

UC Library Investments in Transformative Scholarly Communication Models

Discussion Paper from the UC Libraries Scholarly Communications Officers group.¹

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1. Background

Comprehensive access to the expanding volume of scholarly materials necessary for research and teaching is at risk. Trends in scholarly publishing, especially commercial publisher business models that result in the hyperinflation of the cost of scholarly material, limit the ability to maintain the breadth and depth of library collections and reduce exposure to, and impact of, scholars' work. The UC Libraries are key actors in the university's response and have developed a program of strategic actions to influence the economic dysfunctions of scholarly communication systems (<http://libraries.universityofcalifornia.edu/scholarly/>).

Leveraging their market power in order to advance economically balanced and sustainable scholarly communication systems is one of the strategic priorities within the UC libraries' scholarly communication program. In addition to disrupting that part of the scholarly publishing market that has been based on hyper-inflation in the price of scholarly materials, we propose extending and specifying the strategy to include principled investment in business models that have the potential for transforming scholarly communication. A publishing or distribution effort can be considered to be transformative when it is developed principally to a) remove or reduce impediments to the flow and availability of knowledge, especially of quality-filtered (peer-reviewed) material; or b) create a more sustainable set of economic transactions among the stakeholders, especially of payments from content consumers and originators to publishers for access to content.

As implicitly called for in the strategic plan, and explicitly requested by the University Librarians,² this document provides some background and draft guidelines for a proposal to co-invest in transformative models of scholarly communication. Specifically, we outline:

- The Rationale – why it is important to invest in new business models;

¹ The SCO charge and members list is at <http://libraries.universityofcalifornia.edu/scholarly/sco/>. Primary authors of this document are McClenney, Ober, and Tanji.

² “The UL’s invite the SCOs to propose a rationale for the libraries’ exercising their market leverage by providing some financial support for publishers that are exploring new business models in order to keep access costs to a minimum. The SCOs are also invited to propose a process for surfacing, discussing, and evaluating opportunities to provide such support as well as a means of exiting from any commitments where appropriate.

The recommendations should be developed in consultation with the CDC and others as appropriate, and made available for presentation to the ULs for discussion at the May summit meeting.” From “Shaping implementation of the UC libraries’ scholarly communication strategy. Charge to the Collection Development Committee and the Scholarly Communications Officers.” D Greenstein on behalf of the UC University Librarians January 11, 2004.

- Targets for investment – what makes a publisher/publication a candidate for considering support;
- Criteria for investment – the basis used to evaluate and make a decision to support a resource or model;
- Process proposal – how we surface, discuss, evaluate, invest, and review the investment;
- Remaining questions – additional considerations that may affect the overall approach to supporting transformative models.

2. Rationale. The primary rationale is that creating sustainable economics in scholarly communication requires: 1) the disruption of those components of the traditional, subscription-based model that have been characterized by hyper-inflated subscription prices and that assume continual (i.e. inelastic) demand; and also 2) the development, real-world testing and proliferation of successful alternatives.

Due to the risks of an innovative approach, and in many cases due to inherent features of such models, these alternatives need and request financial support from stakeholders who stand to gain from their direct or secondary successes. A critical question is whether the financial support needed is transitional or ongoing.

There is evidence that scholarly communication models with innovative and potentially sustainable economics can be developed and tested and that they hold promise to create change. The evidence includes:

- Growth in the number of open access journals (1463 in the Directory of Open Access Journals with 58 added in the last 30 days at this writing³);
- Parallel growth in open access journals indexed by ISI/Thomson⁴;
- Rates of authorship, use, critical acclaim, and financial support for various forms of open access publishing — e.g. PLoS journals; BioMed Central journals; Stanford Encyclopedia of Philosophy; PNAS;
- Rates of adoption and use of open access repositories — e.g. eScholarship; arXiv; PubMed Central;
- Subscription rates for new and migrating journals that are based on cost-efficiencies and cost-containment rather than profit (or predictable and relatively low profit) – e.g. SPARC journals; bepress journals; some society journals;
- Metrics that correlate or merge open access readership with citation impact — see, e.g. <http://opcit.eprints.org/oacitation-biblio.html>;
- Financial disclosures showing efficacies of open-access or low-cost publishing – e.g. American Optical Society’s surplus revenue on their author-pays open access journal; American Physical Society; Oxford University Press.

