Open access is possible!

On the transition of a business model.

Kansalliskirjaston Kirjastoverkkopäivät

20.-22.10.2015 Helsinki, National Library of Finland

Kai Geschuhn | Max Planck Digital Library
Open access

Open access is a story of persuading.

Persuading researchers to change their way of publishing...
Underlying business model remains untouched

7,6 bn EUR/ year
Serials crises, still alive and kicking

Subscription costs of ETH Zürich library for three major publishers

What if...?

• ... a variety of problem-solving approaches obscured the large-scale solution?

• ... libraries were the game changers?

• ... it turned out, that they were capable to finance a publication-based open access model?
Disrupting the subscription journal’s business model...

... for the necessary large-scale transformation to open access

http://dx.doi.org/10.17617/1.3
## Enough money already in the system

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Global subscription spending</td>
<td>7.6 billion Euro</td>
</tr>
<tr>
<td>Anually published articles (according to Web of Science)</td>
<td>1.5 million</td>
</tr>
<tr>
<td>Current expenses per article</td>
<td>~ 5,000 Euro</td>
</tr>
</tbody>
</table>
APC levels, current evidence

German OpenAPC Initiative at https://github.com/OpenAPC/openapc-de
"In total, 4,345,486 EUR for 3,515 articles were paid by the participating universities. Average fee is 1,236.30 EUR and the median 1,201 EUR."

German OpenAPC Initiative, September 2015 at https://github.com/OpenAPC/openapc-de
APC levels, current evidence

- SCOAP³ < 1,100 EUR
- Cap applied by German Research Foundation for APC funds = 2,000 EUR
Scenario of transformation based on current operating numbers per year

Global view

<table>
<thead>
<tr>
<th>Subscription market today</th>
<th>Global market volume</th>
<th>1.5 M research papers (WoS); up to ~ 2 M overall</th>
<th>5,000 EUR/article WoS; 3,800 EUR/article overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7.6 bn EUR</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>After an OA transformation</th>
<th>Global basis volume</th>
<th>2 M research papers</th>
<th>2,000 EUR/article</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4 bn EUR</td>
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</table>
Publication volume of selected European countries

Total publication volume
Articles and reviews in Web of Science

The dark part of the columns marks the share of articles with a corresponding author from this country (≤ 70%).

Number of articles p.a. (in K)

Year of the publication
Output volume and expenses in DE, UK, and FR

Publication data 2013

Total number of articles (in K)

Articles relevant to expenses (in K)

Expenses Open Access (in M €)

Expenses subscriptions (in M €)

Total number of articles (in K):
- DE: 103
- UK: 109
- FR: 71

Articles relevant to expenses (in K):
- DE: 70
- UK: 72
- FR: 46

APC: € 2,000

Expenses Open Access:
- DE: ~23%
- UK: ~30%
- FR: ~45%

Expenses subscriptions:
- DE: >120
- UK: >200
- FR: 260

After an OA transformation
Conclusion

Development based on realistic APC expectations shows clear potential of savings.
Close-up country view: share of major publishers in Germany 2013

Publications

Share of overall publications

N = 103,000 journal publications

- Elsevier (21,000)
- Wiley (13,000)
- Springer (13,000)

Share of publications with corresponding author

- Elsevier (14,000)
- Wiley (9,000)
- Springer (10,000)
- no cost

Library expenses

Typical shares of journal expenses

- Elsevier
- Wiley
- Springer
### Institutional level – Max Planck “formula”

<table>
<thead>
<tr>
<th><strong>Total paper output</strong></th>
<th>10,000 research articles per year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>APC relevant share</strong></td>
<td>Maximum of 6,000 (60%)</td>
</tr>
<tr>
<td><strong>Average APC level monitored</strong></td>
<td>Current average APC of ~ 1,300 EUR,</td>
</tr>
<tr>
<td><strong>Expected total expenditure</strong></td>
<td>6,000 x average APC + safety margin ≤ €12 million</td>
</tr>
</tbody>
</table>

- According to Web of Science data, articles and article reviews
- (between 40-60% corresponding author papers)
  This pattern is persistent across the various OA publishers and stable over time
- based on 1,046 APC invoices with a total spend (including taxes) of some 1.3 EUR million [as of April 2015]
- These anticipated costs are very comfortably within our current spending levels

The Max Planck Society as a heavily output-oriented research organization is able and committed to make the transformation.
Conclusion II

• When calculating transition scenarios, we need to take into account shares of corresponding authors only.

• Potential of savings becomes apparent on country and institutional levels, too.
The lesson is clear:

• An OA transformation seems to be possible without financial risks.

