

9-11-2014

# Library Involvement in Faculty Publication Funds

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## Recommended Citation

Monson, Jane; Highby, Wendy; and Rathe, Bette, "Library Involvement in Faculty Publication Funds" (2014). *University Libraries Faculty Publications*. 7.

<http://digscholarship.unco.edu/libfacpub/7>

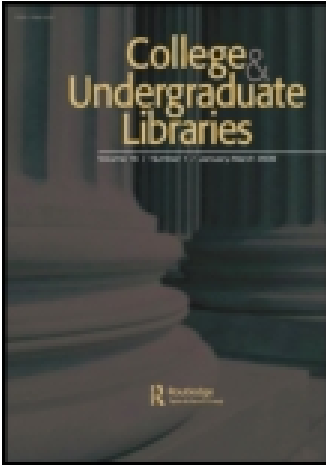
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This article was downloaded by: [University of Northern Colorado]

On: 15 September 2014, At: 10:50

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



## College & Undergraduate Libraries

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/wcul20>

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Published online: 11 Sep 2014.

To cite this article: Jane Monson, Wendy Highby & Bette Rathe (2014) Library Involvement in Faculty Publication Funds, *College & Undergraduate Libraries*, 21:3-4, 308-329

To link to this article: <http://dx.doi.org/10.1080/10691316.2014.933088>

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## Library Involvement in Faculty Publication Funds

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*A faculty publication fund is a fairly new concept in scholarly communication, and academic institutions are experimenting with different models for the administration of funds designed to assist faculty who face prohibitive journal publication charges. Findings are reported from a survey-based, qualitative study of small and medium-sized academic libraries involved with open access faculty publication funds. The survey results and a case study of one library's involvement in fund development are considered in light of the broader research questions: How are libraries engaging as facilitators of scholarly publishing, and what successes and challenges are they facing in this new role?*

**KEYWORDS** *Article processing charge, author fund, faculty publication fund, open access, publishing fee, scholarly communication*

### INTRODUCTION

With the advent of the Internet, scholarly communication has undergone profound changes. This is nowhere more evident than in academic journal publishing, especially in light of the recent trend towards open access (OA). The OA movement champions free access to scholarly research, but many publishers contend that in order to defray costs in the absence of subscription revenue, free access for readers must be counterbalanced by production charges to authors. The solution that many OA journal publishers have embraced is the author-pays publishing model. At the heart of this model are

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© Jane Monson, Wendy Highby, and Bette Rathe  
Received 1 April 2014; accepted 6 June 2014.

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article processing charges, or APCs, fees paid by authors that can run into the thousands of dollars per article.

Many traditional subscription-based journals, particularly those in the sciences, have long made it a practice to levy both voluntary and mandatory fees against authors. These fees may be for article submission or for specific publication costs such as copyediting, typesetting, color printing, reprints, or the addition of figures, tables, and supplementary material. A number of traditional journals also impose a flat page charge for all manuscript pages, and/or for pages in excess of a certain length. A 2012 *Sharmanedit* blog post (Sharman 2012) listed color printing charges for specific biomedical journals ranging from \$150 to \$1,000 per color figure, and page charges from \$55 to \$261 per page. Traditional publishers give various justifications for such charges; for example, the *Astrophysical Journal* (2014) contends that page charges allow it to “more fairly share charges between researchers and librarians,” while the American Meteorological Society (2014) states that publication charges “help cover the cost of publishing and disseminating research and should be regarded as an essential and proper part of the authors’ research budget.” APCs for journal articles in the sciences are often written into grant proposals and thus do not come directly out of researchers’ pockets.

However, for authors who lack significant funding to support their work, APCs can be a significant financial burden and deterrent against publishing, particularly in OA journals. Understandably, when given the choice between publishing in a journal that charges APCs and one that doesn’t, many authors opt for the latter. To address this, some colleges and universities have recently begun creating faculty publication funds, also known as author funds, to assist authors in paying APCs. The concept of a faculty publication fund or campus OA fund is a new approach that has been embraced by many academic institutions as a way to support their faculty members’ efforts to publish in OA journals. Such efforts have been documented by SPARC, the Scholarly Publishing and Academic Resources Coalition, which defines a campus OA fund as “a pool of money set aside by an institution specifically to reimburse article processing or membership fees for articles published by members of the institution in open-access journals” (SPARC 2013).

Such initiatives may be sponsored by various units on campus. Not surprisingly, academic libraries are becoming involved in this trend, either sponsoring or cosponsoring faculty publication funds with other campus entities. In the majority of cases, library-sponsored funds are used as vehicles for promoting OA publishing. But that is where the commonalities end. In other respects, there can be a great deal of variety in how these funds are administered.

This article provides findings from a targeted, survey-based study of ten small and medium-sized academic institutions in the United States where

the library has been involved in the creation and/or administration of a faculty OA publication fund. The study looks at a variety of factors related to the development and implementation of these funds, including procedural, political, and campus cultural aspects. A case study that examines the role of the University of Northern Colorado Libraries in instituting a pilot faculty publication fund is integrated with the survey results. The findings are considered in light of the broader research questions: How are libraries engaging as facilitators of scholarly publishing, and what successes and challenges are they facing in this new role?

## LITERATURE REVIEW

While the case study presented is for a fund that is not limited to OA journal charges, all of the institutions surveyed for this article had funds that were OA-specific. This trend is consistent with the available research, with nearly all previous studies focusing on OA faculty publication funds and OA journal APCs. Most studies come from Canada or the United Kingdom, and they center around themes of (1) the prevalence and makeup of APCs for OA journals, (2) the level of the APC charges and the impact on choice of OA journals, (3) the availability of OA faculty publication funds, and (4) the role that libraries play in OA publication funds.

The development of different business models to support OA publishing is outlined by Laakso et al. (2011) in their article on the history of OA publishing. They describe the initial development of OA journal publishing as requiring no charges to authors; the journals operated with volunteer labor using the editors' home university servers. Starting in 2000, some OA journals, pioneered by BioMed Central, developed the business model of charging authors APCs to fund publication. In 2004 mainstream publishers began experimenting with offering authors the opportunity to make their articles open access in traditional journals for a fee, known as the "hybrid model." By 2005 the supporting infrastructure for OA publishing was in place, and it persists today: the Directory of Open Access Journals (DOAJ), the primary index; Open Journal Systems (OJS) software, a free management and publishing platform; and the Open Access Scholarly Publishers Association (OASPA), promulgators of quality standards.

