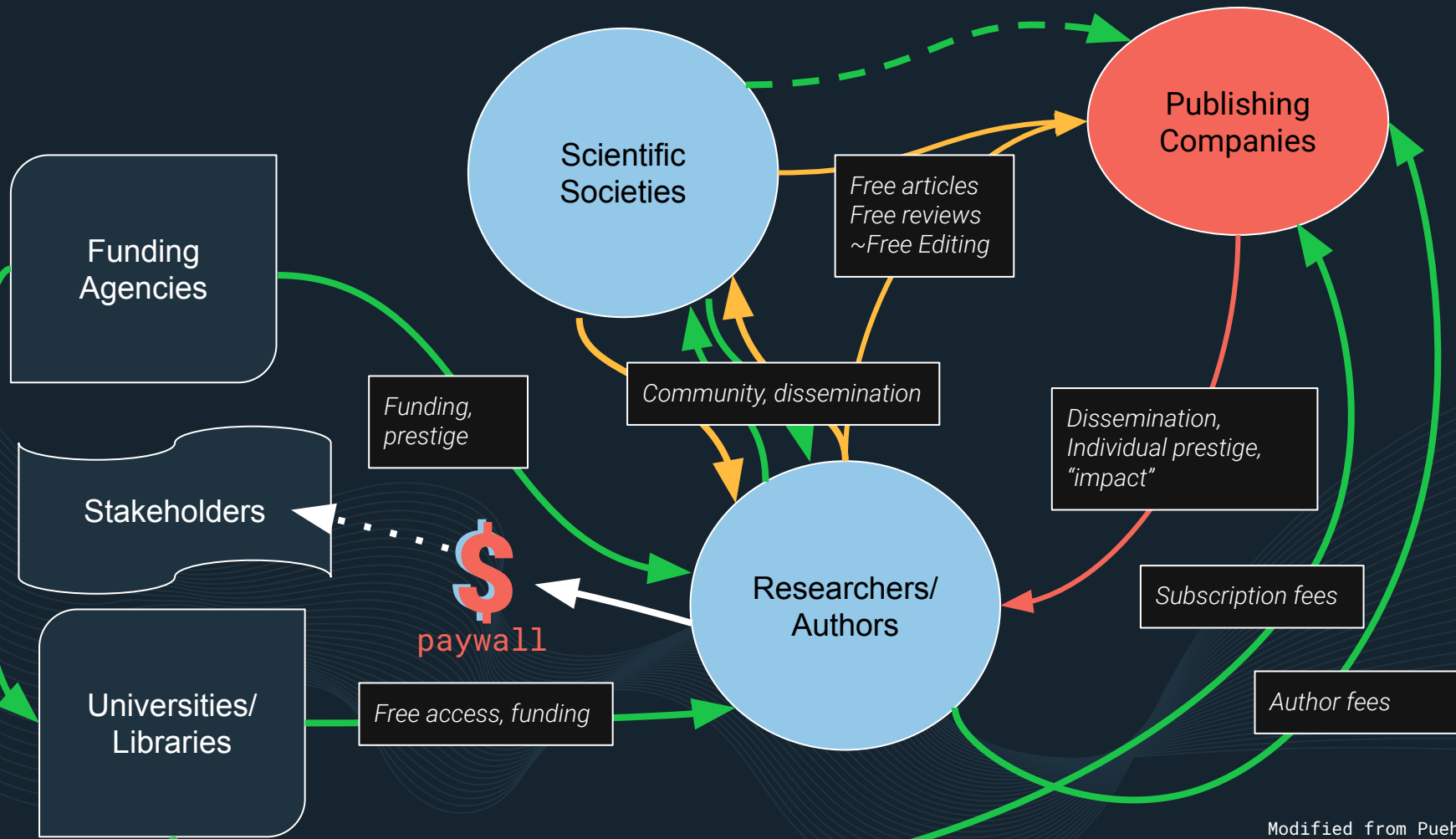
It's WORKING.