³ <http://www.doaj.org> consulted on 2/23/05.

⁴ Approximately 20% of the open access titles as reported in November 2004 at <http://scientific.thomson.com/media/newsletterpdfs/2004-11/open-access.pdf>.

We mention two other rationales for investments in transformative models. While not as compelling as the potential to support greater access at sustainable costs, they nevertheless strengthen the case. They are:

1. Motivating and harnessing advances in information technology – new business models hold promise for being one way that academic libraries and information providers can use information technologies to make digital information more generally, readily, and flexibly accessible than its print counterpart. It is probable that business models derived from the print era (including subscription-based access) limit our ability to take full advantage of the access improvements that technology may supply. To fully envision and realize the access that new technology can provide, new business models for its development and deployment must also be seized and supported.
2. Leading the community, influencing the results – new models need to be mounted thoughtfully and tracked carefully to understand their characteristics and potential benefits. Becoming an investor in them is one way to help guide the community in its overall investment, to have access to data about the models, and to assure/assert participation in a model’s analysis and refinement.

3. Targets for Investment.

Several characteristics can help the UC libraries identify publishers, organizations, and products that might merit support under the rationales described above. Before the UC libraries would proceed to an evaluation using processes and criteria such as those proposed below, a *candidate* for support presumably would demonstrate all of the following characteristics:

- Commitment to address the economic dysfunctions that plague scholarly communication;
- Intent to maximize access and minimize cost;
- Appropriate use of technology to mitigate ongoing costs for distribution and access;
- Demonstrated need for community investment, at least during a transitional period, or community investment as a condition of success (i.e. a part of the model).

At present there are two high-level “flavors” of transformative models:

1. Open access models – those models where access is not restricted to a set of authorized users and subscription charges have been eliminated. These models literally offer, to the reader, “something for nothing.” The content can be accessed at no charge. However, the content is produced at a cost and those costs are covered by: the assessment of contributor/author charges (often at a discount for membership or “subscribing” institutions), underwriting by a single institution; or an endowment or other subsidization generated by several institutions. Note well that mechanisms to generate revenue for open access materials can also be manipulated and may be or become economically unsustainable. Therefore an “open access” model needs to address economic sustainability, along with other criteria, to warrant initial and ongoing investment.

2. Subscription, cost-containment models – those models that retain subscriptions for access but that assemble and deliver content at cost-recovery prices. These often emerge from direct scholar-led rebellions against high-priced commercial publications (e.g. SPARC and bepress journals) or offer a portal to a variety of disciplinary content (e.g. Columbia’s *EarthScape*, *BioOne*, and UC Press’s nascent *AnthroSource*).

In fact, a number of UC library investments have already been made in publishers and products from both categories (see Appendix). Investment and co-investment in these has been ad hoc to date, and the burgeoning opportunities for new or renewed investment is partially responsible for the SCO, CDC, and UL interest in this document.

Additionally, we speculate that the number of opportunities, if not explicit requests for support, will proliferate in the future in at least two directions. First will be replication by additional publishers of the successful models. Second will be the application of the models to other forms of content such as ebooks, Websites and portal services (SPARC already includes portals such as *Earthscape* and the UC Press is working on *AnthroSource*), institutional and/or disciplinary repositories outside UC, collections of digitized primary source material, and collections of digitized early published works.

4. Criteria for Investment. We assume that decisions to support a product or business model start with the current *Principles for Acquiring and Licensing Information in Digital Formats*, i.e. that the principles of quality, relevance, affordability, licensing, and functionality must be met with regard to the related content. A limited exception to the precedence of existing principles may be considered when there is limited information about quality (as with a new scholarly resource) but strong indication of transformative potential.