### Prevalence and Types of APCs in OA Journals

Even within the OA publishing paradigm, the use of APCs is relatively uncommon. A 2009 Edgar and Willinsky (2010) survey of 998 journals using OJS revealed that subsidies were the strongest source of income, with author publication fees and submission fees playing a small role. The majority of

the journals in this survey were published or sponsored by an academic department, a nonprofit publisher, a research unit, or an independent group representing sciences, social sciences, interdisciplinary, and humanities subject areas. Overall, most OA journals listed on the DOAJ website (Directory of Open Access Journals 2014) do not charge APCs: Only 26 percent of the journals listed have publication charges, while an additional 5 percent have conditional charges.

Bjork and Solomon (2012) surveyed seventy-seven publishers who use APCs and whose journals were listed in DOAJ. They found three models for those charges, the first being submission or publishing fees. A second model was the most common: charging a consistent fee for all articles or fees based on some characteristic of the article, such as page charges. The final model levies a uniform fee with discounts or waivers for some categories of authors. A few publishers offer expedited review and article production for a fee.

### Article Processing Charges and Their Impact on Authors' Publishing Choices

Using DOAJ to identify journals that have APCs, Solomon and Bjork (2012b) examined 1,090 OA journals from all subject areas and documented the number of articles published in those journals in 2010. They collected data on the amount charged for APCs by type of publisher and discipline. They found the average APC to be \$906 per journal, with the type of publisher and discipline influencing this amount. Commercial publishers have higher-than-average APCs, and the scientific, technical, and medical fields dominate in the use of APCs to fund OA journals. In a similar study from 2009, Walters and Linvill (2011) examined 663 OA journals in six subject areas and found the average APC per journal to be \$1,109, with the median fees charged by commercial and nonprofit publishers to be essentially the same. Of the fields in their study, biology and medicine were most likely to charge APCs and at the highest amount.

In a second study by Solomon and Bjork (2012a) on sources of funding for APCs and factors influencing authors' choice of journal, the researchers surveyed 429 authors regarding articles that they had published over the preceding five years. The three most important factors for the authors were the fit of their article within the scope of the journal, the quality of the journal, and the speed of the review and publication process. Regarding the payment of APCs, grant funding or institutional funding was the most common source for payment of higher fees, while personal funds were used for fees under \$1,000. The average amount an author was willing to pay for APCs was \$649.

Another survey during the same time period was conducted by the Study of Open Access Publishing project. As reported by Dallmeier-Tiessen

et al. (2011), this survey of 38,358 active researchers revealed that funding for APCs was the leading reason scholars provided for not publishing in OA journals, followed by journal quality.

Other studies have examined the role of APCs in authors' decisions about where to publish. Warlick and Vaughan (2007) surveyed fourteen biomedical faculty members who had published articles in OA journals between January 2004 and June 2005. Most of the biomedical faculty were unconcerned with APCs in either traditional or OA journals due to the level of grant funding and institutional support they received. Journal quality was of utmost importance in deciding where to publish, with the free access and visibility of OA journals being additional incentives. Coonin and Younce (2010) surveyed 309 education journal article authors in 2009 and found that 56 percent would not publish in journals that required APCs, with only 27 percent doing so if a funding agency or institution would pay the fees. Nariani and Fernández (2012) surveyed twenty OA journal article authors from their home institution in 2010. While the quality and subject area of the OA journal were of primary consideration, APCs were not considered an issue, as half of the survey respondents had received funding from their library's fund for OA publishing and others had used grant funding.

### OA Faculty Publication Funds

Faculty publication funds are not prevalent on academic campuses, as revealed by several surveys. Primary Research Group's survey (2012, 62) of thirty-eight academic libraries in the United States and abroad found that only 17 percent of the libraries or their parent institution had paid a publication fee on behalf of faculty. Pinfield (2010) conducted a survey of United Kingdom academic library directors in 2009 and found eight of the fifty-five respondents to have an institutional avenue to payment of APCs. In Pinfield and Middleton's (2012, 111) follow-up survey, seven out of fifty-two respondents had some sort of institutional support for the payment of APCs, very similar to the 2009 survey results. They expressed the view that APCs are an "unnecessary additional expense" as the major reason for the lack of establishment of institutional-level funds. Other issues included the high cost of APCs, the perception among faculty that OA journals are of lower quality, and the need to raise awareness of funds among faculty authors.

Fernández and Nariani (2011) also surveyed eighteen member institutions of the Canadian Association of Research Libraries. Twelve of the libraries had dedicated OA funds that provided sponsorship support for specific OA publishers; nine of those twelve had funds covering APCs. Of the remaining six, three were from small institutions with enrollment under 20,000. Reasons given for instituting OA funding were to support alternative publishing models, to incentivize publishing in OA journals, and to maximize research impact.

Waugh (2012) conducted a review of the OA funds at thirty universities in North America. Twenty-seven of the institutions' faculty publication funds were supported completely or in part by their university's library. Waugh also did a pilot survey of faculty at her institution and found that seventeen of the twenty-eight respondents would be more likely to publish in OA journals or make their work OA if they received some financial assistance from their institution.

Two studies of pilot programs provide details of institution-specific experiences with OA funds covering APCs. Russell and Kent (2010) from the University of Birmingham discovered from their pilot that faculty authors chose a journal based on its reputation and were motivated by funders' requirements for OA more than by any intrinsic benefits. Russell and Kent concluded that the OA fund for APCs is available for those authors who choose this option as best for their article, rather than as a mechanism to promote OA publishing. Eckman and Weil (2010) documented their eighteen-month pilot, the Berkeley Research Impact Initiative. They determined that covering fees for both OA and hybrid journals expanded the number of articles available to receive funding, and, therefore, allowed more authors to engage in a form of OA publishing. They found that many researchers already had access to funding through their grants and so had no need for institutional funds.

