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Google Us!

» Capital Area District Libraries Gets Noticed with Google Ads Grant

BY SHERYL CORMICLE KNOX AND TRENTON M. SMILEY

Increased choices in the marketplace are forcing libraries to pay much more attention to how they market themselves. Libraries can no longer simply employ an inward marketing approach that speaks to current users through printed materials and promotional signage plastered on the walls. Furthermore, they cannot rely on occasional mentions by the local media as the primary driver of new users.

That's why in 2016, Capital Area District Libraries (CADL), a 13 branch library system in and around Lansing, Michigan, began using more digital tactics as a cost-effective way to increase our marketing reach and to have more control over promoting the right service, at the right time, to the right person. One example of these tactics is ad placement on the Weather Channel App. This placement allows ads about digital services like OverDrive and hoopla to appear when certain weather conditions, such as a snowstorm, occur in the area.

In 2017, while attending the Library Marketing and Communications Confer-ence in Dallas, our Marketing and Commu-nications Director had the good fortune of sitting in on a presentation by Trey Gordner and Bill Mott from Koios (**www.koios.co**) on how to receive up to $10,000 of in-kind advertising every month from a Google Ad Grants (**www.google.com/grants**). During this presentation, Koios offered partici-pants a 60- day trial of their services to help secure the Google Ad Grants and create a few starter campaigns. Google Ads are text-based and appear in the top section of Google's search results, along with the ads of paying advertisers. Nonprofits in the Google Ad Grants program can set up various ad campaigns to promote whatever they like—the overall brand of the library, the collection, and various events, meet-ing room offerings or any other product or service. The appearance of each Google Ad is triggered by keywords chosen for each campaign. After CADL's trial period expired, we decided to retain Koios to oversee the Google Ad Grants project.

While the library has used Google Ads for the sharing of video, we had not done much with keyword advertising. So, we were excited to learn more about the
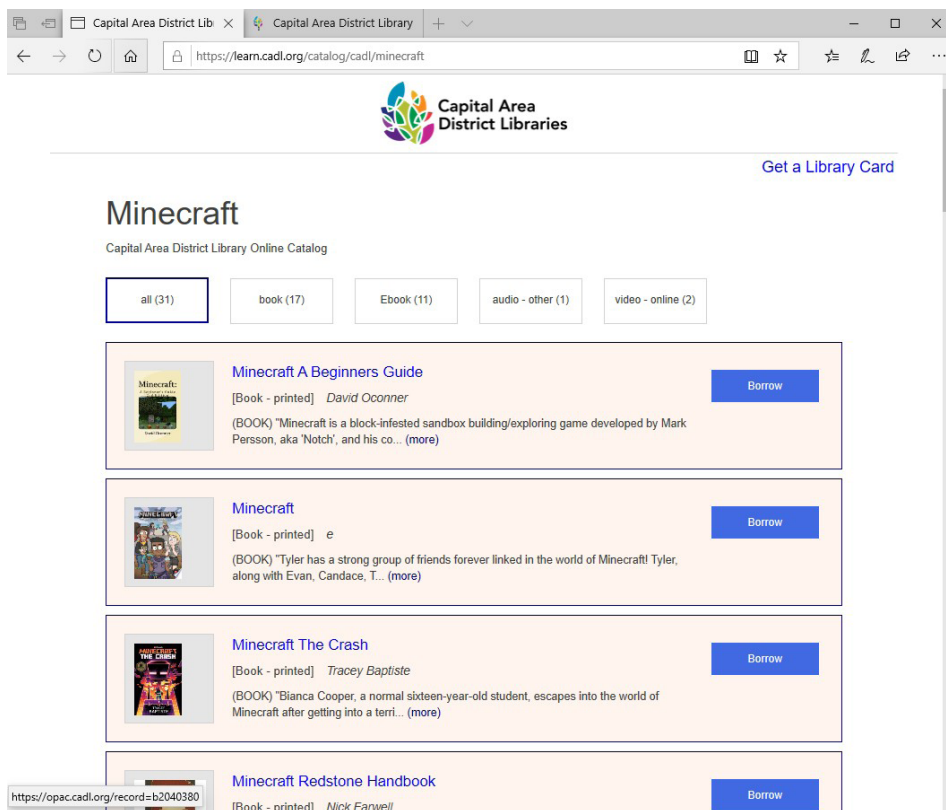
Figure 1. Example of Minecraft title keyword landing page created by Koios.

process of using keywords and the funding available through the grant. We viewed this as a great new tool to add to our marketing toolbox. It would help us achieve a few of our marketing goals: expanding our overall marketing reach and digital footprint by 50 percent; increasing the library's digital advertisement budget by 300% (by using alternative funding); and promoting the right service at the right time.

GETTING STARTED

Koios coached us through the slalom course of obtaining accounts and setting them up. To secure the monthly ad grant, we first obtained a validation key from Tech Soup (**www.techsoup.org**), the nonprofit that makes technology accessible to other non-profits and libraries. That, in turn, pre-qualified us for a Google for Nonprofits account. (At the time, we were able to get a validation token from our existing Tech Soup account, but Koios currently recommends starting by registering a 501c3 Friends organization or Library Foundation with Tech Soup whenever possible.) After creating our Google for Nonprofits account, we used the same account username to create a Google Ads account. Finally, to work efficiently with Koios, we provided them access to our Google Analytics property (which we have configured to scrub patron identifying information) and our Google Tag Manager account (with the ability to create tags that we in turn review and approve). If you are taking the do-it-yourself approach, Google has a step-by-step Google Ad Grants activation guide and extensive help online.

DESIGNING CAMPAIGNS

Spending money well is hard work and that holds true with keyword search ads as well.

There are some performance and ad quality requirements in the grant program that must be observed to retain your monthly allotment. Understanding these guidelines and implementing campaigns that respect them, while working well enough to spend your grant allocation requires study and patience. Again, we relied on Koios to guide us. They helped us create campaigns and ad groups within those campaigns that were effective within the grant program.
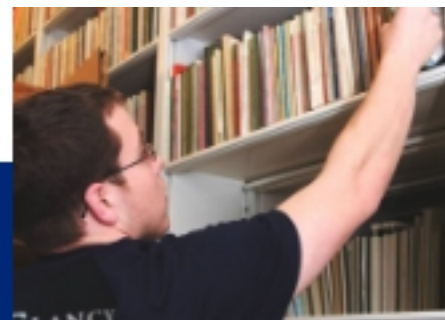
In August 2018, we started with campaigns for general branding awareness that included ads aimed at people actively searching for local libraries and our core services. These ads funnel users to our homepage and our online card signup. They are configured to display only to searchers who are geographically located in our service area. This campaign has been grown and perfected over 18 months into one of our most successful campaigns, garnering over 2,300 impressions and 650 clicks in January 2020, yet it spends just $450 of our grant funds. Another consistent performer for us has been our Digital Media campaign with ads targeting users searching for eBooks and audiobooks. By June 2019 we had grown our grant spend to $1,500 a month using 27 different campaigns.

The game changer for us has been working with Koios to create campaigns based on an export of MARC records from our catalog. We worked with Koios to massage this data into a very simple pseudo-catalog of landing pages based on item titles. The landing page is very simple and SEO friendly so that it ranks well in the split-second ad auction competition that determines whether your ad will be displayed. It has cover images, clear calls to action, loads fast, is mobile friendly and communicates the breadth of formats held by the library **(see figure 1)**. Clicking the item title or the borrow button sends users straight into our full catalog to get more information, request the item, or link to the digital version.