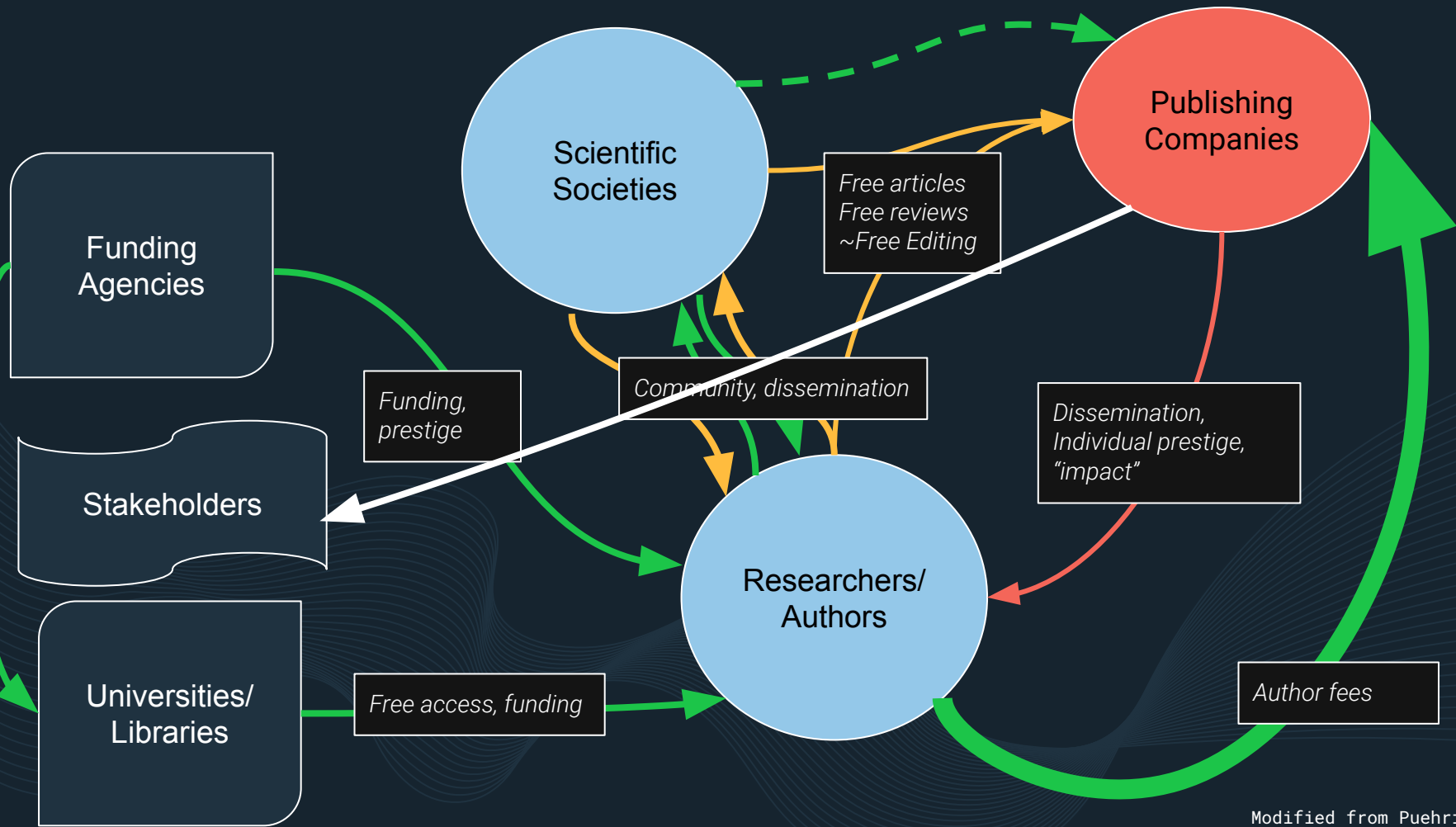
More Citations!