### Library Involvement in OA Publication Funds

The need for academic libraries to create funds to pay APCs for OA journals was presented in an article by Shieber (2009) as an issue of equity. Libraries currently support subscription journals with their payment of subscription fees. Shieber argues that libraries should likewise support journals whose business model is not subscription based, but APC based, by providing funds to pay APCs. This article was the motivating factor in the development of The Compact for Open-Access Publishing Equity (COPE). The COPE Website (2014) lists twenty institutions as signatories of COPE. These entities have COPE-compliant OA publication funds (that is, funds that sponsor purely OA journals only and not hybrids), and another thirty-three institutions have OA funds compatible with the principles of COPE.

Pinfield (2010) points to two factors as motivations for library involvement: (1) the emergence of OA policies at many academic institutions, and (2) the requirement of funding agencies like the National Institutes of Health to make grant-sponsored research available in an OA venue. The response by many academic libraries is the establishment of institutional repositories where articles are made freely available. Libraries may also purchase institutional memberships with OA publishers that provide discounts on APCs for faculty, and/or create a fund to pay APCs for OA journals.



## METHODOLOGY

An Internet search was conducted to identify academic libraries involved with currently existing faculty publication funds at their institutions, and basic information about each fund was gathered from their Websites and from the SPARC (2014) document, "Open Access Funds in Action." Small and medium-sized institutions were targeted, with an arbitrary limit set at 25,000 students and preference given to institutions that provide both undergraduate- and graduate-level programs. Focus was placed on these institutional characteristics in an attempt to create a survey pool roughly on par with the case study institution, the University of Northern Colorado (UNC), a medium-sized doctorate-granting university. A total of sixteen libraries were identified, and from each one a librarian involved in the fund's administration was contacted requesting participation in an eight-question telephone survey. Ten fund representatives ultimately agreed to take part in the study. Participants were sent the survey questions in advance and asked to schedule a thirty-minute phone call with the three-person research team. All calls were digitally recorded and transcribed, and each interviewee was given the opportunity to review his or her transcript afterward. All data collected was anonymized and thematically coded using concept-driven categories, with emerging patterns identified and analyzed.

### Survey Questions

1. What challenges did the library face in creating or helping to create the fund, including source of funding?
2. What expertise or assets do you feel the library brought to the table in this process?
3. Were there other driving forces in the creation of the fund than those stated in the purpose of the fund?
4. How were the eligibility criteria determined, and who makes the final award decision? (Were non-OA article processing fees considered, and why or why not?)
5. What challenges has the library faced in implementing the fund, such as marketing, fielding questions, clerical support, or others?
6. What is the makeup of the reviewing body, and how often does it meet to review the fund?
7. What has been the reaction to the fund by faculty and administration, and has it affected the way they view the library?
8. Do you feel the fund has been a success? Why or why not? Did having a pilot factor in?

The survey questions arose as the result of a self-reflective process stemming from the authors' involvement in the creation of a faculty publication

fund at UNC. A comparison of the experiences of the survey institutions and the case study institution may prove instructive for readers who are considering involving their libraries in the funding of faculty publications.

## RESULTS

Of the ten libraries surveyed, six were located at private institutions and four were public. Four of these institutions fell into the category that was considered to be small, with enrollment under 12,000, while six were medium-sized, between 12,000 and 25,000 students. Two institutions had an OA resolution in place, one had an OA mandate or policy, and two had one of these in place for library faculty only. Five institutions had no OA policy or mandate. The case study institution, a public university with an approximate enrollment of 12,000, had passed both a library faculty OA resolution and a Faculty Senate OA resolution that encourages deposit in the UNC institutional repository.

The surveys revealed the following characteristics regarding applicant and publisher eligibility, fund size, and fund age. Eight funds were open to both faculty and graduate students, with the remaining two limited to faculty only. All ten funds were limited to OA publications of some form; six were limited to purely OA journals, while four also allowed funds to be paid to journals that use the hybrid model. The size of the funds proved difficult to compare, as the pool for some funds covered a single fiscal year, while others covered multiple fiscal years. Overall, the funds ranged from approximately \$10,000 to \$75,000. Most of the funds were established relatively recently. At the time of the interviews (December 2013 and January 2014), two were in their first year and were still considered pilots. Two were established in 2012, three in 2011, and two in 2010. The longest-running fund had been created in 2008.

In contrast to the ten surveyed institutions, it was decided that the UNC fund would not be limited to OA publications. It does support the OA publishing option if authors choose this, in line with the thinking of Russell and Kent (2010). The fund was officially launched in January 2014 with an initial allocation of \$30,000. Eligibility is limited to UNC faculty members.

Responses to the eight survey questions were grouped into three overarching themes: establishing the fund, implementing the fund, and impact of the fund.

### Establishing the Fund

In establishing a faculty publication fund, one respondent stated that “having an administrator that believes in this was huge.” This message came through strongly in responses to questions regarding challenges and driving forces in

the fund creation. Four of the ten survey respondents had deans or library directors with a strong desire to support OA, and this drove the establishment of the fund. As one interviewee pointed out, "If your director is very pro-open access, they are going to find a niche of money somewhere to put into the program for publishing funds." In one case the provost brought the idea of a fund to the library for implementation, and in two other cases, faculty members brought a desire for money to cover APCs to the attention of the dean or library director, who then worked to establish a fund to meet this need with the investment of library money. With the three remaining respondents, the idea for the fund was developed by individuals or a scholarly communication group within the library, with money from the library being identified to help establish the fund.

The driving force for the creation of the UNC fund was faculty requests, which liaison advocates and a supportive administrator sought to meet, a pattern similar to two survey respondents. Over the course of two years, liaison librarians at UNC had received inquiries from faculty asking about institutional support for OA publication fees. This led to conversations with the Assistant Vice President for Research (AVPR) about open access, publication fees, and innovative programs at other institutions, thus planting the seed that would later germinate into a full-fledged faculty publication fund.