In Google Ads, Koios created 14 cata-

log campaigns out of the roughly 250,000 titles we sent them. Each campaign has keywords (single words and phrases from titles) derived from roughly 18,000 titles ranked by how frequently they are used in Google search. Again, these ads are limited geographically to our service area. Figures 2 and 3 illustrate what a Google searcher in Ingham County, Michigan, potentially encounters when searching for "dad jokes".
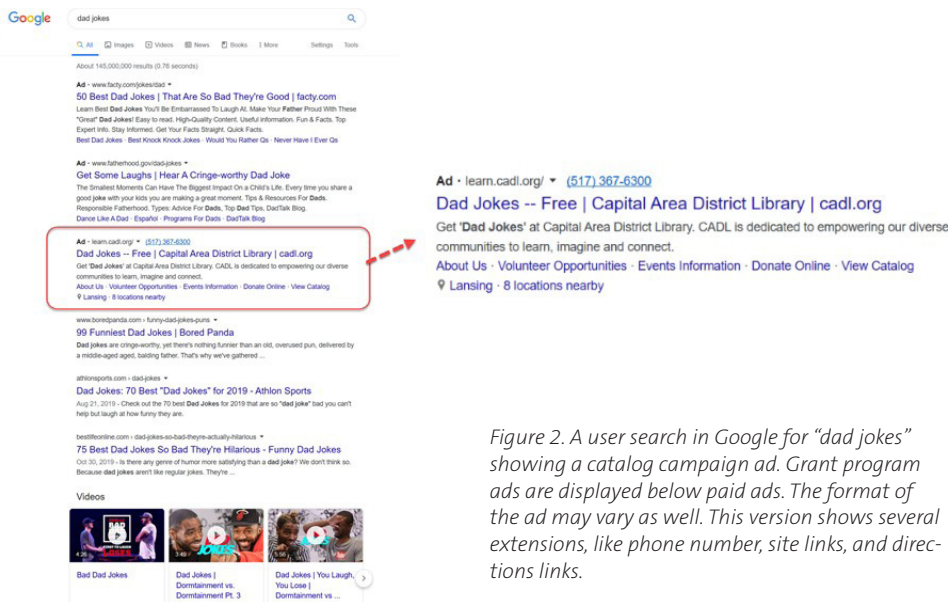
Since their inception in September 2019, these catalog campaigns have been top performers for us, generating clickthrough rates of 8-15% and a couple thousand additional ad clicks monthly, the aggregation of a small number of clicks on any one ad from our "long tail" of titles. We are now spending over $5,000 of our grant funds and garnering nearly 23,000 impressions and 3,000 ad clicks monthly.

RESULTS

In general, we find that our Google Ads have succeeded in drawing additional new visitors to our web site. Using our long-established Google Analytics implementation that measures visits to our website and catalog combined, we compared the third quarter of 2018, when we were ramping up our Google Ad Grants campaigns, to the third quarter of 2019, after our catalog campaign was firmly established. The summary numbers are encouraging. The number of users is up 17%, and number of sessions is up 4%. Within the overall rise in users, returning users are up 9%, but new users are up 25%. Therefore, we are getting more of those coveted, elusive "non-library-users" to visit us online. When comparing the behavior of new and returning visitors, we also see that the overall increase in sessions was achieved despite the head wind of a 4% decline in returning visitor sessions.

However, are the new visitors engaging? Perhaps the most tangible measure of engagement for a public library catalog is placing holds. We have a Google Analytics conversion goal that measures those holds. The rate of conversion on the hold goal among new visitors rose 7%, while dropping 13% among returning visitors. From other analysis, we know that our highly-engaged members are migrating to our mobile app and to digital formats, so the drop for returning users is explainable and the rise among new visitors is hopeful. We are working on ways to study more closely these new visitors so that we can discover and remove more barriers in the way of them becoming highly engaged members of their public library.

FUTURE PLANS

With the help of Koios, new campaigns will be created to promote our blogs and podcasts. We will also link a campaign to our Demco events database. Finally, in partnership with Koios, we will work with Patron Point to incorporate our automated email marketing system into Google Ad campaigns. We will add campaigns for pop-up ads that encourage library card signup through our online registration system. Once someone signs up for a library card online, the system will trigger a welcome email that promotes some of our core services. This on-boarding set-up will also include an opportunity for the new card-holder to fill out a form to tailor content in future emails to their interests. Through all these means, CADL leads the way in delivering the right service, at the right time, to the right person. ∎

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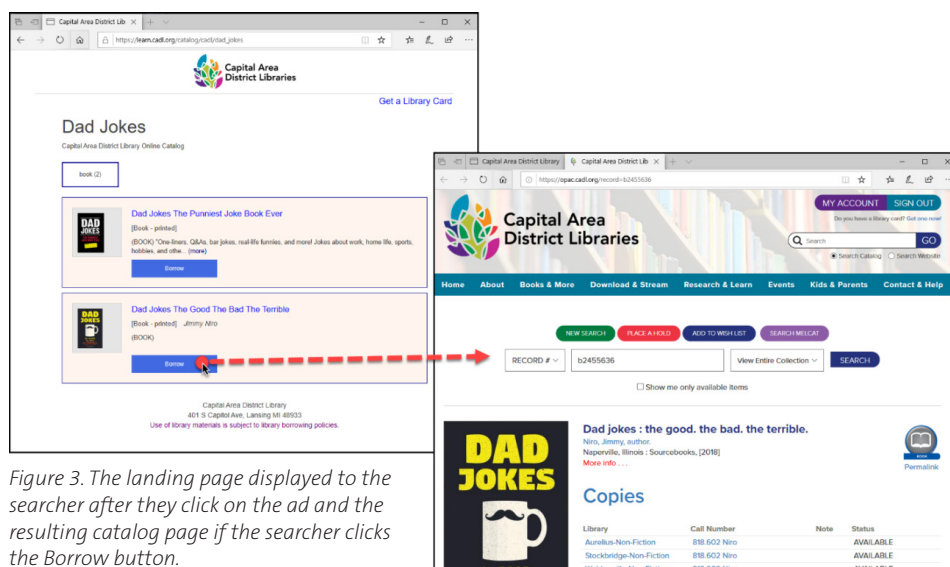
Figure 3. The landing page displayed to the searcher after they click on the ad and the resulting catalog page if the searcher clicks the Borrow button.

A Circulation Worker Visits Special Collections

BY ANNE KRISTEN HUNTER

In spring 2019, I started an internship in the Special Collections department in Ingram Library at the University of West Georgia (UWG). I worked with Dr. Michael Camp and learned the basics of archival processing while working with two collections of documents donated by Congressman Mac Collins (R-GA, 1993–2005). When I started the internship, I had already worked for more than a year in the Circulation department at Ingram. The internship was, for me, a bit of professional cross-training, as well as a requirement for the post-baccalaureate Certificate in Museum Studies offered by the Public History program within UWG's History department.

I started working with miscellaneous documents and artifacts that were transferred by Congressman Collins when he left office, and later moved back in time to process documents from his final term in office. The first set of documents and photographs I worked with were part of a larger series of Collins's Washington, DC office files. Then I processed, from beginning to end, a complete series of awards and certificates. Finally, I processed a series of invitations received during the 108th Congress, 2003–2005.

My initial mental image of archiving was wrong in two major ways. I should add that I know from experience that initial impressions of academic disciplines are nearly always wrong. Students think that learning criminology, for example, will be like watching *Law & Order* or *CSI*; they expect that studying psychology will primarily be about the hunt for serial killers. My own mistaken images of archiving probably come from television as well, and notably, from social media. The two images I had in mind were, first, of the sort of dusty backrooms of file cabinets that our heroes break into to find the villain's personnel file, and second, of viral video montages of people in white gloves

painstakingly restoring badly-preserved Renaissance oil paintings before showing off a dramatic before-and-after reveal of the repaired and revarnished art. Unsurprisingly, both these mental images missed the mark.

First, I quickly learned that archives are primarily for people rather than being for the materials they house. The purpose of an archive is not simply to store old documents, it is to provide access to those documents to people who want to see them. While I was working at my internship, I saw professors and graduate students gathering data for

their research, a radio journalist preparing for a series of broadcasts about the university's history, community members looking up genealogical records and examples of their ancestors' appearances in the local news of the day, and even undergraduate students wanting to view primary documents as part of a class project. It was not just that I was wrong in thinking that the archive was un-used; I was wrong in thinking that its purpose was anything other than to be used. The archive, I learned, was not for preservation-for-preservation's-sake, it was

for people to be able to access the materials that were being preserved.

Second, I learned that the vast majority of documents in the archives were far from being delicate and unique in the manner of 500-year-old oil paintings. Many of the documents I was working with were not even 15 years old yet, and most of them were far more ordinary than I had imagined. As archivists have realized at least since the 1980s, contemporary collections consist in large part of very routine documents that have essentially no intrinsic value as objects; they are only valuable for the historical information they contain (Ham, 1984). I saw office manuals, Republican Party conference schedules, countless scheduling emails, and all sorts of payment and reimbursement vouchers, all printed on ordinary white office paper, exactly the same kind we use for our own routine office business upstairs in the Circulation department.