Beyond the core collection development criteria, the additional criteria that we recommend to assess a potential investment in a transformative model or resource are:

Criterion	~ Weight	Potential Indicators
<p>The potential for transformative influence. This is a key and, by nature, subjective criterion. Assessment of the model or resource can begin by examining it for one or more key characteristics or indicators such as those to the right. A list of such indicators will be maintained by the SCOs.</p>	Extremely important	Removes access barriers; opens access to more potential readers; Redistributes production costs and payments (e.g. from reader pays to producer pays); Provides direct competition to expensive for-profit resources; Leverages technology for efficiencies in production, timely distribution, integration with other resources; Has key forms of community endorsement, e.g. SPARC, ARL, ICOLC.
Economic sustainability. Mechanisms for	Extremely	OA publication fees within

generating revenue that supports production costs are economically sustainable for all parties.	important	+/- 10% of industry average; revenue covers but does not exceed production costs and strategic development.
Operational Sustainability. The organizational setting, technical infrastructure, and other factors suggest the product/model can endure, can move from startup to ongoing operational status. The model is explicit with regards to the duration and nature of its financial support and, preferably, seeks self-sustainability.	Very important	Sited with an experienced publisher; follows industry technical standards; financial plan available
Disclosure/transparency. The extent to which the sponsor/host exposes and explains their approach, business model, and use; the extent to which they pursue and share analysis of economic viability and of scholarly quality and impact.	Very important	COUNTER compliant; full financial disclosure in annual reports.
Uniqueness. The resource supported assembles unique content or provides the first or primary sustainable replacement or add-on to what already exists; uniquely provides direct competition to high-cost publications in the same domain.	Important	List of competitors available and doesn't include other transformative products.
Scholar-led. Preference will be given to ventures and resources that are launched and led by scholars and scholarly organizations.	Important	Executives, board members, editors, etc. are senior scholars.
Protection from financial risk. Assurances that fees/investments will be adjusted downward if self-sufficiency improves and adequate warning for and explanation of requests for higher investment levels; guarantees that endowment-type funds will be returned upon failure of the model.	Important	Explicit guarantees and mechanisms.
Non-profit status. Preference will be given to non-profit ventures and those whose publishing revenues support only publishing activities.	Important	501.3c filing

5. Proposed process for surfacing, evaluating, and making co-investments. Because the rationale and goals for investment in transformative models — namely, the potential to help transform scholarly communication — vary from the traditional rationale and goals for collection development, we assume that investments made in these models follow a parallel but not identical path to decisions about collection investments. As shown in the table below, we propose processes that differ for the two major “flavors” of transformative model. Both propose steps for considering products with transformative business models that utilize existing groups and mechanisms already in place as much as possible.

PROCESS STEP	Type 1. Subscription-based model with cost-containment (e.g. SPARC); access to the content requires investment	Type 2. Open access model (e.g. PLoS membership, SEP endowment); access does not require investment
Identify	<ul style="list-style-type: none"> Bibliographer Groups 	same

opportunity, initial content evaluation, and priority/urgency ranking	<ul style="list-style-type: none"> • Faculty • CDC, JSC, SCOs • University Librarians • Etc. 	
Evaluate compliance with core collection development criteria	JSC (if yes proceed; if no or uncertain, consult with SCOs re: whether the resource is a candidate for investment based on transformative potential, if yes then proceed)	same
Evaluate compliance with transformative criteria	JSC and/or CDC with advice from SCOs	SCOs
Negotiation with vendor (if nec. or desired); call for co-investment	CDL	CDL/OSC
Endorsement and decision to co-invest	CDC via JSC (consulting campus SCO)	CDC consulting SCOs (unless separate funds are available – see “Remaining Questions” below)
Tracking and Assessment	Resource Liaison (assigned by CDC & CDL)	Resource liaison or an SCO (assigned by SCOs)
Decision to renew or divest	CDC (consulting campus SCO) Use annual assessment report from Resource Liaison or equivalent – and return to step 2.	Same (unless investment duration is pre-determined or qualified - see “Remaining Questions” below)

6. Remaining Questions. We have proposed criteria and a process for converting *ad hoc* library investments in transformative models into principled, structured ones. However, several questions remain that could affect the strategy and amend or supplement its implementation.