#### SOURCES OF FUNDING

Six of the ten respondents reported partnering with other units on campus to fund the initiative. The most common sources of outside funding were the Provost's Office and the campus Office of Research. In two cases, individual campus departments are asked to contribute. One respondent indicated that the department chairs "were initially a little resistant to it, thinking that they might be asked to pay for something they don't want to pay for or be inundated [with requests]." Another respondent pointed out the need to "keep convincing" the diverse set of funders on campus that the fund was worthwhile. Of the four remaining respondents who used library funds exclusively, two reported faculty concerns questioning whether it was a good use of library money in a time of limited resources.

In the case of UNC, the AVPR eventually approached the library with news that repurposed funds had been set aside within the budget of the Office of Research for the purpose of addressing faculty requests for publication funding. The task of fund criteria creation was brought to the library, akin to the experience of the survey respondent whose provost brought the idea to the library to implement. In contrast with the surveyed institutions, the library did not provide funds directly for the program, but rather committed solely the time and expertise of its staff to create and manage the fund in partnership with the Office of Research.

## LIBRARY EXPERTISE AND ASSETS

When survey participants were asked what expertise or assets they felt that their library brought to the table in the fund-creation process, eight responded that they contributed a strong knowledge of OA publishing. In the words of one respondent, “We understood from a very front-line perspective what open access really looks like and how it operates.” Seven participants explicitly contrasted this with the faculty’s lack of awareness of the topic. One mentioned that “faculty are still a little puzzled” about open access, and another characterized the librarians’ knowledge of OA publishing as “far greater than [that of] any faculty member on campus.”

One interviewee noted that faculty members’ circumscribed roles as authors and editors tend to narrow their views of publishing, while librarians have a more complete picture encompassing economic aspects. In fact, four out of ten respondents mentioned the financial acumen that librarians brought to the table. One stated, “We’re trusted in terms of our accounting and our management of funds.” Another contrasted librarians’ hyperawareness of the “serials crisis” with faculty members’ lack of knowledge about the high cost of journals. Interviewees cited other types of proficiencies librarians brought to the fore, including expertise in intellectual property issues and copyright, knowledge of authors’ rights, an awareness of disciplinary differences, and the ability to evaluate the quality of publications. An overall “awareness of the scholarly publishing ecosystem” was how one interviewee succinctly described librarians’ holistic perspective.

The survey respondents’ answers echoed the experience of librarians at UNC. Members of the library’s Scholarly Communication Committee were asked by the AVPR to draw on their knowledge of scholarly publishing models to suggest a framework for the UNC fund, which was then implemented. In preparing a preliminary report for the AVPR, committee members developed a broad knowledge of publication fund practices at other institutions, and this was instrumental in the successful implementation of the fund. Before the fund could be launched, a Web presence needed to be created quickly containing the eligibility criteria and application form and process. The library’s use of Libguides made the creation of this presence an easy thing to accomplish with the publishing of the “Pilot Fund for Faculty Publications” guide (University of Northern Colorado, 2014).

## PROMOTING OPEN ACCESS

All ten interviewees used their funds as a promotional vehicle for open access, but they varied in their approach to this advocacy role. Some were ambitious advocates and expressed hope that their fund would lead to significant changes in campus culture, such as more innovative modes of

publication becoming accepted in the tenure and promotion system. Others aspired merely to influence faculty to consider OA publishing. Many saw the publication fund as an outgrowth of “larger conversations on campus about sharing of research” and a natural step in the transition from user-based to author-based models of journal funding. One respondent recognized that the transition would not be instantaneous: “We see it as sort of a transition that will probably be happening over a number of many years here.” But the time frame did not dampen her enthusiasm, and she was among the four of ten who echoed the sentiment that the fund provided a good opportunity to educate faculty and improve understanding of OA publishing. According to one, dialogues were now occurring in “places that we could never have conversations about open access, because they just wouldn’t open their doors to us.”

Echoing Fernández and Nariani’s 2011 study, enthusiastic proponents tended to refer to the viability or sustainability of the OA publishing model, and strong advocates characterized their role as proactive participation in the creation of this new paradigm. Additionally, these initiatives allowed them to become “a part of the access model, rather than being participants sitting on the sideline.” The spokesperson for one institution described the dual nature of this generative intention. First, it is a very focused, direct, and service-oriented goal to help faculty authors; its secondary aim is “to try and provide an incentive. .. for using journals that had good sustainable publishing models” and “incentivize sustainable models” in a more systemic sense.

Still others tied their OA advocacy to various institutional goals. One interviewee conveyed her institution’s “enthusiasm for exploring new models of scholarly publishing” and these models’ potential for supporting the institution’s efforts to extend the impact of its research internationally. She received feedback from many people who “thought that open access increased the visibility and use of their research.” Another interviewee noted that the fund supported a faculty senate resolution encouraging open access. It was acknowledged by one respondent that part of the motivation behind the fund was to keep current with trends; the organization also “felt it was a way for the library to extend a goodwill gesture to the campus.”

OA advocacy at UNC was an initial driver for the idea of the fund, at least in the library’s eyes. The Scholarly Communication Committee had made various attempts to encourage open access on campus; past initiatives included sponsoring Open Access Week events and drafting a library faculty OA resolution. The Committee was also instrumental in the passing of a Faculty Senate OA resolution, which encourages deposit in UNC’s institutional repository. With the fund creation, however, exclusive promotion of open access publishing ended up taking a back seat to the larger administrative desire to make the fund as inclusive as possible.

## Implementing the Fund

According to the surveyed librarians, prior to the creation of their institutions' publication funds, most faculty members relied on grant funding or requests to department chairs or deans to help cover APCs. Three institutions had a separate fund to cover APCs for traditional publications. As one respondent indicated, "We knew that existed so we felt very clear that we can make this just to fund open access." While all funds surveyed excluded non-OA publication charges, approaches were mixed when it came to the inclusion of hybrid journal fees. For three respondents, funding hybrid journals was an important tactic for OA advocacy, with one commenting that "We decided that for our university, for our faculty, we didn't want to say no at any point to anyone who was interested in open access. And if they got interested through a hybrid option, great, that was going to be okay." For the six out of ten that did not allow funding for hybrid journals, the general attitude was "We're not going to pay a for-profit publisher additional fees to make an individual article open access." This was reflective of the COPE stance of OA-only funding, with two respondents being COPE signatories and four having COPE-compatible funds. Another respondent said her fund only supported selected hybrid journals that had proved they were not "double dipping" (accepting subscriptions from libraries while simultaneously charging authors).