My supervisor, Dr. Michael Camp, started introducing me to the internship by giving me a tour of the facilities. He also assigned me some reading about what he considered to be the most important issues in archiving today, and explained his perspective. Special Collections at the University of West Georgia includes faculty offices, a reading room for people to view documents, the main archive, and a special "off-site" storage facility in another campus building across the street. Special Collections also controls a temporary exhibition space and a permanent display of objects from the office of Georgia Representative and Speaker of the Georgia House Tom Murphy. The main archive inside Ingram Library houses the majority of the processed papers, while the off-site facility houses the rare books and almost all unprocessed papers. Our first trip off-site was to retrieve the first batch of papers for me to process; we returned a couple more times during the semester for the same purpose.

My reading started with Mark A. Greene and Dennis Meissner's (2005) "More Progress, Less Process," which Michael said he considered to be the most important article currently guiding archival practice. Michael also showed me how documents were organized within the archive. Collections contain series (and occasionally sub-series); series are made up of folders. Folders in turn are housed in numbered boxes, which are housed on numbered shelves. I think one of my biggest surprises, early on, was realizing that there is no complete inventory

of every item in every folder. That is simply not how archival records are kept. Michael also showed me the finding aids that act as the archive's catalog. I saw how scope and content notes described the collection, and how container lists tracked the folders in each box. Michael explained that he views archiving as an art, rather than a science. There are some norms, precedents, and traditions to follow, but both the final organization of a collection, and especially the specific steps taken to arrive at it, are necessarily particular to the individual archivist.

I began processing by simply viewing already-processed papers from Collins's DC office files. I processed a handful of miscellaneous folders holding constituent letters, invitations, and research Collins's staff conducted to help inform his legislative decisions. Once I had a handle on the basics, Michael moved me on to my first real project, processing a portion of the office files related to Collins's participation in the Congressional Art Caucus's annual art show. Each year, Collins's staff helped

organize an art competition among Georgia high school students living in his district, a viewing and reception for the competition winners in Georgia, and then transportation to Washington DC for the winners to participate in "An Artistic Discovery," the Art Caucus's annual show. Collins's staff had already created a separate folder for each year, and following current best practices, I simply refoldered these into acid-free folders (Greene & Meissner, 2005). Collins's staff had also produced a pair of photo albums that spanned multiple years. For these, I really did wear gloves, to avoid getting fingerprints on the photographs, as I disassembled the albums and put each year's images into their own folders. Seeing how badly the album pages under the photographs had degraded, even just since the 1990s, really drove home to me how important it is that archival storage be acid-free.

After completing my work on the art shows, Michael gave me an entire archival series to complete from start to finish. We pulled all the boxes that contained awards

and certificates Collins had received over the years, and I was given responsibility for unboxing all the objects, organizing them, disassembling bulky picture frames when possible, then reboxing the artifacts in an order of my choosing, and writing scope and content notes and container lists for the eventual finding aid. Even the awards were more ordinary than I originally expected. Collins had dozens of wooden plaques celebrating him as "taxpayer hero" or a "small business champion," given to him again and again by the same few organizations over the years. There were surprises as well. We found a signed, numbered art print from American outsider artist Rev. Howard Finster. We also found an original copy of a newspaper political cartoon. It appeared to have been given to Collins as a gift by the cartoonist, although I was never sure why, since the content of the cartoon didn't seem to have anything to do with him. But those two stand out in my mind because they were unusual. As I'm sure most archivists and most historians already know, most of what we collect is usual. The few extraordinary items stand out because most items are ordinary.

The tail end of the Miscellany collection, the collection of all the things Collins's staff boxed up when he left the House in 2005,

held a few more surprises. I found a couple of oversized binders with photocopies of press clippings. For over a decade, it had been someone's job to find every time Collins showed up in a newspaper and to make a photocopy, and all those copies ended up boxed with his awards. I also found an incredibly curious letter. It was unsigned, but purported to be from Fidel Castro, and was addressed to a Democratic Congressperson, explaining why he, Castro, was declining to attend the 1999 World Trade Organization meetings in Seattle, Washington. According to the envelope I found it in, it had been mailed to Collins by the Swiss ambassador to Uruguay, but there was no other accompanying information. I imagine there must be a really fascinating story behind that letter, and the circuitous path it took to land on Collins's desk, but I have no idea what that story might be. I have no idea if the letter itself is genuine, or if its supposed provenance is authentic, but even as a possible forgery or hoax, it seems fascinating.

My final archival project was to process all the invitations Collins received during his final term in office, the 108th Congress from 2003 to 2005. These were perhaps the most ordinary documents I worked with all semester. Collins accepted invitations to attend mandatory GOP conference meetings

and members' only briefings about the Iraq War. He rejected invitations to events held in Georgia while he was in DC, or vice versa; he rejected events that posed scheduling conflicts because they were at the same time as other events. A close historical reading might uncover other patterns in his acceptance and refusal of his various invitations, but as Michael pointed out to me, interpreting the artifacts is a job for historians. Our job as archivists was to make the documents available so that historians could actually access them.

While processing the invitations, I really struggled with Greene and Meissner's directive to engage in "less process" (Greene & Meissner, 2005) to avoid paying too much attention to the individual items in each folder, and to avoid repeated re-handling of the same folders and items. Partly, I struggled because I was still learning. I didn't want to remove staples gratuitously, for example, but each time I went back through a folder, I felt like I saw another batch that needed to be removed. Initially I only pulled a certain style of staple that was already causing rust damage. Then I pulled excess staples from documents where Collins's staff had used a half-dozen staples to hold together a dozen pages. Finally, I also removed staples from instances where a heavy cardstock invitation was affixed to an ordinary page of office paper, because I realized that the ordinary paper couldn't really support the weight of the pairing without damage, and I wanted to prevent that damage as much as possible. As a second example, I also took several tries to put all the papers in their folders staple-side up, successfully alternating folders with wide corners on the right and left. It's a simple technique to maximize how many folders fit in a box, but it still took me about half the semester to apply it consistently.

But the other challenge of trying not to over- process the invitations came because of the same problems Steven Gentry (2014) wrote about in his attempts to apply Greene

and Meissner's ideas to a collection of a college president's office papers. In addition to needing to pull staples for the purpose of document preservation, I also needed to find and photocopy every sticky note Collins's staff stuck on one of his invites. The sticky notes all needed to be removed, for the same reason I had to disassemble the photo albums, to prevent degradation over time. (And as an aside, let me add that Congressional staff members, or Collins's staff at least, are very fond of re-positionable sticky notes!) But finding all those notes in the first place required item-level attention to detail, and photocopying and removing them required me to go back again through folders I had already processed, while item-level attention and multiple pass-throughs are both practices that Greene and Meissner discourage.

There was also a need to help protect the privacy of Collins's constituents and his staff members, as well as a need to avoid retaining historically worthless records like Collins paying his office phone bill every month, or purchasing bottled water, printer ink, and copier toner. I found a few instances of people's Social Security Numbers (SSNs) written on documents. Some I caught the very first time through, because there were several SSNs on the same page, or because they were displayed fairly prominently. But some I didn't notice until my second or third pass through the same folder, because the SSNs were jotted down as a handwritten

note that I hadn't looked closely enough at the first time. Item-level attention and multiple pass-throughs were the only thing that let me save those people's privacy. As for the billing records, I mostly passed those on to Michael, so he could evaluate what part of them, if any, needed to be retained for the sake of any future historians interested in Congressman Collins.

As I said, I struggled with Greene and Meissner's advice, because I wanted to follow it, but I also wanted to do my internship work correctly. And in one sense, doing my work correctly meant following their advice so that I was not wasting Michael's time or my own. But in another sense trying to follow their advice conflicted with doing all the tasks my work required. I talked to Michael a few times about managing this conflict. He encouraged me to focus more on the quality of my work than on my speed, to be sure I was doing things correctly, keeping appropriate records to add to the scope and content notes, and making accurate container lists of my boxes. And together, Michael, his graduate assistant, and I worked fast enough to finish processing one partially-completed collection and to process a second from start to finish, all in one semester.

