APCs in the Wild – White Paper
15th Munin Conference on Scholarly Publishing, November 2020
Mithu Lucraft, Marketing Director, Outreach and Open Research
THE GOAL: Accelerating the transition to open access

OA 2020’s goal: to accelerate the transition of scholarly communication to universal open access by transforming today’s scholarly journals, currently locked behind paywalls, to open publication models.

“The goal is to preserve the established service levels provided by publishers that are still requested by researchers, while redefining and reorganizing the necessary payment streams. By disrupting the underlying business model, the viability of journal publishing can be preserved and put on a solid footing for the scholarly developments of the future”

http://dx.doi.org/10.17617/1.3
THE NEED: redistribution of funding

“In order to respond adequately to the Open Access transformation in-house and to actively shape it, reliable estimates of financial relief or burdens with regard to the expected total institutional APC expenditure of the individual institutions after a comprehensive transformation of journals into Open Access are indispensable”

https://doi.org/10.4119/unibi/2937971
THE CHALLENGE: complex and fragmented funding landscape

Developments in OA business models and infrastructure are improving an institution or funder’s ability to monitor their OA publications and spending.

There are still many APCs ‘in the wild’ (payments that are harder to monitor and that institutions and funders may be unaware of).

The scale of the problem
SPRINGER NATURE SUPPORTS THE OA TRANSITION

We are working with the research community to examine challenges that could block progress to OA.

APCs in the Wild  https://doi.org/10.6084/m9.figshare.11988123.v4
SPRINGER NATURE SUPPORTS THE OA TRANSITION

We are working with the research community to examine challenges that could block progress to OA, including complexity of APC funding streams.

‘APCs in the Wild’ explores the role that increased monitoring of OA funds - and harnessing of complex funding sources - might play in speeding up the transition to OA.

The whitepaper includes findings from:

- A survey with over 1,000 Springer Nature authors who paid an APC from June to August 2019
- 16 interviews with institutional contacts responsible for OA management
- NEW for Munin Conference: results of survey with ~200 institutions
A BETTER UNDERSTANDING OF APC FUNDING SOURCES IS KEY
We wanted to better understand the current APC funding landscape and identify opportunities to support the OA transition

• Which types of APC funding sources are used by Springer Nature authors?

• Does this vary by journal type and author location?

• How much visibility do institutions have on this?

• What methods are institutions using to monitor APCs?

• Could improved monitoring help support the transition to OA?
THE APC FUNDING LANDSCAPE IS COMPLEX
Where APC funding sources are still ‘in the wild’ it may be harder for institutions and funders to track, and therefore to consolidate funds

![Diagram showing different funding sources and OA management approaches]

- **Funding source**
  - Library collection budget
  - Institutional OA fund
  - OA block grants from research funder, via inst.
  - Dedicated OA fund from research funder (rare)
  - Research grant funds used for APCs
  - Inst. funds not dedicated to OA, e.g. research (departmental) budget
  - Funds from co-author/other org
  - Personal funds

- **OA funding management**
  - Centrally managed by institution
  - Centrally managed by funder

- **OA articles in hybrid journals**
  - Transformative agreements e.g. “Read and Publish”
  - Individual APCs supported by dedicated OA funding sources
  - Fully OA publisher agreements

- **OA articles in fully OA journals**
  - Ad hoc management
  - Individual APCs supported by ad-hoc sources

**APCs “in the wild”**

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APCs in the Wild https://doi.org/10.6084/m9.figshare.11988123.v4
MANY APCS ARE STILL ‘IN THE WILD’

Over a quarter of Springer Nature authors surveyed only used ‘wild’ funding sources for their APC, and a further 50% used wild sources in combination with more easily monitored sources.