1. Library funding. Is it assumed that co-investments will be made with collection funds and generally follow the shared collections funding conventions? This may be the logical and straightforward course, especially for support of/access to subscription-based models, but other approaches are possible. Off hand these might include:

- creation of a pool of library funds to be used for investments, perhaps especially of “memberships;”
- repurposing shared resource funds;
- request for local or central new initiative funds

2. Duration of investments. While some models, particularly subscription-based cost-containment ones, will require regular assessment and renewal, open access models will have varying timing and success in becoming self-sustaining. Do we encourage the aggressive pursuit of self-sustainability by declaring transitional, time-limited support, especially for open access models?

3. Non-library university investments. Do the libraries want to initiate a conversation about how and from where the university supports the transformation of the economics of scholarly communication? Can/should discussions about faculty incentives for using alternative publications and faculty subventions extend to supporting open access institutional memberships and the like?

4. Our own creation of transformative models. The eScholarship Repository is arguably the largest collective new publishing initiative within UC, is centered at the Office of Scholarly Communication and the Libraries, and enjoys worldwide high use and prestige. Should the strategy of supporting transformative models extend to the consideration of other collectively supported innovations under the direct leadership and control of the UC Libraries?

Appendix. Summary of Current and Potential UC Library Investments

Current Investments & Support (note: memberships and author fee discounts also listed at http://osc.universityofcalifornia.edu/alternatives/submit_work.html)				
Product	Business model	Current investment	Timing	Comments
BioMedCentral journals	Author publication fees & institutional memberships (membership yields 100% discount on publication fee).	\$21K annual for Institutional membership paid in 04 and 05 by: CDL	Renewed 2005	Starting in '06 membership price will be tied to number of articles submitted by UC faculty
Nucleic Acids Research (from OUP)	Author publication fees, & subscriptions. Subscriptions yield an institutional membership. Authors receive 66% discount on publication fee.	\$14,754 (6 UC subscriptions yield an institutional membership)	Renewed for 2005	Author fee discounted from \$1500 to \$500.
PLoS	Author publication fees & institutional memberships (membership yields 20% discount on publication fee).	\$15K in 05 (\$25K in 04) for Institutional membership: in '04 CDL paid 33%, campus co-investment 66%	Renewed 2005	Author fee discounted from \$1500 to \$1200. PLoS Medicine released 10/04; 3 new PLoS "community journals" scheduled for 2005
Proceedings of the National Academy of Science (PNA)	Online subscriptions plus author publication fees. Subscriptions yield membership which yields 25% discount on publication fees	UC's Tier 2 site license yields discount.	Renewed 2005	Author fee discounted from \$1000 to \$750
SPARC journals various	Subscriptions – cost containment.	~\$87.5K annual (6 campus libs & CDL are SPARC members @ \$5k each; various subscriptions (purchase commitment of members is \$7500))		SPARC membership includes a "purchase commitment" to support journals
Potential Investments & Support				
Project Euclid	Subscriptions – cost containment. Proposed \$15K subscription for UC in '05 & '06			\$12.4K '04 campus subscriptions
Bepress journals	Subscriptions – cost containment. Several proposals forwarded by bepress.			
Stanford Encyc. Of Philosophy	Endowment (\$3M in community contribs. will support production)	None. Suggested contrib. from UC: \$2.5-8K per year for 3 yrs for 8 campuses = \$60-192K (some protection in case of failure)	SEP requests commitments in 04-05	ICOLC & SPARC endorse; Run out of a single academic department; bulk of content promised but not available; 40 UC authors/editors