My internship taught me the basics of archival processing, enough that I could now probably take a small collection, process it, organize it, file it away, and write an appropriate finding aid to provide researchers access to it. My internship also gave me a glimpse into the larger responsibilities Michael and the other archivists undertake. I saw Michael scheduling oral history interviews, corresponding with potential donors—not financial donors, but rather donors of documents and artifacts—and I saw him bring in newly acquired collections that his solicitations had secured. I helped Michael install an exhibition of archival

materials about immigration, and attended a reception for the opening of the exhibit, Borders Real and Imagined: Georgia Immigration Politics in the Twentieth and Twenty-First Centuries, Thomas B. Murphy Reading Room, Ingram Library, UWG, January 24 to May 10, 2019, curated by W. Michael Camp with Lalah Manly and Anne Hunter. I saw the other archivists supervising their own interns, student workers, and volunteers. And I saw all the work that goes into helping people access the archive—pulling boxes, finding folders, answering questions. Special collections is a different world than circulation, where I've been until now, and I appreciated the opportunity to participate in that world. ■

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Library VHS in Danger

» Media Preservation in Academic Libraries

BY LEETTA SCHMIDT

Preserving the cultural record is an intrinsic function of libraries, and an activity that is explicitly permitted in U.S. copyright law. Section 108 of the Copyright Act of 1976 (2012) describes reproduction activities allowed to libraries for published and unpublished works, as well as for preservation, loss recovery, and library services. Yet, it is unclear how comfortable and, if comfortable, how regularly libraries are making use of this provision to maintain the entirety of their collections. Advancements in media access and delivery, where one format overtakes and replaces another at rapid rates and where carrier materials are not typically made to last, create a pressurized situation where libraries must choose to preserve materials before they are no longer able to do so due to advanced deterioration and equipment failure. Video Home System (VHS) is the perfect example of this situation.

As far back as 1997, VHS was identified as a medium that, from its inception, was impermanent, and was considered an interim and discardable format (Forgas, 1997, p. 44). However, VHS tapes and the videocassette recorders (VCRs) that played them contributed to and advanced the desire of the general public to consume and create culture. With VHS came a rise in the number of amateur movie-makers, the creation and proliferation of video rental services, and a glut of access to films not before seen when movie-watching was restricted to theaters (Gary, 2015). In an article detailing Yale's collection of horror and exploitation VHS, David Gary goes on to point out that though "digital streaming has made [VHS] mostly irrelevant to the general public," about 40% of content issued in VHS format has not yet been shifted to any other medium (2015).

Perhaps not even counted in this statistic are the video recordings of local events, oral histories, training or instruction videos, etc., that are often housed in library media
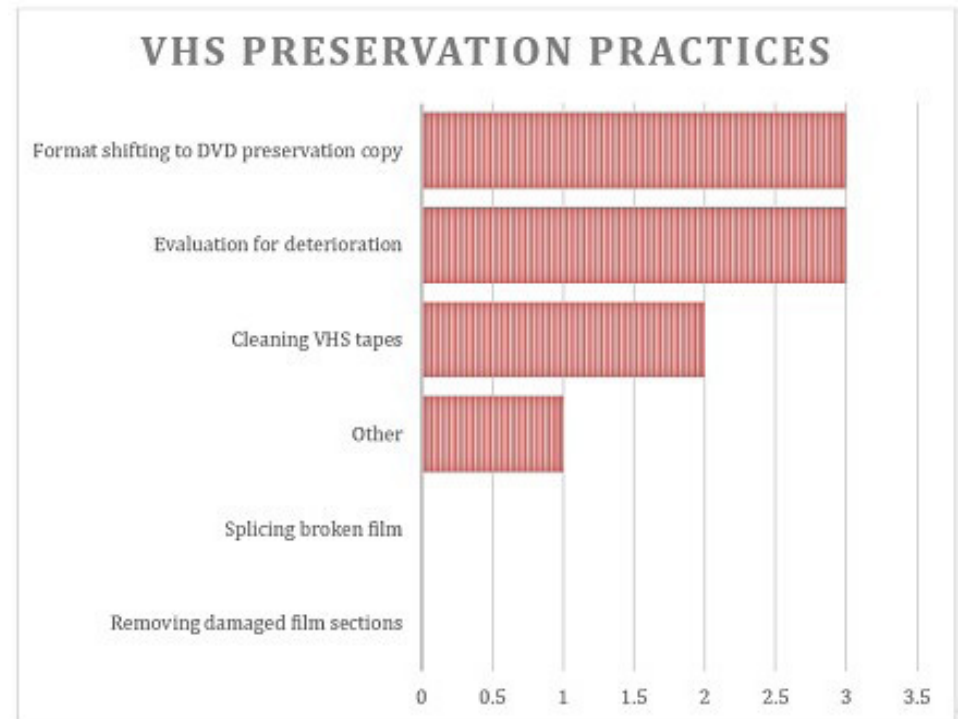

Figure 1. VHS preservation practices (n=14)

collections. Like the amateur movies that once filled video stores, difficulty in locating the rights-holders and lack of access or interest in obtaining permissions to redistribute the video in new media formats could mean that libraries are singularly situated to preserve the content. An example of this situation can be found in C. N. Turner, a director, whose low-budget VHS horror movies became cult classics. Though there was interest by a distributor to reissue them on Digital Video Disc (DVD), Turner could not be found to grant the rights for the distribution (Enis, 2016). Yet libraries do not seem to be making moves to confront the issue of VHS as a dying format. As Matt Enis pointed out in his "Please Rewind" article, "we're forgetting one of the most important technologies between the history of television and the Internet—analog videotape. We're just dismissing it because it's difficult and expensive to manage, but that doesn't make it any less important" (2016, p. 45). The Association of Research Libraries (ARL) as well,

in their *Code of Best Practices in Fair Use for Academic and Research Libraries* (hereafter, Best Practices), called upon libraries to migrate in-danger materials before those works "disappear completely" (2012, p. 18).

The ARL's *Best Practices* and the *Copyright Guidelines from Video at Risk* (2012) attempt to give libraries some guidelines for preserving at risk materials like VHS. These guidelines give libraries a map to the kinds of preservation, reproduction, and format shifting activities that are allowed under copyright law. They are an indispensable tool to overcome what has been considered one of the main obstacles in confronting a VHS preservation project: that is, avoiding infringing upon the exclusive rights of creators granted by copyright law. This study seeks a more certain understanding of how common it is for academic libraries to preserve their VHS collections, and how they are making use of both the exceptions in copyright law and the available guidelines written to assist libraries in developing their

preservation programs in accordance with copyright law. Through a review of the literature, this article will look at the demands on libraries to provide content in VHS format and compare current programs of VHS preservation and format shifting. Programs of both preservation and format shifting are discussed because, though they may have different underlying reasoning, both program types may utilize the same exceptions in copyright law and result in some type of digital access to content stored in VHS format. Through a survey of Research 1 (R1) libraries, it will provide a view of existing preservation and format shifting programs in academic libraries.

LITERATURE REVIEW ENVIRONMENT

Since academic libraries are primarily driven by the needs of their faculty, staff, students, and other institutional communities, it is valuable to establish the need that such stakeholders have for video material, some of which may be in VHS format only. Several researchers report that video is heavily used in higher education by faculty as both primary and supplemental course materials (Otto, 2014; Laskowski, 2003; Morris & Currie, 2016; Leahy, 2015). Additionally, a study by Leahy (2015) found that third-party video was most often used by instructors, and that instructors were not relying most on videos either they or their students made.

Otto (2014) found that faculty may prefer Web-based video but were open to using any format from 16mm film to Blu-ray, including VHS. A later study reported an increase in requests for streaming versions of videos that were available in physical formats and that faculty were often very specific about the versions of documentaries, plays, etc. that they wanted to use (Morris & Currie, 2016). A correlation could be drawn that a faculty member's preference for Web-based or streaming content may not actually reflect whether the content exists in that form without conversion from an older, physical, format. Another study by Rodgers (2018) further points out that, though a "professor would rarely assign an out-of-print book as a primary course text and expect a class to share one library copy, . . . out-of-print films are often the norm in film studies, and the library is expected to provide access to them" (p. 2).