At UNC, the purpose of the fund was simply to assist faculty who were previously forced to pay out of pocket for journal APCs, regardless of the publishing model of the journal. However, certain criteria were put in place to prevent the scope of the fund from becoming unwieldy. Prepublication expenses, such as research costs, typesetting, copyright fees, indexing, and copyediting were specifically excluded, as were application fees, reprints or offprints, and charges for books or book chapters. Guidelines were set down limiting eligible journals to those that are peer reviewed and meet certain explicit standards of quality.

### JOURNAL QUALITY CONTROL

Evaluation of journal quality and reputation was also a concern for the surveyed fund managers. For seven out of ten, quality-control measures to weed out predatory publishers were integral. These included checking for inclusion in indexing services, the DOAJ, and Beall's (2014) "List of Predatory Publishers," posted on his *Scholarly Open Access* blog. The eligibility criteria for one fund were updated after an award recipient chose to publish in a journal that was deemed disreputable, despite the fund managers' strong discouragement. "We at that point had no mechanism in our criteria to not give the funding. And so that was when we're like, okay, we have to have some sort of threshold barrier to say no when it is a predatory publisher." One fund committee had a contrasting approach: "We framed

this conversation as, we could say this publisher is a predatory publisher today but that sometime in the future, it may become an established scholarly publisher. And so, do we really have the right to say we won't fund you for this particular journal because today it's predatory? It's a real grey area still." However, both this fund manager and two others stated they had turned down applicants publishing in what were deemed to be less-than-reputable journals.

In addition to the stipulation that qualifying journals be peer reviewed, the UNC fund criteria require that applicants document two of the four following characteristics: (1) the journal is listed in the DOAJ or its publisher is a member of the OASPA; (2) it is indexed; (3) it has a prestigious impact factor or other indicator of credibility; and (4) it has nationally or internationally esteemed editors or editorial boards. The purpose of these criteria is to weed out predatory OA publishers and low-quality traditional journals.

#### REVISING THE GUIDELINES

The need to revise or adapt the initial eligibility criteria after a fund had been in operation for a time was mentioned by six respondents. One stated, "Over time things have evolved slightly, just as we sort of learned from doing the fund." Another described the need for revising guidelines this way: "The words we used didn't say the same thing to the person reading it." A related issue was making very clear who was eligible for the fund and what it covered, and ensuring that mechanisms were in place to deny funding when necessary. For one respondent, a concern was communicating follow-up steps to award recipients (a standardized letter was developed that provided options for payment or reimbursement). Revisions and changes were often run past key funders and the review committee, if one existed.

Similarly, within a month of launching the UNC fund, the need had already arisen for the fund review committee to revisit its written guidelines. There was disagreement among committee members as to whether one applicant's request to fund optional color page charges met the eligibility criteria. The request was ultimately funded, due in part to the committee's not having clearly communicated criteria as grounds for rejection. In other cases, faculty queries about eligibility revealed issues unanticipated by the committee during initial drafting of the guidelines.

#### REVIEWING APPLICATIONS

At five of ten institutions, a single individual reviewed funding applications and made final award decisions. Two of these five mentioned consulting a library administrator in cases where questions arose. The other five respondents reported that a committee, ranging in size from three to thirteen members, reviewed applications and made award decisions. Another role of these committees was to conduct an annual review of the fund: for example,

going over questions received from faculty, graduate students, and other librarians and editing guidelines in an effort to “tighten things up.”

Analogous to five of the surveyed libraries was the formation of a committee at UNC to review applications, although the UNC fund could be considered a hybrid committee/individual model. A review committee of four members—two faculty and two librarians serving on the Scholarly Communication Committee—was appointed by the AVPR, with members serving two-year terms. In this case, the committee reviews applications and makes a recommendation to the AVPR, who then makes the final award decision. The committee is charged with issuing semiannual reports on the implementation of the initiative and any recommendations regarding revisions for enhancements of the logistics and impact of the program. This six-month review was reflective of a common pattern among survey participants to “test the waters” before committing to finalizing fund guidelines.

#### PUBLICIZING THE FUND

Initial forays into marketing varied in style, from timid and tentative to intensive and highly organized. One participant said, “We did a kind of soft launch because we didn’t know what the level of demand was and we didn’t want to go out and create a level we couldn’t support,” which echoed a second respondent’s concern. Conversely, for a few the initial marketing push was both assertive and multipronged, with one indicating intensive publicity in the beginning. The most common marketing channels used by respondents (in no particular order) were faculty LISTSERVs, presentations to campus constituencies, Web presence or social media, and items in campus periodicals (each noted by four interviewees). The next-most-common avenue was Open Access Week events (three responses); the least common mode was printed fliers or cards (one response).

Five out of ten respondents indicated word of mouth was their most important marketing tool. One conducted a survey and discovered that 50 percent of applicants had heard about the fund through word of mouth, a percentage far greater than the other publicity strategies employed. Another interviewee commented that word of mouth worked best because “Once you get one person in a department who knows about it, they share that news with other folks”; this sharing seemed to take on a life of its own once a certain critical mass was reached. One respondent employed no active marketing, relying entirely on word of mouth, but this minimalistic approach was unusual.

Four interviewees said that subject liaisons were used to communicate information about the fund. One was especially emphatic: “Our main marketing source for all our scholarly communications [efforts] is through our liaison librarians . . . . We want the liaisons to be the front line—they have



the relationship with the faculty, they have the relationship with those departments and opportunities for those sort of serendipitous conversations.” This interviewee also contradicted the researchers’ framing of marketing as a challenge, instead seeing it as a “fantastic opportunity” for conversations about open access: “Any time you roll out a fund, you’re offering the faculty lots of money, you get people’s interest.”

The primacy of word-of-mouth marketing seems to have been borne out in the case study instance as well. The UNC review committee adopted a fairly passive approach; marketing efforts employed included written announcements in the daily university campus news e-mail, creation of a link on the homepage of the library Website, and announcements by fund review committee members at various department and committee meetings. There was no coordinated or concerted publicity effort, partially because the fund was established as a one-year pilot, and the level of demand for funds was not yet known. However, word of the fund seemed to spread quickly, with applications being submitted almost immediately after its launch. Two months after its publication, the fund Libguide had seen over 370 visitors, a strong indication of quickly spreading faculty awareness.

