

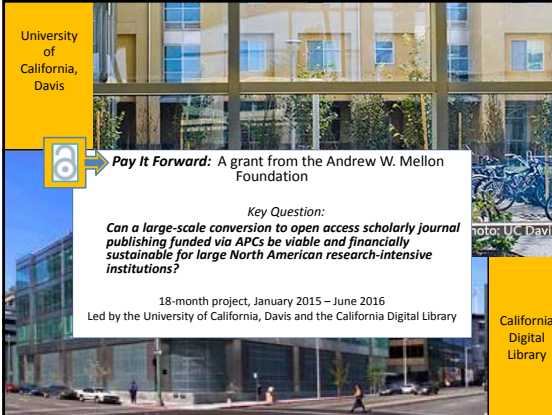
Pay It Forward:

Investigating a Sustainable Model of Open Access Article Processing Charges for Large North American Research Institutions

SLAS/AC Meeting
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University of California, Davis

Pay It Forward: A grant from the Andrew W. Mellon Foundation

Key Question:
Can a large-scale conversion to open access scholarly journal publishing funded via APCs be viable and financially sustainable for large North American research-intensive institutions?

18-month project, January 2015 – June 2016
Led by the University of California, Davis and the California Digital Library

California Digital Library

Why this project, why now?

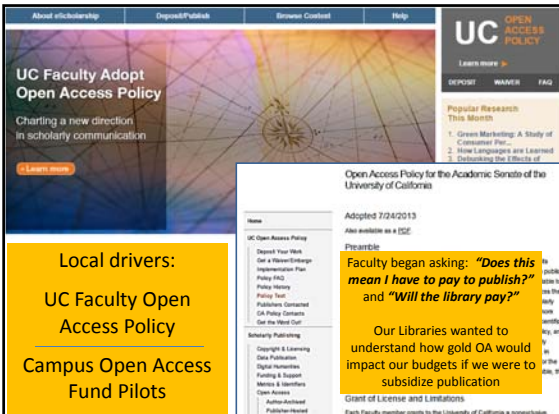
Increasing disconnect between European and North American approaches to open access

North America (Green)	Europe / UK (Gold)
<ul style="list-style-type: none"> Tri-Agency Open Access Policy NIH Open Access Policy OSTP Directive Faculty OA Policies FASTR 	<ul style="list-style-type: none"> Finch Report Horizon 20/20 APC "Total Cost of Ownership" Agreements (UK, Austria, Netherlands...)

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<p>Confusing economic situation</p> <ul style="list-style-type: none"> Institutional license fees and APC revenue are both increasing Potential for publisher double-dipping Lack of transparency <p>Confusion about</p> <ul style="list-style-type: none"> What content one has access to What content one is paying for 	



Local drivers:

- UC Faculty Open Access Policy
- Campus Open Access Fund Pilots

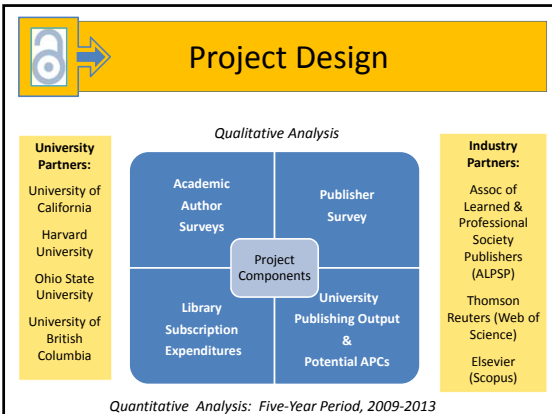
Open Access Policy for the Academic Senate of the University of California

Adopted 7/24/2013

Preamble

Faculty began asking: **"Does this mean I have to pay to publish?"** and **"Will the library pay?"**

Our Libraries wanted to understand how gold OA would impact our budgets if we were to subsidize publication



Project Design

Qualitative Analysis

University Partners: University of California, Harvard University, Ohio State University, University of British Columbia

Industry Partners: Assoc of Learned & Professional Society Publishers (ALPSP), Thomson Reuters (Web of Science), Elsevier (Scopus)

Project Components: Academic Author Surveys, Publisher Survey, Library Subscription Expenditures, University Publishing Output & Potential APCs

Quantitative Analysis: Five-Year Period, 2009-2013



Core Project Team

- MacKenzie Smith, UC Davis (Co-PI)
- Laine Farley, CDL (Co-PI)
- Greg Tananbaum, ScholarNext (Project Manager)
- Ivy Anderson, CDL (Quantitative Lead)
- Mathew Willmott, CDL (Data Analyst)

Project Consultants

- Greg Tananbaum, ScholarNext (Publisher surveys and costs)
- Carol Tenopir, University of Tennessee (User studies)
- David Solomon, Michigan State University &
- Bo-Christer Bjork, Hanken School of Economics (APC research, Scenario modeling)
- Mark McCabe, Boston University & SKEMA Business School (Scenario modeling, economic analysis)

Project Deliverables

- A publicly accessible financial model that depicts what the emerging APC model would cost large research institutions under a variety of rigorously-modeled scenarios
- A replicable methodology that that others can apply in a local context
 - What level of APC is realistic and sustainable in a given discipline?
 - How might costs be distributed among institutions, research funders, and other players?