Levels of APC funding ‘wildness’

- **All OA (1014)**: 27% Only APC funding sources in the wild, 50% Combination (APC funding in the wild and more easily monitored), 23% No APC funding sources in the wild.
- **Fully OA (820)**: 29% Only APC funding sources in the wild, 54% Combination (APC funding in the wild and more easily monitored), 17% No APC funding sources in the wild.
- **Hybrid OA (194)**: 18% Only APC funding sources in the wild, 31% Combination (APC funding in the wild and more easily monitored), 51% No APC funding sources in the wild.
LEVELS OF APC ‘WILDNESS’ VARY REGIONALLY
OA policies and funding mechanisms have created different landscapes

Levels of APC funding 'wildness' - fully OA by region

- RoW (66)
  - Only APC funding sources in the wild: 38%
  - Combination (APC funding in the wild and more easily monitored): 48%
  - No APC funding sources in the wild: 14%

- Rest of Asia (inc. Middle East) (162)
  - Only APC funding sources in the wild: 26%
  - Combination (APC funding in the wild and more easily monitored): 68%
  - No APC funding sources in the wild: 6%

- China (mainland) + Hong Kong + Taiwan (78)
  - Only APC funding sources in the wild: 29%
  - Combination (APC funding in the wild and more easily monitored): 67%
  - No APC funding sources in the wild: 4%

- North America (161)
  - Only APC funding sources in the wild: 35%
  - Combination (APC funding in the wild and more easily monitored): 57%
  - No APC funding sources in the wild: 8%

- United Kingdom (40)
  - Only APC funding sources in the wild: 13%
  - Combination (APC funding in the wild and more easily monitored): 38%
  - No APC funding sources in the wild: 50%

- Germany (55)
  - Only APC funding sources in the wild: 31%
  - Combination (APC funding in the wild and more easily monitored): 36%
  - No APC funding sources in the wild: 33%

- Rest of Europe (258)
  - Only APC funding sources in the wild: 28%
  - Combination (APC funding in the wild and more easily monitored): 48%
  - No APC funding sources in the wild: 24%
‘WILD’ APC FUNDING HAS THE POTENTIAL TO BE HARNESSED

Nearly one in three fully OA authors is using institutional funding from non-dedicated sources, and it is also common to draw on research funds

### APC funding sources: Fully OA authors (n=820, multiple selection possible)

<table>
<thead>
<tr>
<th>APCs in the wild</th>
<th>Institutional funding source</th>
<th>Research funder funding source</th>
<th>‘Other’ funding source</th>
</tr>
</thead>
<tbody>
<tr>
<td>APCs in the wild</td>
<td>28%</td>
<td>12%</td>
<td>4%</td>
</tr>
<tr>
<td>Dedicated OA funds from my institution (excluding block grants from funders)</td>
<td>29%</td>
<td>27%</td>
<td>26%</td>
</tr>
<tr>
<td>The publication fee was fully covered by my funder/institution’s OA membership</td>
<td>16%</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>Dedicated OA funds from my main research funder, distributed via OA block grants</td>
<td>12%</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>Dedicated OA funds from my main research funder (excluding OA block grants)</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>I used funds from my institution that were not dedicated OA funds</td>
<td>20%</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>I used remaining funds from my main research grant (not dedicated open access)</td>
<td>15%</td>
<td>12%</td>
<td>8%</td>
</tr>
<tr>
<td>I used a budgeted OA allocation from my main research grant</td>
<td>20%</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>I used my own personal funds/savings</td>
<td>16%</td>
<td>12%</td>
<td>8%</td>
</tr>
<tr>
<td>My co-author(s) funds (from their own funder, institutional or personal funding)</td>
<td>10%</td>
<td>8%</td>
<td>4%</td>
</tr>
<tr>
<td>Dedicated open access funds from an organisation that is not my main research</td>
<td>4%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

APCs in the Wild  https://doi.org/10.6084/m9.figshare.11988123.v4
BUT MANY APC PAYMENTS ARE NOT SEEN BY INSTITUTIONS
Almost one in three fully OA authors paid the publisher directly – institutions may find it challenging to monitor funding for these articles, and this is also an additional administrative burden for authors.

Who was involved in the process of paying the APC?