Perhaps the predilection of faculty for using out-of-print film is why Rodgers found that the library was expected to provide the content. Spicer and Horbal's evaluation of
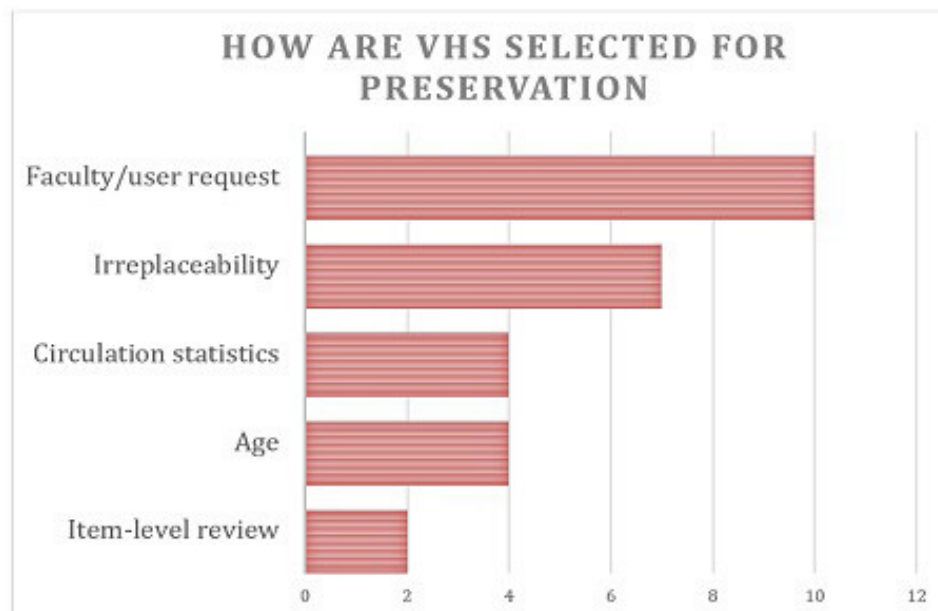

Figure 2 VHS preservation criteria (n=14)

the use of media in classes focused on the classroom technology support available to faculty in buildings on campus. They found that most institutions in their survey group had predetermined phased retirement plans for media playback devices in campus classrooms, which were not communicated outside their department. If confronted by faculty requesting VHS or DVD playback ability, the audiovisual (AV) support units surveyed by Spicer and Horbal (2017) indicated their first piece of advice would be to digitize the item, thereafter referring the faculty member to the library or other campus video provider.

Both the phenomenon of faculty utilizing out-of-print videos in classes and the phased retirement of playback devices by classroom technology staff turn a spotlight on the library as a primary access provider of pedagogically necessary video content. Additionally, there are whole swaths of videos that may never be offered in an updated format. For example, both *Frontline* and *American Experience*, two popular PBS documentary series, obtain only limited licenses to use the content within each program. Within anywhere from three to ten years, the makers and producers of the content would no longer have the ability to sell the program unless the licenses were renewed at significant cost. Customers on PBS websites are often referred to their local library collections and interlibrary loan services (Frontline, personal communication, 2015; Frontline, FAQs, 2015; *American Experience,* 2015).

AVAILABLE GUIDELINES FOR LIBRARIES

Out of print materials and the unique, locally made videos in library collections are prime resources for which the library should make replacement copies. This instruction has been given to the library community within Carrie Russell's review of the video-lib listserv (2010), in ARL's *Best Practices,* and in *Video at Risk.* Both the ARL *Best Practices* and *Video at Risk* discuss when a video can and should be evaluated for replacement, either in deference to the limitations on exclusive rights of fair use or reproduction by libraries and archives—Sections 107 and 108 of U.S. copyright law respectively. Both documents suggest that when evaluating a damaged or deteriorated video, or a piece of media that is in a difficult-to-access or obsolete format, the first step of the library should be to exhaust the market for an equivalent and reasonably priced replacement. These documents also recommend that libraries should not provide access to both copies at once, restrict off-premises access to the material, and provide full attribution for the copy (ARL, 2012; *Video at Risk,* 2012). *Video at Risk* gives further advice for what constitutes "damaged or deteriorated" in relation to VHS, including visual or audio drop out, color and sound loss, etc. It also elaborates on what aspects of video preservation should be fully documented by the library, including a search for a commercial replacement and the evaluation of deterioration (Video at Risk, 2012). Both documents recommend restricting public access to the copy to within the confines of the library premises, however, both make a distinction between
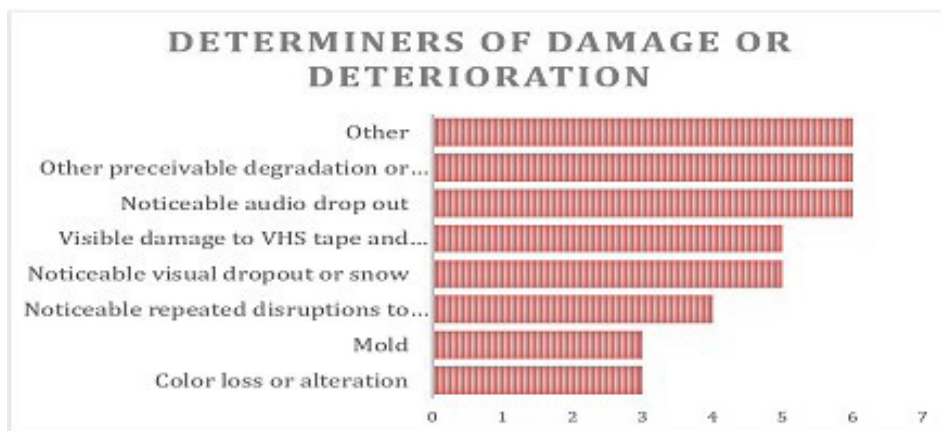
DETERMINERS OF DAMAGE OR DETERIORATION

Figure 3. Determiners of damage or deterioration (n=11)

authorized users, e.g. faculty on campus, and unauthorized users, e.g. general public, and describe allowances to authorized users for use on campus outside the confines of the library building. It is important to note that this distinction between user groups is not explicitly included in Section 108 of U.S. copyright law. Instead it appears to be a discussion and interpretation of the word "public" appearing in Section 108 (c)(2) which restricts a library's reproduction of a work: "Any such copy or phonorecord that is reproduced in digital format is not made available to the public [emphasis added] in that format outside the premises of the library or archives in lawful possession of such copy." (17 U.S.C. § 108, 2011).

LIBRARY PROGRAMS IN PLACE

The most notable library program for preserving VHS was a multi-pronged, grant-funded project involving New York University's Division of Libraries, the Moving Image Archiving and Preservation program at NYU's Tisch School of the Arts, and the circulating media collections of the University of California Berkeley and Loyola University that resulted in the *Video at Risk* instructional document. In light of perceived scarcity and possible loss of content access the Video at Risk team "sifted through circulating titles to identify the scope of obscurity for large numbers of documentaries, independent productions, art films, and other rare educational videos" (Cinema Studies, n.d.).

Even though *Video at Risk* provides thorough instructions for libraries, reports of library programs outside the *Video at Risk* project that actively format shift videos are rare. Other than the 2016 announcement of the preservation of Holocaust videos at Yale University described in "Please Rewind"

(Enis, 2016), digitization of videos is often linked to other services. One program, described by Eng and Hernandez (2006), extended the conversion and electronic supply function of the reserves program from print material to audio and visual.

The process reported by Eng and Hernandez utilized the Technology, Education, and Copyright Harmonization Act (TEACH) Act (2011) of U.S. copyright law to provide media based on exceptions for educators, and did not mention format shifting of media for the permanent library collection or as part of preservation. The TEACH Act addresses how instructors of non-profit educational institutions may perform lawfully made audiovisual material in an online class. It contains a number of conditions that must be met before the exception can be applied. Within the conditions and limits of the TEACH Act, a VHS tape or other analog audiovisual material may be digitized for use in digitally transmitted instruction. Section 110(2) (Title 17, US Code) places limits on the transmission of these works, including:

> (C) "The transmission is made solely for, and, to the extent technologically feasible, the reception of such transmission is limited to—
>> (i) students officially enrolled in the course for which the transmission is made; or
>> (ii) officers or employees of governmental bodies as a part of their official duties or employment."

Eng and Hernandez's project involved the local creation of a system that provided streaming access, and included a homemade Digital Rights Management (DRM) procedure to keep videos from being shared outside of the bounds of the

program (2006). Schroeder and Williamsen (2011) also reported on a streaming service developed by a library to meet the demands of faculty and students on campus when faced with unacceptable streaming options for academic institutions. Videos in VHS and DVD format were selected based on faculty use in classes and underwent a rigorous licensing search. This program also involved a homegrown system that kept track of licensing restrictions, permissions, and term dates, with the ability to block access based on an expiration date. At the close of the pilot program, most of the content added to the system was faculty- and student-created.

