Evaluating publication patterns to support the assessment of transformative models

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Context

Our approach is centered on open and collaborative research infrastructure with several aims:

- Support open publishing (e.g., preprints, selecting OA publishers with zero/low APCs)
- Guide open sharing (e.g., IRs, disciplinary repositories)
- Support retention of authors' rights
- Support across research lifecycle (e.g., OSF, ORCID, Dryad)

For journals, it's all about buying power, overall value, and ROI. The key aspects of OA deals we support include:

- Cost neutral or minimal increase to participate
- No APC transactions or otherwise very streamlined
- Unlimited OA publishing (no cap on # of articles)

Methodology

Data Collection

- Citations were identified using a Web of Science Core Collection search, OG=(North Carolina State University) AND PY=(2020) and full citation records were downloaded.
- Data limitations were introduced due to data sources, institutional name disambiguation, dual appointment, and lack of distinction between corresponding author and coauthor.

Data Cleaning

- Publisher name variation was normalized to reflect the structure of library subscriptions rather than different imprints.
- To make this work more replicable, data cleaning and analysis was done using R scripts which can be rerun on different data sets, and are available through the QR code on this poster or on GitHub at go.ncsu.edu/institutional_publishing

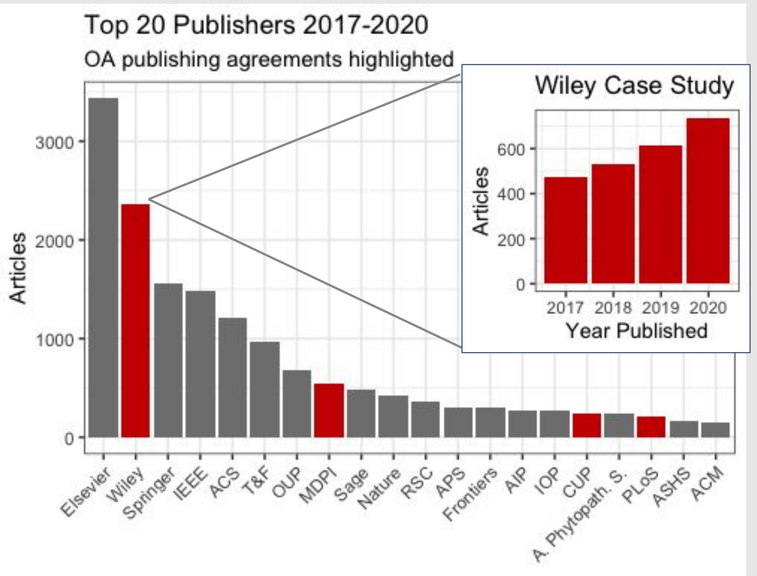
Limitations

- We face significant challenges in estimating the full cost of OA. The article processing charges (APCs) are often not well-articulated and there is variation in the discounts offered and APC waivers for invited submissions and special issues.
- We don't have data on how much our authors are paying for OA fees ("OA in the wild"). The main basis for benchmarking costs is what our library pays for traditional subscriptions.
- For large-scale intel on publishing patterns, we are limited to the indexing databases that we subscribe to.

Analysis

The number of publications can fluctuate significantly for individual publishers year to year, but that the "rank" of each publisher tended to remain stable. This underpinned the importance of a mechanism to control cost fluctuations in the OA agreements we make.

The agreements we've made have tended to be with publishers that are not our highest article output, but fall along the middle of the distribution. We are considering consortial deals with two higher volume publishers than we've been able to afford agreements with. Our publication patterns with Wiley are highlighted below as a case study of higher volume publishing trends.



Additional Information:

Find our code:
go.ncsu.edu/institutional_publishing

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Finding a Deal That's Just Right

We aim to support OA publishing with publishers for which we have authors from multiple academic units, that support early career researchers' interest in OA, and where we have enough publishing activity to see a return on investment. Those elements need to align with a business model that is sustainable for our budget.

Some experimentation is useful to explore the pros and cons of different models (e.g., MDPI and Wiley).

Publisher	Cost Neutral / Min $ Inc	No APCs	No Cap on OA Publications
Annual Reviews	✔	✔	✔
CUP (starts in 2022)	✔	✔	✔
IWAP	✔	✔	✔
PLoS	✔	✔	✔
SCOAP3	✔	✔	✔
MDPI (10% discount)	✔ (no fee)	X	X
Microbiology Society	✔	✔	✔
Wiley (starts in 2022)	✔	X	X (700)

Case Study: Wiley Read & Publish (2022)

In this consortial deal, we keep journal "read" access and add the ability to fund OA fees for all authors in the deal in Wiley's hybrid OA journals.

Pros	Cons	Unknowns
Modest $ increase	OA article cap (700)	Author OA interest
Test OA with big publisher	OA vouchers need intervention (but will be handled centrally)	First come, first serve + variation in publishing across consortium
Save authors $	Only hybrid journals	Authors' grant subsidies

Future Possibilities

- Expand data on publishing patterns from other sources
- Investigate corresponding authorship using fields in the Web of Science data to get more precise estimations of potential APCs
- Explore institutional co-authorship patterns as part of exploring consortial Read & Publish deals
- Use Web of Science Open Access tags to estimate the number of open access publications by NC State University authors
- Assess the impact of Read & Publish agreements on teaching and early career faculty publishing