#### FUND UPTAKE

For many funds, a commonality was actually slow uptake—in six cases, interviewees reported that the totality of funds were underspent during the first year. Only two interviewees indicated that they had spent, or were expecting to spend, all of their annual funds within a year of launch. The fact that a fund was slow to get off the ground did not seem to be an indicator of later success, however. The respondent with the longest-lived fund, at five years, characterized its uptake as “very low” and its climb to success as “slow.” While one person reported that his or her fund had not been used up over the course of three years, most others recounted that usage rates increased significantly and that funds were depleted or nearly so in subsequent years. One interviewee’s institution was “burning their way through” its fund, and another person lamented having the unfortunate task of turning away authors. This interviewee had also tracked increases over time, “both in terms of applications to the fund and overall open access publishing.” The handful of interviewees who indicated more active fund use tended to have more mature funds (three years or older), with an established presence and reputation on campus.

In its first few months, the UNC fund had seen relatively brisk uptake. Between January and April of 2014, the review committee received four applications—three for publication in traditional subscription journals and one for an OA journal—and approved \$2,550 in funds. One applicant was turned down due to the fund request being below the minimum award

threshold. The review committee chair also received multiple faculty inquiries during this time, suggesting a broadening awareness of the fund's existence.

### Impact of the Fund

The survey revealed that library publication funds are appreciated by individuals who use them and by an institution's faculty as a whole. One respondent indicated that the fund served to remind faculty that librarians were "here to help them with their research and their publishing and their literature needs." Another respondent said, "It reinforces the view that the library is a trusted partner in conversations about publication issues and decisions about publications." Still another stated that "it helps the library be perceived as a change agent in trying to do new and interesting things." At one institution, faculty had commented that the library "is one of the few places. . . where a university entity is putting their money where their mouth is." At another, the library's willingness to provide funds for a recognized need among faculty brought appreciation, as "there is no other funding source on campus for this."

### MEASURES OF SUCCESS

An interviewee cited many "intangible" reasons her fund could be considered a success, such as "the ability to talk about open access and publishing with the faculty." For another, the fund opened up "opportunities for us to have other conversations about things like author permissions and our new service for hosting [faculty] research online." While one interviewee was hesitant about the future viability of OA publishing, he saw the fund in a positive light in that it "at least gets people talking about" alternatives in the scholarly communication system and evokes the question of whether the traditional journal article is the sole way to communicate one's research.

A respondent reported receiving positive feedback from faculty authors about their research impact, particularly from those seeking international readers. The faculty acknowledged that they got "more of a global reach" when publishing in OA journals, feeling that the venue "increased the visibility and use of their research." A second respondent witnessed an exponentially positive ripple effect, with this process of internationalization also increasing name and research recognition for the institution.

### CHANGES TO CAMPUS CULTURE AND SCHOLARLY COMMUNICATION

One interviewee noted that his campus's culture around scholarly communication had changed because of its publication fund: "Since the open access fund has happened, [institution name] has changed what it calls its

'philosophy of scholarship' to include a little more support for less-established [publications venues such as] podcasts, blog post comments, wiki entries, whatever, that might rise to a level of scholarship depending upon how it was validated." This interviewee had lofty goals for his institution's fund, hoping it would "become not just an open access publishing fund but a scholarly dissemination fund, more broadly defined."

Impacts on open access activity may also extend to publishers and their policies. The aforementioned interviewee directly influenced a journal to create an open access option for authors. Another worked with a publisher to ensure that its open access policies were transparent and the business model for its hybrid journal was ethically sound—i.e., not engaging in "double-dipping" practices.

#### PATTERNS OF FUND USAGE

A theme addressed spontaneously by half of the respondents was emerging patterns of fund usage in relation to academic disciplines. Two respondents with more mature funds (three years' duration) noted that the life sciences dominated fund use on campus. This was attributed to disciplinary differences: "They have more opportunities for open access publishing. It's much more established in their fields." Another respondent with a fund slightly less mature (two years' duration) noted a more even distribution of participation among subject areas, with "equal numbers of social science and humanities people. .. in many cases, we've had a surprising number of humanities people taking advantage of the fund. So we've been really excited by that. We think that probably comes out of some very effective liaisons we have in those areas."

#### FUND SUSTAINABILITY

Given the relative newness of most of the funds, the question of their long-term sustainability was a recurring theme expressed by interviewees. Two expressed confidence that their fund was stable and would continue to be renewed in the coming years, while five voiced uncertainty about the continuation of the fund and/or the amount of funding that would be available in the future. This uncertainty was due to general library and institutional budgetary constraints. One respondent expressed this concern in that "as all library budgets are constricted, we could see a reduction in the publishing fund." As previously indicated by those with funding partners, the need to persuade nonlibrary entities such as provost's offices and department heads to continue supporting the funds was an ongoing challenge that created uncertainty for the funds' continuation. One person indicated that implementation of the fund had raised larger issues surrounding the author-pays OA publishing model in general, and whether it will be viable in the long

run: “I think a challenge is asking ourselves whether we’re supporting a sustainable business model.”

In terms of fund impact and success, the UNC faculty publication fund was too new as of this article’s writing to yield enough information for useful analysis or comparison. Some observations may be made about patterns of fund usage among disciplines; two of four applicants to date were faculty from the business school, a third was in science education, and a fourth was in physics and astronomy (the latter being the lone OA applicant). This suggests that usage patterns of a non-OA fund may not follow the same trends indicated by the OA-only survey institutions, but more data would be needed to effectively evaluate this hypothesis.

## DISCUSSION

The designation of publishing venue was the most striking difference between the funds of the surveyed institutions when contrasted with the case study institution. OA funds were not given preferential treatment by UNC; this difference provides an opportunity to discuss the unique culture of each institution with regard to open access.