In addition to a system or method to keep track of permissions and licenses, De Stefano, Tarr, Buchman, Oleksik, Moscoso, and Moskowitz (2013) suggest that information on how the material was converted, what equipment and settings were used, as well as conversion dates and operator information should be added to the metadata recorded about the format shift for any preservation plan. Keeping track of information about the licenses and conversion is often not the largest burden of format shifting analog to streaming media for use in classes. Libraries must make sure that they have the infrastructure and technical ability to create the streaming copy, host it, and provide the security necessary to restrict further dissemination (Consortium of Academic and Research Libraries in Illinois [CARLI], 2014). That library programs like these usually start with and rely heavily on a licensing and permissions search is considered, by some, to be a step in the wrong direction. By paying fees to participate in activities allowed by copyright law, libraries are legitimizing "a new revenue stream for rights holders, and fees are now accepted by some as necessary for streaming a film" (Russell, 2010, p. 356).

For libraries that direct their efforts at obtaining collections of streaming media through available publishers and providers, the question of preservation does not vanish. Often libraries pay for access to, not ownership of, content, and that content will only be available as long as the publisher/provider's status and catalog remain the same. Very seldom are ownership and preservation addressed in library contracts (Moghaddam, 2007; Beh & Smith, 2012; Cross, 2012; King, 2014).

The small amount of literature on media preservation and format shifting

programs could indicate that only a small number of libraries are embarking on such projects. This is echoed by the findings of a survey of CARLI consortium members that showed only 18.2% of the libraries had converted physical discs to streaming. Again, emphasis was on obtaining rights and licenses or converting only out-of-copyright material (2014). This is in opposition to Forgas's 1997 prediction that "due to the impermanent nature of video tape, almost all institutions with video collections will undertake reformatting of some of the material held to a greater or lesser degree... (1997, p. 53)." Should a library adequately negotiate the right to preserve videos to which they have purchased access, grow their own collection of born-digital materials, or format shift physical media for digital preservation and storage, they will be embarking on a never-ending cycle of format and version shifting as technologies change (Kastellac, 2012; Schroeder & Williamsen, 2011). Preservation plans must consider the routine maintenance required for digital objects, lest libraries again be faced with cobbling together workarounds in order to preserve a format they let linger too long. Yale University was faced with just this situation during the digitization of its Holocaust interviews, when they had to "cannibalize" or 3D-print system parts to continue the project (Enis, 2016).

Beyond the need for robust storage systems and sophisticated recordkeeping, a library's primary obstacle to enacting a preservation plan that includes format shifting media remains copyright. Though granted unique exceptions in copyright law, libraries can be loath to take advantage of the special ways they can use material without infringement. In the library program that Schroeder and Williamsen (2011) described, which was designed to provide for the streaming needs of teaching faculty, the possible legal repercussions of misusing copyrighted content led the committee to focus efforts on creating a homegrown DRM that would protect the content. Concern over secure legal liability may also lead libraries to avoid such projects all together. Similarly, developments in licensed content where providers are restricting access to digital collections of public-domain materials create questions for libraries on what they and their patrons can do with such content (Klinefelter, 2001).

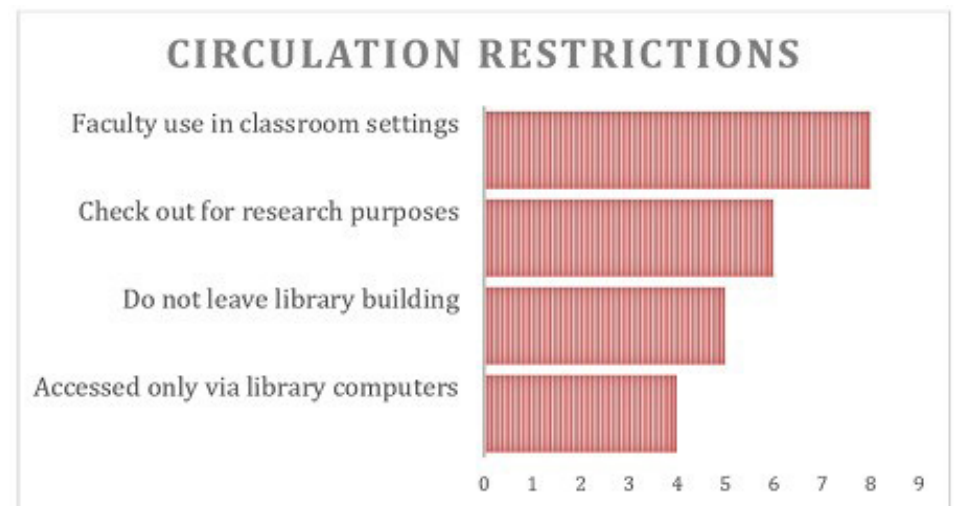Reproducing published work for preservation is an activity that is described in

Figure 4 Circulation restrictions (n=13)

Section 108(c) of U.S. copyright law, but the language of the statute can also create questions for librarians. In it, libraries can make a reproduction of a published work as:

. . . replacement of a copy or phonorecord that is damaged, deteriorating, lost, or stolen, or if the existing format in which the work is stored has become obsolete, if—
1. the library or archives has, after a reasonable effort, determined that an unused replacement cannot be obtained at a fair price; and
2. any such copy or phonorecord that is reproduced in digital format is not made available to the public in that format outside the premises of the library or archives in lawful possession of such copy (17 U.S.C. § 108[c]).

The words of the statute are filled with possible interpretations, only one of which, obsolescence, is clearly spelled out in the Section 108(c) (Title 17, US Code): "For purposes of this subsection, a format shall be considered obsolete if the machine or device necessary to render perceptible a work stored in that format is no longer manufactured or is no longer reasonably available in the commercial marketplace" For the others, Kenneth Crews (2001) pointed out in a paper prepared for the *Digital Music Library Project* that the statute does not clarify what constitutes a fair price or what qualifies as deteriorated. These concepts have also not been addressed by any judicial decision. And, though digital copies are specifically restricted to the library premises, there is nothing to address the "subtleties of a 'virtual library'" (Crews, 2001).

There is also nothing to address how reproductions of media made in deference to Section 108(c) impact the culture of sharing resources enjoyed by libraries internationally. As Klinefelter observed, "copyright and the related law of electronic resources is complicating and even compromising some traditional library services" (2001, p. 176). These traditional services, like interlibrary loan, are a way for libraries to meet the needs of their users when they cannot acquire every item a user may need. The digital preservation of material under Section 108 may ensure the material can be accessed sometime in the future, but the access points are restricted, specifically to the library premises, compared to national and international circulation currently enjoyed by materials in their original formats.

Finally, the setup required to begin a VHS preservation plan in earnest, to host and maintain digital copies for access by library patrons, or to seek out licenses to offer streaming videos further than it would seem copyright law allows, can become extremely costly and time consuming (Morris & Currie, 2016). This financial obstacle should be seen as something that can and must be overcome. "The building of hybrid media collections and a commitment to reformatting rather than abandoning collections will cost money, and librarians need to be prepared to argue why such practices are essential to protecting long-term access" (King, 2014, p. 302).

From the available literature, the conversation about digitally reformatting library VHS collections is one of confused purposes. Academic libraries are either acting to address faculty demands for video in classes, laying out complex processes for obtaining licenses and restricting access electronically,