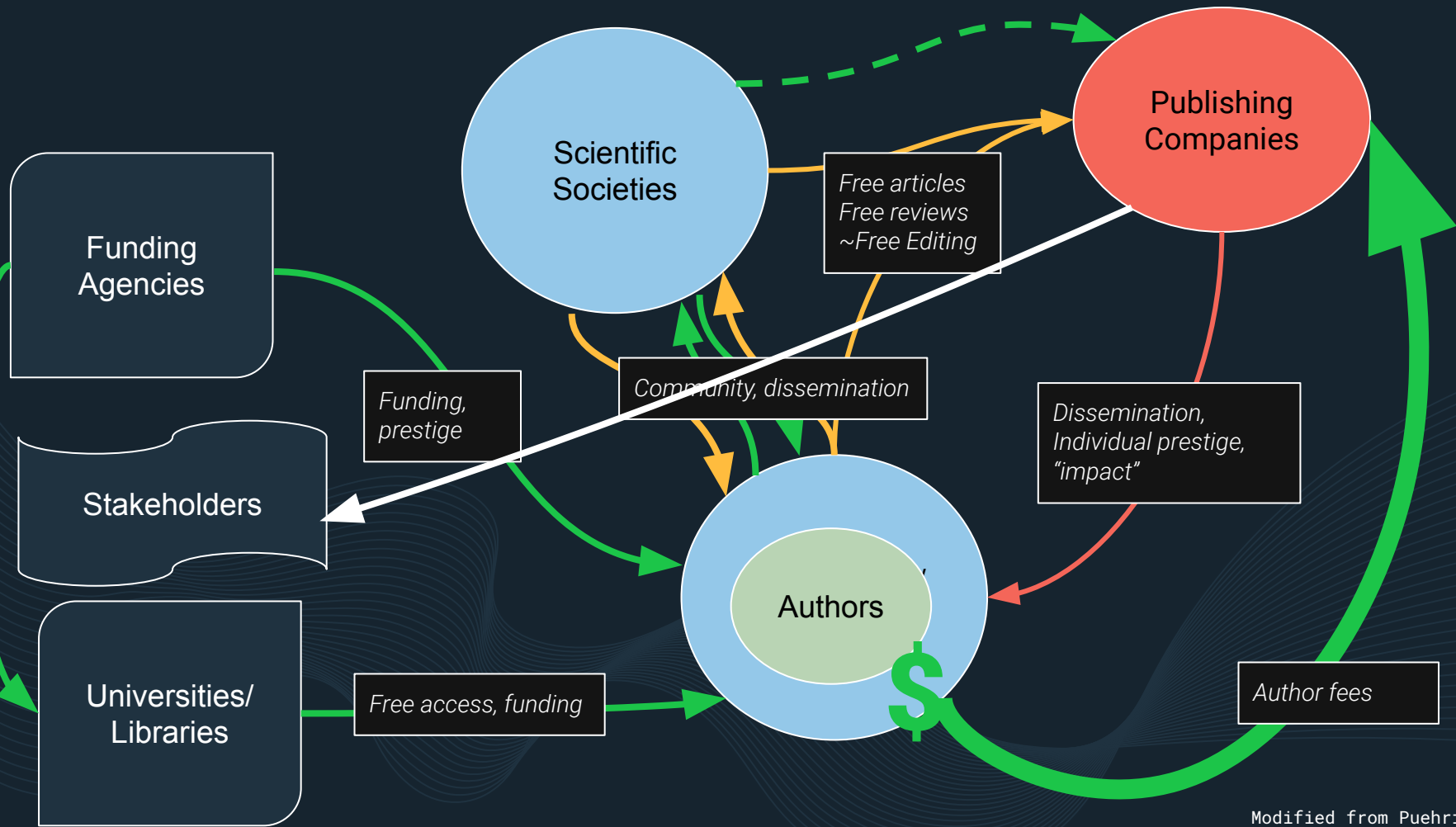
Bigger readership!



Piwowar et al. (2018)







what is the actual **COST**?

\$1800

Average OA author
fee across
disciplines.

\$200-
\$1000

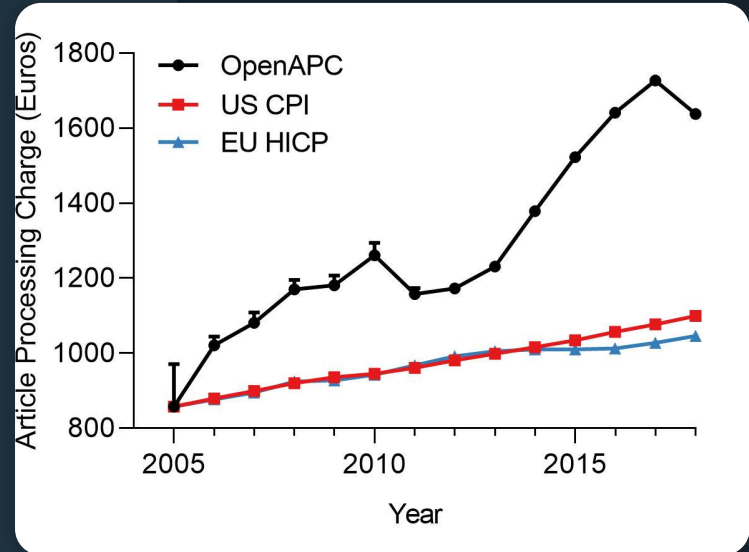
Actual cost to
publishers per
paper

10%

Amount by which
average APC
increases per
year in the
last decade.

market RATE?