Some institutions tend to be bellwethers, leaders ahead of the curve. Others are traditionalists and adopt change more slowly. When compared to UNC, the survey institutions tended to be the innovators, the assertive OA advocates. This stance of advocacy is evidenced by the early and intentional pro-OA leadership demonstrated by their library administrators. It manifests in institutional membership in SPARC, participation in COPE, partial or total financial support of the funds, and intensive marshalling of resources. It is revealed by the discourse recorded in this study, the expressed desire of several of the institutions to be active cocreators and facilitators of a sustainable new publishing model. But that is not necessarily enough. Support from campus-wide administration and the existence of Faculty Senate OA resolutions/mandates lend political strength to OA initiatives. UNC had a Faculty Senate resolution, but it was nonbinding and lacked both the grassroots and administrative support needed to bring its intent to fruition. The UNC library provided research and human capital, in the form of committee members, to establish and implement the fund, but it did not provide financial capital to support its pilot phase.

Once the preliminary and early implementation stages have been successfully surmounted, the hurdle of marketing must be jumped. For most libraries, the establishment of a publication fund is a marathon, not a sprint. And marketing represents a substantial obstacle. But given the choice of the three challenges—marketing, inquiry response, and clerical support, most (eight out of ten) of the respondents noted that marketing was the most difficult of the three. In fact, three respondents characterized marketing as a perennial challenge for their respective libraries.

In the middle of the maturity spectrum (around two to four years of existence), fund statistics tended to indicate that usage had kept pace with funding level, but a few still indicated slow uptake. Two funds in the sample were still too early in their piloting phases to have meaningful data about usage. One of the necessary factors for successful emergence from the piloting phase is the allowance for a reasonable period of time in which to become established. This wiggle room seems to be advisable for several reasons: (1) the variable length of time it takes to establish a known presence on campus (from a few months to several years); (2) the difficulty of predicting the optimal/appropriate funding level; and (3) the widespread, almost universal, phenomenon of a generally low level of faculty awareness of open access. While slow uptake could be an indicator of languish or neglect, in this limited sample, it seemed instead to be a natural stage in the establishment of a fund, and one that may persist or recur. Rate of uptake depends upon many variables, some of which are out of a library's locus of control.

Finally, support outside of the single institution is also critical. The OA faculty publication funds did not develop in a vacuum. Whether an institution's culture veers toward the innovative path or the traditional road, it is not untouched by the OA movement. SPARC is a powerful force in the OA movement; its membership is international and numbers almost 800 institutions. The Association of College and Research Libraries (ACRL) is also an influential player. With its sponsorship of the Scholarly Communications Roadshow and the accompanying Scholarly Communications Toolkit, ACRL disseminates OA educational materials widely to academic libraries. Joyce Ogburn, former ACRL president, states that "For decades librarians have engaged in what is essentially a social movement to enact radical change in scholarly communication" (2012, 1). Ogburn is a champion for assertive leadership by librarians in the OA movement. But this bold stance regarding OA advocacy is not practicable for every institution.

The political realities of OA advocacy are astutely acknowledged by Cryer and Collins (2011), whose advice may be helpful for those whose campus culture is more traditional. Not every campus has the convergence of resources and political support necessary to be a bellwether. For those libraries, incremental change may be the best path. Cryer and Collins advise libraries to test the waters: "To inspire debate and to test out the real-life applications of the various open access models, large actions are not necessary... The steps can be small and gradually applied. The important thing is that librarians foster a deeper understanding of open access for patrons to encourage debate and change the landscape of academic publishing for the better (2011, 106)." The bolder action of implementing a faculty publication fund exclusively supporting OA publication venues was *apropos* for the interviewed institutions. In contrast, the smaller step, a faculty publication fund for use in all publication venues, was the most appropriate course of action for UNC. While the course of action differs, the intent—to improve scholarly communication—is the same.

## Study Weaknesses

This striking difference between the interviewed group and the case study institution provides a vivid contrast that can be instructive. But it also points to an inherent weakness in the study. Not only was the targeted group of interviewees a small group of ten, it was also a sample of convenience. The interviewed institutions are actively engaged in OA advocacy, as shown by transparent documentation of their innovative funding programs on the SPARC document and/or on the Web. Another limitation of the study is the relatively short amount of time the funds have been in existence, ranging from first-year pilot to an outlying five-year-old program. The median fund age is three years. That level of maturity limited the experiences from which the respondents could draw, making the responses highly anecdotal in nature. Another peculiarity of this study, impossible to control, is the volatility of the changes in the OA publishing landscape. While libraries strive to be proactive in their facilitation and funding of the scholarly communication process, they are often forced to be reactive to changes in the marketplace, ranging from publisher consolidation and the rise of predatory publishers to the complexity of hybrid journals and membership fees and benefits. The scholarly communication landscape captured by this study will not persist; it will doubtless change.

## CONCLUSION

As the publishing marketplace changes, so do our institutions. One respondent spoke of the “teaching focus” of faculty, and another spoke of the campus initiative of “raising the research profile of the university.” This shift from teaching focus to research focus of faculty raises an interesting question for further research. How does the library’s role change with this shift? Another respondent spoke of the campus focus on internationalization. This takes on many forms: increasing numbers of international students, increasing numbers of international faculty, as well as faculty and student exchange programs with partner international universities. What impact, if any, is this internationalization having on the scholarly publishing activities of the faculty? Other areas of needed research are the prevalence of and library involvement with non-OA faculty publication funds on academic campuses and new, emerging business models in scholarly publishing. Are faculty publication funds merely a stopgap in the ever-changing scholarly publishing world?

What does remain constant is academic librarians’ dedication to furthering their institutions’ missions and serving their constituents. Faculty publication funding is just one niche in a complex scholarly publication ecosystem. Academic libraries and librarians are uniquely positioned to have a holistic and helpful view of the big picture, and, simultaneously, to be trusted

and pragmatic financial managers. That, along with their service orientation, places librarians in a powerful position to influence scholarly publication models for the better and to engage as successful facilitators.

The common challenge for libraries and librarians is communication. If that challenge is successfully met, then librarians are poised to become ideal mediators of scholarly publishing. Given adequate resources and political will, this powerful facilitation may bear fruit. Seize the opportunities for those “serendipitous conversations.” Be bold or be temperate depending upon your institution’s culture, but be strategic. Positive changes in the scholarly communication ecosystem are possible, and they often happen, person-to-person, by building upon one enlightening conversation at a time.