• Subscriptions must be stopped and reinvested in open access business models.
Offsetting– hybrid „reloaded“

Hybrid Model

... known for „double dipping“

Institutional costs for open access publishing with publisher X

Institutional costs for access to publisher X
Offsetting– hybrid „reloaded“

Offsetting

• Publisher X reduces subscription costs according to the APC revenue from an institution (in the narrower sense).
• In the broad sense: compensation of subscription and publishing costs

Subscriptions

= Total institutional spending to publisher X
Offsetting—hybrid „reloaded“

Transition

As open access availability increases, subscription costs should be reduced step-by-step in favor of an APC based business model.
Conclusion III

• Offsetting can be seen as be a promising approach to a large-scale transition.

• It touches the existing corpus of scientific journals.

• There is no need for researchers to change their publishing habits.
Instead of convincing researchers...
... let’s start with the transition.

Open Access
2 million scientific papers

7,6 bn EUR/ year
Road to transition

Start working on transition scenarios:

- Capture publication data on country and institutional levels
- Capture subscription costs data on country and institutional levels
- Link current costs with publications, work on offsetting scenarios on publisher levels, institutional levels, country levels
- Focus on those publishers and disciplines absorbing the largest budget shares (STM).
Output volume in Finland

Finland
Publication volumes and corresponding author shares
Articles and reviews in Web of Science

Share of publications with a corresponding author from Finland

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Corresponding</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>8,365</td>
<td>6,199</td>
</tr>
<tr>
<td>2005</td>
<td>8,416</td>
<td>6,120</td>
</tr>
<tr>
<td>2006</td>
<td>9,010</td>
<td>6,513</td>
</tr>
<tr>
<td>2007</td>
<td>9,151</td>
<td>6,446</td>
</tr>
<tr>
<td>2008</td>
<td>9,601</td>
<td>6,724</td>
</tr>
<tr>
<td>2009</td>
<td>9,909</td>
<td>6,790</td>
</tr>
<tr>
<td>2010</td>
<td>10,260</td>
<td>6,854</td>
</tr>
<tr>
<td>2011</td>
<td>10,786</td>
<td>7,128</td>
</tr>
<tr>
<td>2012</td>
<td>11,241</td>
<td>7,317</td>
</tr>
<tr>
<td>2013</td>
<td>11,838</td>
<td>7,470</td>
</tr>
</tbody>
</table>

7,470 papers × 2,000 € = ~15m €

7,470 papers × 1,300 € = ~9.7m €
Road to transition

• Work on efficient infrastructure, help to build up scalable processes for APC transactions.

• Work on price transparency: publish APC data, neglect confidential clauses.
Community-built infrastructure to ensure transparency and efficiency

- OpenAPC Initiative https://github.com/OpenAPC/openapc-de
- ESAC http://www.esac-initiative.org
Subscription payments must be stopped
Global concerted action needed

Staging the Open Access Transformation of Subscription Journals

open access

BERLIN 12

8-9 December 2015
Thank you.

Data analyses by Margit Palzenberger / RIO, please cite:
Offsetting—hybrid „reloaded“

### Variety of offsetting schemes currently in place

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Institution(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>APC spend returned as deduction against future subscriptions</td>
<td>IOP (in AT), Wiley</td>
</tr>
<tr>
<td>No extra charges beyond subscription payments for authors of subscribing institutions</td>
<td>ECS</td>
</tr>
<tr>
<td>Discount on Article Processing Charges</td>
<td>PNAS</td>
</tr>
<tr>
<td>Vouchers for spend against Article Processing Charges</td>
<td>RSC</td>
</tr>
<tr>
<td>„Read and publish“ agreement</td>
<td>Springer Compact</td>
</tr>
</tbody>
</table>

Many differences with regard to overall costs, ease of administration, transparency and contribution to a full OA transition.
Transition models

It is also possible for libraries to support an infrastructure instead of simply purchasing journals

• SCOAP³ Consortium

• Open Library of the Humanities: System of Library Partnership Subsidy (LPS) → no APCs for authors („To fund an operation publishing 250 articles and 12 books in partnership with reputable presses per year, we need a banded average of just $700 from 500 libraries. If 1000 libraries participated, this cost is lowered to $350. On the $700 rate that’s a cost to each library of $2.80 per article. And you get 12 books per year (as part of our monograph pilot study). This becomes cheaper with every library that joins.” https://about.openlibhums.org/2014/04/07/library-partnership-subsidies-lps/)

• Knowledge Unlatched