PUBLISH OR PERISH
+
PAY TO PLAY =
PAY OR PERISH?



Khoo 2019 - APCs per paper paid by European institutions 2005-2018 compared to Consumer Price Index

KEY POINTS.



Publishers sell back to us what we give them for free

Journal authority and prestige arises only from their volunteers: the research community.

Research assessment contributes to the problem

Competition between researchers - using journal ranking as a proxy for quality metrics - has created a market in which publishers can charge whatever they want because their acceptance is so valuable for individual researchers.

We can take back control of the process

This would reduce costs, while focusing revenues into community/public benefits instead of corporate profits.

●●● some “SOLUTIONS”?

1. Move to Gold Open Access but organize payment of author fees
 - a. Funders pay?
 - b. Employers pay?
 - c. Collective agreements with libraries?

2. Reduce or eliminate author fees
 - a. National agreements?
 - b. Price caps
 - c. Market pressure on price
 - d. Rapid public archiving
 - e. **Grassroots publishing with low/no author fees**



If we started over from scratch,
today, what would we want a
journal to be like?



Accessible
Transparent
Respectful
Credible
Progressive

Our Seismic Moment



What is Seismica?

- A community-driven, open-access journal for peer-reviewed research in seismology & earthquake science
- Free to publish, free to read

We Are Open!
(for submissions)



SEISMICA

Editorial Board



47 of your friends and colleagues

www.seismica.org

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-11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 UTC +1 +2 +3 +4 +5 +6 +7 +8 +9 +10 +11 +12



How are we different? (Programs running + under construction)

- Built to be global, diverse, inclusive, and useful
 - ↳ **Equity, Diversity, Inclusion** guiding our policy creation
 - ↳ **Open Science principles** built into author guidelines by actual experts (Librarians)
 - ↳ **Article types** to capture more types of research tools and products
 - ↳ Self-review for Seismica to **grow and evolve**
- Editing and Reviewing ethos designed for positive, supportive interactions
 - ↳ **Editorial mentoring** + Best Practices - discussion forum for Handling Editors
 - ↳ **Reviewer mentoring** + Best Practices - workshops and webinars



Executive Editors :

- Open Science, EDI, Operations, Production, Community

Functional teams

- Media & Branding, Tech, Fast Reports, Standards & Copy Editing

Handling Editors

- Similar to all other journals
- Editorial Mentoring program led by Five Experienced Editors (Chair: Beroza)

McGill University Library

- Hosting, Tech support, DOI, ISSN, eventual IF



01 **CONSIDER YOUR
COMMUNITY**

You have **CHOICES**



Make data,
figures, code,
preprints easy
to find and
easy to use



How can your
article reach
the most
people?



Support open
publishing for
less \$



**02 VOTE WITH YOUR
TIME & FUNDS**

You have CHOICES



Is your time
and money
giving
something
back?



Is your time
and money
supporting
fight against
Open Science?

A white icon of a document with a red, yellow, and green window header, representing a preprint on arXiv. The text 'prints on arXiv' is visible on the document.

prints on arXiv

Push publishers
to change
policies

03 DON'T MULTIPLY THE IMPACT HYPE

Don't fall for journal prestige as a proxy for excellence in hiring, tenure, promotion, awards, collaborations, etc. etc. How many *really good, super impactful* papers will not be in Nature because it costs >\$10k? LOTS OF PAPERS.

How many papers in high-impact journals are splashy but flawed? LOTS OF PAPERS



04 ASK YOUR LIBRARIAN

- Open Science practices for data, code, publishing
- Post your preprints in repositories
- Negotiating copyright transfers and author fees
- Understanding Creative Commons Licenses
- Archiving and journal selection - which allow preprinting (Green OA)?
- Best practices starting from research design
- Fee waivers or available funds for OA publishing

THANK
YOU!

Do you have any questions?



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@KeepItRheo1

Seismica.org



@WeAreSeismica

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UNLESS OTHERWISE NOTED, COSTS and FEES REPORTED IN USD\$