- My institution paid the publisher directly
  - Fully OA: 59%
  - Hybrid: 48%
- I paid the publisher directly
  - Fully OA: 16%
  - Hybrid: 31%
- My co-author paid the publisher directly, or arranged the payment
  - Fully OA: 4%
  - Hybrid: 12%
- My funder paid the publisher directly
  - Fully OA: 8%
  - Hybrid: 9%
- Other (please specify)
  - Fully OA: 3%
  - Hybrid: 8%
- I can't remember
  - Fully OA: 1%
  - Hybrid: 7%
INSTITUTIONAL MONITORING AND TRACKING
Results from our interviews and follow up survey
WE GATHERED INSIGHTS FROM 16 INSTITUTIONS

Institutional interviewees provided us with insights into their motivations, challenges, and approaches to APC monitoring.

<table>
<thead>
<tr>
<th>Country</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>University of Queensland</td>
</tr>
<tr>
<td>Australia</td>
<td>University of Wollongong</td>
</tr>
<tr>
<td>Austria</td>
<td>University of Vienna</td>
</tr>
<tr>
<td>China</td>
<td>Fudan University</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Erasmus University Rotterdam</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Delft University of Technology</td>
</tr>
<tr>
<td>Norway</td>
<td>University of Bergen</td>
</tr>
<tr>
<td>Sweden</td>
<td>Stockholm University</td>
</tr>
<tr>
<td>UK</td>
<td>University of Glasgow</td>
</tr>
<tr>
<td>UK</td>
<td>Imperial College London</td>
</tr>
<tr>
<td>UK</td>
<td>University of York</td>
</tr>
<tr>
<td>USA</td>
<td>Iowa State University</td>
</tr>
<tr>
<td>USA</td>
<td>IUPUI - Indiana University - Purdue University Indianapolis</td>
</tr>
<tr>
<td>USA</td>
<td>University of California</td>
</tr>
<tr>
<td>USA</td>
<td>University of Florida</td>
</tr>
<tr>
<td>Qatar</td>
<td>Qatar National Library</td>
</tr>
</tbody>
</table>

APCs in the Wild  https://doi.org/10.6084/m9.figshare.11988123.v4
THEN A FURTHER ~200 INSTITUTIONS responded to a survey.

- University: 101
- Hospital: 11
- National-level research institute or branch: 14
- Corporate organisation: 5
- Local research institute: 1
- Other (please specify): 9

Geographical distribution:
- Europe: 29
- N. America: 18
- Japan: 55
- South America: 16
- Other: 17
INSTITUTIONAL INVESTMENT IN APC MONITORING VARIES
Where institutions or funders are seeking OA transition we unsurprisingly see greater focus on APC management and monitoring to facilitate this

- **Model A**: separate financial streams for subscriptions and APCs

- **Model B**: separate financial streams, with an institutional OA fund

- **Model C**: research funder in the lead, compliance is key

- **Model D**: library in the lead, aiming to transform the library budget

Through interviews we identified four broad models under which institutions approach APC management and monitoring – more details in the report.
MOST INSTITUTIONS ARE NOT MONITORING APCS
Less than a quarter of respondents were monitoring APC payments centrally

Does your institution undertake any monitoring of APCs paid for articles affiliated with your institution? n=135

- Yes, there is some central monitoring of APCs by my institution
- No, the institution does not monitor APCs centrally
- I don't know / I'm not sure

Europe
- Yes: 55%
- No: 34%
- I don't know: 10%

N. America
- Yes: 17%
- No: 61%
- I don't know: 22%

Japan
- Yes: 7%
- No: 73%
- I don't know: 20%

South America
- Yes: 19%
- No: 31%
- I don't know: 50%

Other
- Yes: 29%
- No: 35%
- I don't know: 35%
You said that your institution carries out some central monitoring of APCs paid by authors. What is the institution aiming to monitor?