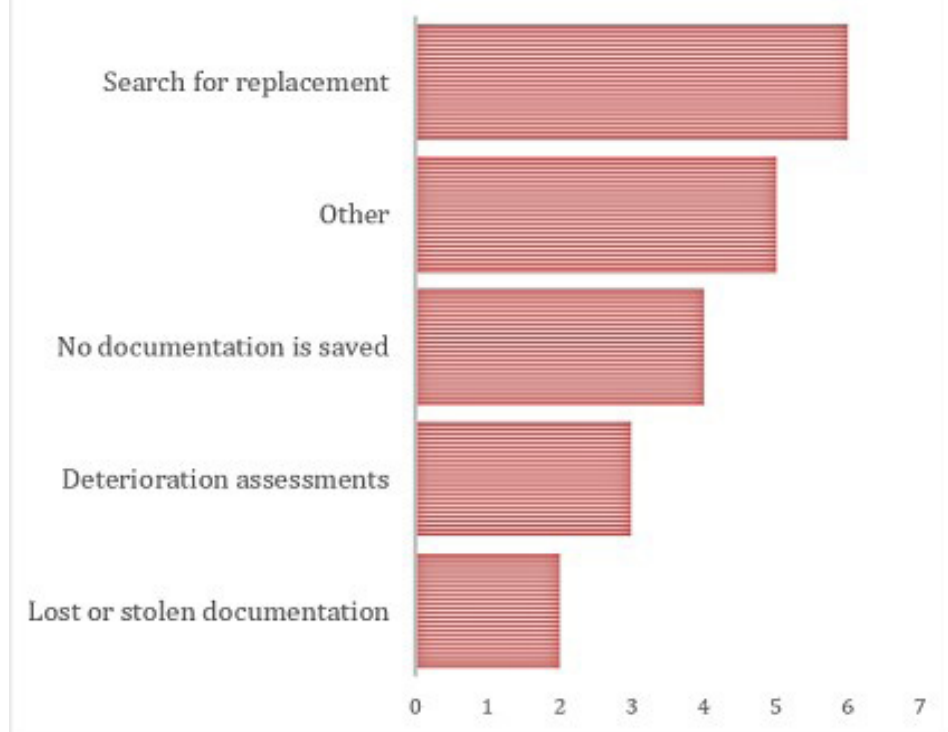# DOCUMENTATION OF VHS PRESERVATION ACTIVITIES

Figure 5. Documentation of VHS preservation activities (n=13)

or they are considering the archival preservation of media unique to their institution, which physically and digitally would live within the restricted access spaces of archives or special collections. Each program described above restricts the use and users further than is required by libraries preserving VHS in deference to the Section 108 exception in copyright law which would only limit access to the library premises: One by limiting the access to format shifted media to select classrooms; the other by retaining the restricted access to archives and special collections materials that digitally could enjoy access from points throughout the library. Each program also seems to exist independently of the other.

SURVEY METHODOLOGY

Since reviewing the existing literature did not reveal the extent which library VHS collections were being preserved for continued access, a survey of institutions was identified as one way to find out if libraries were utilizing exceptions in U.S. copyright law and available best practice documentation within their preservation plans. The survey population of 116 libraries was chosen from the list of university libraries which were

part of an institution that, as of 2017, had a Carnegie classification of Doctoral Research 1 (Carnegie Classification of Institutions of Higher Education, 2017). To determine whether library size or budget had any bearing on preservation practices, the library statistics gathered by the National Center for Education Statistics (NCES) were also collected. The collection size of the libraries averaged 8,779,078, with a range of 27,092,529 and a median at approximately 8,400,000. The reported expenditures of the libraries averaged $15,512,175, with a range of $46,982,159 and a median at approximately $14,600,000 (NCES, 2017).

Individual libraries were identified from the list of 116 R1 institutions. Library websites were searched, first for organizational charts and departmental pages to determine the best individual to contact regarding preservation practices and VHS preservation with regard to exceptions under section 108 of U.S. copyright law. If no such information could be found, individuals were selected based on job title via the staff directory. Because it was not always apparent who was the most qualified to answer the survey questions, the contact email requested that recipients forward on

the message if there were a more appropriate person.

Two major documents address how libraries can best preserve and digitize VHS materials in their collections within the bounds of copyright law: ARL's *Best Practices* and the *Copyright Guidelines* from *Video at Risk.* Survey questions were created in deference to these two documents, with the goal of capturing all aspects of video preservation at the surveyed libraries. Finally, the survey questions were reviewed by preservation, media, and related staff locally and externally prior to being delivered to the survey population.

The survey consisted of 21 questions, including an optional last question that asked that respondents willing to share more information to provide their names and email addresses. Survey logic was employed to shuttle respondents who reported not having policies or procedures past questions that asked for more detail. The survey was designed and disseminated using Qualtrix. A PDF version of the survey questions was supplied upon request to those respondents who wished to review the whole survey in advance of filling out the online form. After the initial contact, a reminder email was sent at 14 days, and again at 1 month.

RESULTS

Thirty-one responses were gathered from the original contact group of 116, a response rate of 27%. The Qualtrix system recorded that an additional seven respondents opened the survey but failed to answer any of the questions. Survey respondent locations were mapped and their size and expenditure checked to verify that the respondents were not grouped in any one location or were too similar in expenditure or collection size to represent the survey population. The geographic distribution of respondents was similar to the overall geographic distribution of the initial survey population. Similarly, the respondents represented the full range of AV collection size, budget allocation, and budget designated for preservation reported for the entire survey population within the NCES library statistics.

In answer to the first question, "does your library participate in the preservation and format shifting (copying to DVD or other) of VHS," fourteen respondents (45%) answered "yes", another fourteen (45%) answered "rarely", and three respondents (10%) answered "no". Respondents that

answered "no" were shuttled to the end of the survey and did not answer any subsequent questions. The three respondents who answered "no" represented libraries with an average collection expenditure of $14,444,463 and a range of $10,222,383 (NCES, 2017).

Respondents were then asked if their libraries had an established preservation policy or procedure for library collections. Twenty-five respondents answered this question. Nine respondents reported their library had a policy, ten respondents reported that they had an established procedure, and five respondents reported there was no policy or established procedure for preservation of library collections. The final one respondent reported that the only policy or established procedure for preservation in their library concerned special collections items. Eight of the respondents who had a policy or established procedure reported that it was established in the 2010s; additionally, three were established in the 2000s and two in the 1970s. Fourteen respondents answered the question on how often the policy or established procedure was revisited. Four reported yearly, six reported that it was revisited as needed or occasionally, with the remaining four respondents reporting that the policy or established procedure had no revision plan. To the question, "what departments or administration were involved in making the policy/procedure," six said preservation, three mentioned the involvement of a copyright librarian, and two described a committee of various people. The remainder of the fourteen respondents mentioned access services, media services, and Information Technology (IT). Ten respondents confirmed that their preservation plan included VHS preservation practices; four did not. Those whose library's preservation plan did not include VHS were able to skip the following questions specific to VHS preservation.

None of the respondents reported physical preservation practices beyond cleaning VHS tapes, and only two respondents confirmed that they do clean tapes if needed (Figure 1). Of the six respondents that reported they format shift their VHS to digital or streaming preservation copies, two included extra comments that reformatting materials to DVD was not considered optimal.

Fourteen respondents answered when asked which department was responsible for the evaluation, determination, and pres-
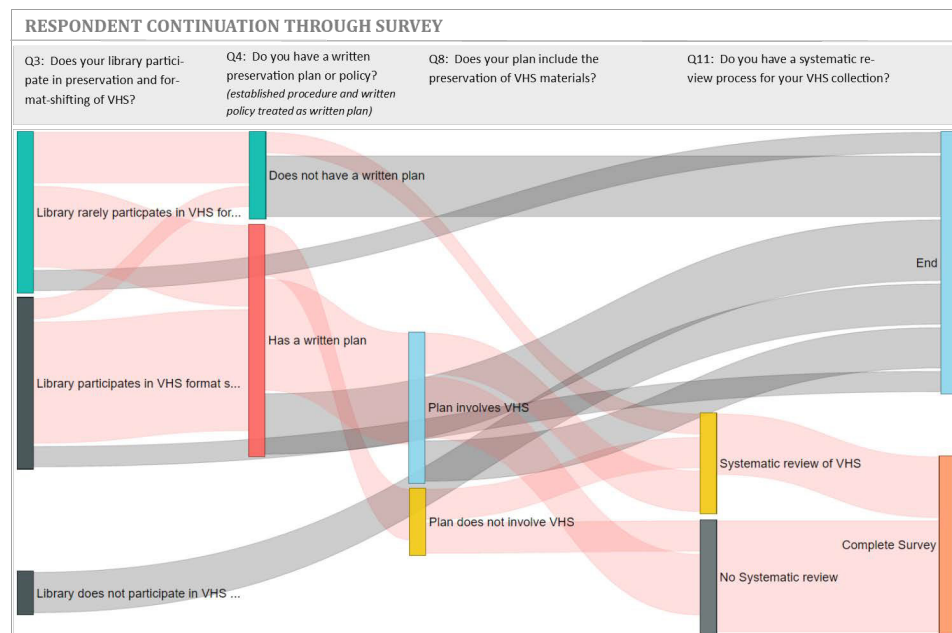

Figure 6. Respondent continuation through survey

ervation of VHS. Five respondents reported that technical services, or, more specifically, preservation, handled the process. Four respondents placed reformatting activities in Digital Collections or Scholarship Services, and the remaining five respondents reported that a variety of departments may be involved or capable of format transfer, with Media Centers and IT emerging as the most frequent departments other than technical services/preservation and digital collections/scholarship services. When asked if their library conducted any type of systematic review of VHS for preservation purposes, only two of the 15 respondents said they did. One other respondent reported that their library had recently completed a mass deselection of VHS, and so had very little collection left.