## REFERENCES

- American Meteorological Society. 2014. “Journal Page Charges.” <http://www2.ametsoc.org/ams/index.cfm/publications/authors/journal-and-bams-authors/author-resources/journal-page-charges/>.
- Astrophysical Journal. 2014. “Page Charges.” <http://iopscience.iop.org/0004-637X/page/Page+charges>.
- Beall, Jeffrey. 2014, January 2. “Beall’s List of Predatory Publishers 2014,” *Scholarly Open Access* (blog). <http://scholarlyoa.com/2014/01/02/list-of-predatory-publishers-2014/>
- Bjork, Bo-Christer, and David Solomon. 2012. “Pricing Principles Used by Scholarly Open Access Publishers.” *Learned Publishing* 25(2):132–37. doi:10.1087/20120207
- Compact for Open-Access Publishing Equity (COPE). 2014. “Signatories.” <http://www.oacompact.org/signatories>.
- Coonin, Bryna, and Leigh M. Younce. 2010. “Publishing in Open Access Education Journals: The Authors’ Perspectives.” *Behavioral & Social Sciences Librarian* 29(2):118–32. doi:10.1080/01639261003742181
- Cryer, Emma, and Maria Collins. 2011. “Incorporating Open Access into Libraries.” *Serials Review* 37(2): 103–07. doi:10.1016/j.serrev.2011.03.002
- Dallmeier-Tiessen, Suenje, Robert Darby, Bettina Goerner, Jenni Hyppoelae, Peter Igo-Kemenes, Deborah Kahn, Simon Lambert et al 2011. “Highlights from the SOAP Project Survey: What Scientists Think about Open Access Publishing.” <http://arxiv.org/ftp/arxiv/papers/1101/1101.5260.pdf>.
- Directory of Open Access Journals (DOAJ). 2014. “Search.” <http://doaj.org/search>.
- Eckman, Charles D., and Beth T. Weil. 2010. “Institutional Open Access Funds: Now Is the Time.” *PLoS Biology* 8(5):e1000375. doi:10.1371/journal.pbio.1000375
- Edgar, Brian D., and John Willinsky. 2010. “A Survey of the Scholarly Journals Using Open Journal Systems.” *Scholarly and Research Communication* 1(2):1–22. <http://src-online.ca/index.php/src/article/viewFile/24/40>
- Fernández, Leila, and Rajiv Nariani. 2011. “Open Access Funds: A Canadian Library Survey.” *Partnership: The Canadian Journal of Library and*

- Information Practice and Research* 6(1):1–24. <https://journal.lib.uoguelph.ca/index.php/perj/article/view/1424#.UsWvNLSJQYs>
- Laakso, Mikael, Patrik Welling, Helena Bukvova, Linus Nyman, Bo-Christer Bjork, and Turid Hedlund. 2011. "The Development of Open Access Journal Publishing from 1993 to 2009." *PLoS ONE* 6(6):e20961. doi:10.1371/journal.pone.0020961
- Nariani, Rajiv, and Leila Fernández. 2012. "Open Access Publishing: What Authors Want." *College & Research Libraries* 73(2):182–95. <http://crl.acrl.org/content/73/2/182.full.pdf+html>.
- Ogburn, Joyce L. 2012. "The Movement to Change Scholarly Communication Has Come a Long Way—How Far Might It Go?" *Journal of Librarianship and Scholarly Communication* 1(1):1–3. <http://jisc-pub.org/jisc/vol1/iss1/>
- Pinfield, Stephen. 2010. "Paying for Open Access? Institutional Funding Streams and OA Publication Charges." *Learned Publishing* 23(1):39–52. doi:10.1087/20100108
- , and Christine Middleton. 2012. "Open Access Central Funds in UK Universities." *Learned Publishing* 25(2):107–17. doi:10.1087/20120205
- Primary Research Group. 2012. *Survey of Scholarly Journal Licensing & Acquisition Practices*. New York: Author.
- Russell, Jill, and Tracy Kent. 2010. "Paved with Gold: An Institutional Case Study on Supporting Open Access Publishing." *Serials* 23(2):97–102. doi:10.1629/2397
- Sharman, Anna. 2012, March 8. "Journals that Charge Authors (and Not for Open Access Publication)," *Sbarmanedit* (blog). <http://cofactorscience.com/blog/author-charges>.
- Shieber, Stuart M. 2009. "Equity for Open-Access Journal Publishing." *PLoS Biology* 7(8):1–3. doi:10.1371/journal.pbio.1000165
- Solomon, David J., and Bo-Christer Bjork. 2012a. "Publication Fees in Open Access Publishing: Sources of Funding and Factors Influencing Choice of Journal." *Journal of the American Society for Information Science and Technology* 63(1):98–107. doi:10.1002/asi.21660
- . 2012b. "A Study of Open Access Journals Using Article Processing Charges." *Journal of the American Society for Information Science and Technology* 63(8):1485–95. doi:10.1002/asi.22673.
- SPARC. 2013. "Open Access Funds." <http://www.sparc.arl.org/initiatives/funds>.
- . 2014. "Open Access Funds in Action." <http://www.sparc.arl.org/sites/default/files/OA%20Funds%20in%20Action%201.3.14.pdf>
- University of Northern Colorado (UNC). 2014. "Pilot Fund for Faculty Publications." <http://libguides.unco.edu/content.php?pid=557453>.
- Walters, William H., and Anne C. Linvill. 2011. "Characteristics of Open Access Journals in Six Subject Areas." *College & Research Libraries* 72(4):372–92. <http://crl.acrl.org/content/72/4/372.full.pdf+html>
- Warlick, Stefanie E., and K. T. L. Vaughan. 2007. "Factors Influencing Publication Choice: Why Faculty Choose Open Access." *Biomedical Digital Libraries* 4:1–12. doi:10.1186/1742-5581-4-1
- Waugh, Laura. 2012. "UNT Libraries: Open Access Fund Research Report." <http://digital.library.unt.edu/ark:/67531/metadc111007/>