- **Any and all spend on APCs**
  - Europe: 8
  - Non-Europe: 11

- **Spend on APCs from the institutional budget**
  - Europe: 6
  - Non-Europe: 3

- **Other (please specify)**
  - Europe: 3
  - Non-Europe: 11
MODEL D INSTITUTIONS ARE LEAST PREVALENT
Distribution of OA funds was the least common activity

- Support authors in depositing manuscripts into institutional or funder repositories
- Monitor the number of OA publications by the institution's authors
- Advise authors on compliance with their funders' OA policies
- Help authors to make APC payments to journals/publishers
- Provide authors with advice on funding sources for OA article processing charges (APCs)
- Negotiate agreements with publishers to cover authors' APCs
- Distribute funds for APCs via an institutional OA fund

N=135

APCs in the Wild https://doi.org/10.6084/m9.figshare.11988123.v4
‘APCS IN THE WILD’ ARE LEAST MONITORED
Non dedicated OA funds, personal funds, or funds from outside the institution were monitored least

Dedicated institutional OA fund (excluding block grants from funders)
Institutional fund that is not dedicated to OA
Research funding grants
OA block grants from research funders, distributed by the institution
OA agreements between the institution and individual publishers
Researchers' personal funds
Funding from another organization, not including institution or research funders
Other (please specify)

Centrally monitored
Not centrally monitored
Unsure
Not applicable
‘APCS IN THE WILD’ ARE A KEY BARRIER TO MONITORING

What are the barriers or challenges experienced by your institution when monitoring APCs? Please select all that apply

- APC funding and payments administered without any institutional involvement
- Availability of institutional resource for monitoring
- Availability or quality of data provided by publishers on APC payments and OA articles
- APC funding and payments administered by different groups within the institution
- Engaging researchers or staff in APC monitoring workflows
- Availability or quality of external data on OA articles (e.g. in abstracting and indexing databases)
- Other (please specify)

“Sometimes we pay the article fee and the publisher doesn’t apply the payment to clear our account and we receive automatic reminder that there is an amount pendant”

“The complexity of the APC monitoring workflows by some publishers.”

“Linking information (discrimination of publisher name and OA type) necessary”
THERE IS LOW CONFIDENCE IN MONITORING ALL APCS
Just under a fifth estimate they could monitor all APC payments

Of all APCs paid by researchers affiliated with your institution, what proportion do you estimate are monitored by the institution? (n=38)

<table>
<thead>
<tr>
<th>Proportion</th>
<th>Europe</th>
<th>N. America</th>
<th>Japan</th>
<th>South America</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>All of them</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>More than three quarters</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Between a quarter and a half</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Less than a quarter</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
INTERVIEWEES SHOWED SIMILAR VARIATION IN TRACKING

It is challenging for some institutions to estimate the proportion of APCs they are monitoring since those ‘in the wild’ are so difficult to track.

One interviewee - with institution-wide APC tracking over several years - has been able to track more than 95% of all APCs.

Another interviewee - from the library with an OA fund and no publisher deals - thinks the vast majority of APC payments fall outside their view.

Another interviewee - with a central OA fund - thinks they cover about 15 to 20% of the APCs, based on a search in a bibliographic database.

Institutions often find APC monitoring a “bureaucratic headache.”
RESOURCE IS THE FACTOR MOST CITED FOR NOT TRACKING
Institutions who do not monitor APCs were most likely to point to lack of resource

Do you know why your institution does not monitor the APCs paid for articles affiliated with your institution? Please select all that apply

- Lack of resource: 27
- Not a high priority: 22
- APCs are monitored by authors, or individual faculties, but not centrally: 25
- APC payments are monitored elsewhere (please specify): 4
- Authors do not publish open access: 3
- Other (please specify): 15

• Accounting Dept
• I work for an EU Agency, APC payments are monitored - to some extent - by the European Commission
• Only the APCs of the institutional fund are supervised
BUDGETING FOR INSTITUTIONAL OA/NEGOTIATION OF OA AGREEMENTS ARE KEY MOTIVATIONS

What's the reason that your institution monitors APCs? Please select all that apply

- To support compliance with funder OA policies
- To support budgeting for institutional OA publication funds
- To support negotiations with publishers for OA agreements
- Other (please specify)
- Unsure

“To understand the overall cost of submitting and subscribing papers for academic research at institutions”

“To balance publication fees and subscription fees”

“Internal cost calculation for all sort of publications”

“To ensure best value of money. To help drive the shift away from legacy publishing to open access publishing.”