Scenarios We Will Explore

3-way split of payments across grants, authors, library/institution.

- Could be sub-models with different splits, as opposed to just one model with a split into thirds.

No grant funding, libraries support APCs wholly.

- Depends on publisher negotiations for low APCs whose goal is to break even with current materials budgets.

No library support, authors use grants or other funds to pay for APCs.

- Libraries direct their budgets to new activities.

Key Goal: Scenarios with sufficient market pressure to drive APCs to their lowest realistic level

Utilizing Grant Income

One key scenario is that publications emanating from a grant would be funded by the grant

66% of UC publications contain a grant acknowledgement statement

2013 R&D Expenditures

- * Nationally: \$67 billion
- Harvard: \$1,012,766 (in thousands)
- OSU: \$793,373
- UC (All): \$5,495,810

• Together, our three institutions = 11% of all R&D expenditures in the U.S.

Source: NSF Higher Education Research & Development Survey, 2013
<http://ncesdata.nsf.gov/herd/2013/>



Publications are an allowable cost on federal grants

NIH, NSF, DOE, DOD, & NASA = 75% of all US grant expenditures

A few quick UC stats (*provisional*)

- Total UC Authorship in 2013:
 - Web of Science: 39,747
 - Scopus: 46,250
- Total UC Corresponding Authors (WoS): 23,824 (60%)
- UC papers that acknowledge a grant : 15,870 (66%)
- Average APCs for journals in which UC authors publish: \$2000 - \$2500
 - (based on today's marketplace)
 - We are still working on what APCs *should* cost


Provisional UC Results with Grant Funding

Average "high end" APCs from European sources (full + hybrid)

PIF Subject	APC	Total Docs	Docs w/ Grants	Grant Funding Needed	Institutional Funding Needed
Arts and Humanities	\$ 2,168	675	40	\$ 86,730	\$ 1,376,846
Biomedical Research Disciplines	\$ 2,641	3657	3201	\$ 8,453,104	\$ 1,204,191
Business and Economics	\$ 1,958	383	28	\$ 54,816	\$ 694,985
Chemistry	\$ 2,622	1535	1427	\$ 3,741,943	\$ 283,202
Clinical Medicine	\$ 2,571	4291	2729	\$ 7,015,685	\$ 4,015,573
Earth Sciences	\$ 2,252	1573	1393	\$ 3,136,687	\$ 405,315
Engineering	\$ 2,195	2122	1596	\$ 3,503,171	\$ 1,154,554
Life Sciences	\$ 2,423	2626	2198	\$ 5,314,210	\$ 1,049,272
Mathematics	\$ 1,758	423	318	\$ 555,463	\$ 191,600
Multidisciplinary	\$ 2,227	137	128	\$ 285,004	\$ 20,039
No PIF Category	\$ 2,500	1723	9	\$ 22,500	\$ 4,285,000
Physics and Astronomy	\$ 2,228	2271	2073	\$ 4,618,515	\$ 441,132
Psychiatry/Psychology	\$ 2,405	971	312	\$ 750,226	\$ 1,584,613
Social Science	\$ 2,380	2455	98	\$ 990,011	\$ 2,352,732
TOTAL FUNDING NEEDED				\$ 38,528,066	\$ 19,059,053
TOTAL EXPENDITURES (R&D / LIB)				\$ 5,495,810,000	\$ 32,534,330
R&D % / LIB BUDGET VARIANCE				0.7%	13.47% -27%


Focus group results

- 8 focus groups conducted as of March 2015: 60 participants
- 4 locations: UBC, Harvard, UC Irvine, UC Davis
 - OSU later in April
- Diversity of disciplines, ages, and perspectives



Early focus group impressions

- Range of perspectives:
 - True believers, skeptics, most people somewhere in the middle
 - Many senior faculty already post green versions in a repository or personal website
 - Support for OA as readers and as a moral good, but most have access to what they need now
- Concerns:
 - Where funding will come from
 - Richer nations may dominate publication
 - Potential for APC price increases
 - Predatory / vanity publishing
 - Lack of transparency - 'publishing is broken'
 - APCs are too high - publishers charge what the market will bear
- Library role:
 - Coordinating/administrative
 - Institutional publishing licenses

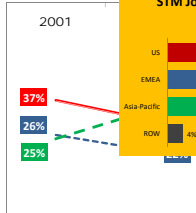


Next Steps

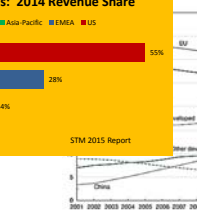
- Refine and cross-check data
 - Bibliometric
 - Research funding
 - Library expenditures
- Refine APC estimates
- Develop and test scenarios
 - including behavioral modeling
- Develop growth projections over time

Looking toward the future: Global Outlook

Global R&D Share



S&E Global Article Share



STM Journals: 2014 Revenue Share

Region	Share
US	55%
EMEA	28%
Asia-Pacific	14%
ROW	4%

2001: 37% (US), 26% (EMEA), 25% (Asia-Pacific)

2014: 55% (US), 28% (EMEA), 14% (Asia-Pacific), 4% (ROW)

"The cumulative effect of sustained above-global-average growth in R&D spending in emerging economies has been a profound shift in the global make-up of research." (STM Report, 2015)