Europe

- To support compliance with funder OA policies: 10
- To support budgeting for institutional OA publication funds: 10
- To support negotiations with publishers for OA agreements: 13

non-Europe

- To support compliance with funder OA policies: 5
- To support budgeting for institutional OA publication funds: 9
- To support negotiations with publishers for OA agreements: 4
THERE IS OPPORTUNITY TO LEARN FROM SUCCESS STORIES

Some have identified mechanisms for successful APC tracking, offering greater opportunities to bring together complex APC funding sources:

- **Publisher agreements**: centralisation of APCs reduces the number of micro payments requiring tracking, and provides clarity on APC funding
- **Accounting codes**: specific finance codes to enable tracking
- **Bibliographic data bases**: manual collection of article data from external sources
- **Policy requirements**: authors required to inform institution about OA publications

### Which methods does your institution use to centrally monitor APCs? Please select all that apply

<table>
<thead>
<tr>
<th>Method</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publisher reports on institutional APCs funded as part of an OA membership / read and publish agreement</td>
<td>18</td>
</tr>
<tr>
<td>Specific finance code for APC payments</td>
<td>17</td>
</tr>
<tr>
<td>Manual collection of data on OA articles from external databases</td>
<td>14</td>
</tr>
<tr>
<td>Requirement for authors to notify central team of all articles accepted for publication</td>
<td>10</td>
</tr>
<tr>
<td>Publisher reports on individual APCs outside an OA membership/ read and publish agreement</td>
<td>8</td>
</tr>
<tr>
<td>Requirement for authors to provide central team with details of all APC payments</td>
<td>7</td>
</tr>
<tr>
<td>Other (Please specify)</td>
<td>8</td>
</tr>
</tbody>
</table>
SUCCESS STORIES
New fully OA agreements show the opportunities to bring multiple sources of funding together, e.g. Bibsam and University of California

University of California
https://osc.universityofcalifornia.edu/uc-publisher-relationships/springer-nature-transformative-oa-agreement/

• **Institution**: UC covers the first USD 1000 per article

• **Research funders**: Authors contribute to balance of the cost from research grants, where available

• **UC covers remainder of APC if authors lack funds**

“[We] will continue to work with funders and publishers to find solutions for new publishing agreements”

RECAP: KEY FINDINGS

APC funding is complex but with improved monitoring there is potential for institutions and funders to harness funds to support OA transition

- **APC funding is complex.** Authors use a wide range of funding sources, often in combination.

- **Monitoring is a challenge** as many APCs are still 'in the wild', particularly for fully OA journals.

- **Authors use ‘wild’ funds from outside of the library budget** (other institutional funds or from research funders), which presents an opportunity to harness funding streams to support OA.

- **Institutions need a more comprehensive view** of APC funding sources to support the OA transition.

- **Publisher OA agreements offer opportunities** to facilitate monitoring, reduce admin burden and consolidate multiple funding sources, but require an understanding of funding streams.

- **Success stories show potential** for effective monitoring can be achieved.
The story behind the image

Antarctica meltdown could double sea level rise

Researchers at Pennsylvania State University have been considering how quickly a glacial ice melt in Antarctica would raise sea levels. By updating models with new discoveries and comparing them with past sea-level rise events they predict that a melting Antarctica could raise oceans by more than 3 feet by the end of the century if greenhouse gas emissions continued unabated, roughly doubling previous total sea-level rise estimates. Rising seas could put many of the world’s coastlines underwater or at risk of flooding and storm surges.