Respondents were asked what criteria they used to evaluate their VHS for possible preservation. The most frequently chosen criteria were irreplaceability and faculty or user request (Figure 2). Even though respondents were asked to select as many options as applied, five of the ten respondents who selected "faculty/user request" as a reason for selecting VHS to preserve and format shift, did so as their only selection to this question.

Audio drop out and other perceivable distortion were the most reported determiners of damage or deterioration when evaluating VHS for preservation, with six responses each (Figure 3). The same number of respondents selected "other" as had selected these first two categories. Their text responses indicated that selection

evaluations of age and irreplaceability were the primary considerations in the decision-making process, as all VHS were considered endangered or near obsolescence.

Thirteen respondents reported on how the format-shifted VHS content could be accessed by users of their libraries (**Figure 4**). Eight confirmed that the material could be accessed from classrooms on campus or checked out to be used in classrooms by teaching faculty. Six reported that the material could be checked out for research purposes. Of the twelve respondents who answered the question on how the original VHS was handled after format shifting, eight removed the material to a warehouse or remote storage, two stored the material in special collections, and two withdrew the material altogether.

Respondents were asked what kind of documentation they retain while considering and executing the preservation of VHS materials in their library collections (**Figure 5**). Six of the respondents reported that documentation related to a search for a suitable, unused, and fairly priced replacement copy was retained. "Other" was the next most popular selection, with five responses. The most common reason given for this answer was a lack of consistency across departments and types of activities. For example, documentation is kept only for streaming materials, or only for archival preservation.

Only eleven respondents out of fifteen confirmed that they noted the preservation copy in their library systems, with seven

libraries restricting the visibility of these notes to staff only. Four libraries confirmed they make no note, and none of the respondents reported that the preservation note they place in their library system mentions Section 108 of U.S. copyright law. A few of the respondents reported that they were either unsure of practice or consistency of saving notes on the preservation in their library systems, or that notation activities were in development.

To allow for further expansion of the study, survey respondents were asked if they could share their written policy or procedure. Only two libraries volunteered to do so and provided contact information. In light of the small response rate, the study was not expanded to include an analysis of policy and procedure.

DISCUSSION

Although the initial response rate among the survey population was considered good at 27%, only 12% of the individuals contacted continued through the entire survey. Most of the respondent drop off occurred at questions three, four, and eight (Figure 6). While the survey logic naturally routed respondents who answered "no" to question three to the end of the survey, questions four and eight did not. Ideally, the survey would have gathered a greater number of responses. However, the respondent libraries were equally distributed among a similar range of staffing, expenditure, collection size, and geography to the entire target survey population, which may support the efficacy of viewing the survey results as representative of the whole.

It is possible that orienting the question about whether a respondent's library participated in VHS preservation and format shifting as the first question encouraged contacts to forgo the survey if their answer was "no". However, we cannot include this hypothesis in our analysis of the results. What we can analyze is the 45% of respondents who stated that their libraries participated in format shifting of VHS. An additional 45% answered that their libraries format shifted rarely. This would seem to indicate that 90% of the respondent libraries participate in format shifting of VHS to some degree. Taken at face value, and assuming that our sample is representative of academic libraries in general, this aligns with Forgas's prediction that most libraries would preserve their media collections, to a greater or lesser degree, due to inherent im-

permanence (1997). Pairing the terms "preservation" and "format shifting" also may have caused confusion, as these can be two different processes in libraries, though both utilize the same exceptions in copyright law and result in digital access to content stored in VHS format.

Five libraries selected "faculty/user request" as the only method of video identification for format shifting. Two additional libraries indicated that special projects were initiated as requested or on a case by case basis, and an additional library selected "faculty/user request" and "other"—indicating that they followed different processes for archival preservation and user request was the only reason a general collection title would be preserved. Only two libraries reported that they had a systematic review of their VHS collections for preservation practices. Combining the results of these questions would seem to indicate that though a large percentage of respondents reported that their libraries did format shift VHS for preservation purposes, most library programs rely on user identification of needed titles and do not include any systematic review of the general media collections. The review of the literature also provided more examples of format shifting programs in direct response to faculty use of material in classes than it did for programs that evaluated whole VHS collections for preservation of content and access.

Outside of the *Video at Risk* project, preserving the content available in library VHS collections has not seemed to garner the amount of importance and attention in R1 libraries as one might expect (Forsberg et al., 2016). However, approximately half of the fourteen survey respondents who provided the most complete information on their local programs reported procedures and activities in line with recommendations from the Video at Risk Copyright Guidelines (2012). For instance, six out of the nineteen libraries that reported having an established policy or procedure favored shifting VHS content to digital storage over any other kind of media. Two respondents added that DVD and other optical carriers were not considered viable for preservation copies. The same half of respondent libraries that favored shifting VHS content to digital storage also retained documentation on, at least, the search for a replacement copy, as recommended in Video at Risk (Forsberg et al., 2016). Additionally, eight of thirteen reported allowing the format shifted videos

to be accessed in classrooms at the direction of faculty. Allowing the material to be accessed outside the library building to specific patron groups is a recommendation found in both the ARL Best Practices (2012) and Video at Risk (2012). This recommendation is in opposition with a literal reading of Section 108(b)(2) of U.S. copyright law that restricts digital format preservation copies to the "premises of the library or archives," though it is, perhaps, an activity that may be considered a fair use of the material.

CONCLUSION

There is still much opportunity for research into whether libraries are making full use of the Section 108 exception allowed to them under U.S. copyright law to preserve and maintain access to VHS collections. Of these, an analysis of library preservation policy documentation and an analysis of library holdings to ascertain the percentages of format-shifted content may be the next steps to obtain an expanded view of preservation and format shifting activities at libraries. Further investigations of this type may help to raise general awareness among libraries and library administrators of content that is not being adequately preserved for the future, and exploration of libraries' knowledge and comfort with copyright law and exceptions may help lay the groundwork for expanded programs in this area.

VHS has long been identified as a rare and at-risk medium that carries content not commercially available in any succeeding format, yet the routine preservation of this content by libraries does not seem to be occurring at a rate that one might expect of research libraries. The literature seems to indicate that preservation and format-shifting activities, either as combined or independent programs, happen in two different ways. Libraries may be supporting faculty by format shifting requested media in order to meet the demands of a classroom; alternatively, they may be evaluating the archival preservation needs of media unique to their institution. The most prevalent format shifting programs may be those that are demanded by teaching faculty. This would be a reasonable next step for a library that had built its media collection based on faculty instruction needs, as had the institutions that Spicer and Horbal surveyed (2017). However, questions among academic libraries over who shoulders the responsibility to provide curriculum materi-

als versus research materials, as was noted in Morris and Currie's study (2016) that looked at library policies regarding streaming media and gathered input from a library listserv, may stymie the growth of format-shifting programs created only for teaching purposes. Additionally, VHS that is format shifted for online teaching under the TEACH Act can be restricted to a small subset of library patrons.

Preserving and format shifting media in line with the section 108 exception to copyright law, however, would give libraries the ability to maintain access to their VHS collections while both the format and the players necessary to display the format are phased out on campus. The literature and survey results both seem to indicate that, outside of the Video at Risk project, this preservation is not getting the expected attention and activity in R1 libraries. One explanation for this may be that, as Enis (2016) pointed out, libraries are dismissing VHS because it is difficult and expensive to manage. Leaving a representative few libraries to shoulder the burden of VHS preservation and format shifting could create issues where some media that needs saving is lost. ∎

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Library Supported Open Access Funds

» Criteria, Impact, and Viability

BY AMANDA B. CLICK AND RACHEL BORCHARDT

INTRODUCTION

Libraries have been supporting open access (OA) publishing for more than a decade, often by administering funds dedicated to paying article processing charges (APCs). The literature provides some insight into the design, implementation, and evaluation of library OA funds, but no study has collected and analyzed the scholarship published using these funds. This study involved building a dataset of almost 1,200 publications funded by library OA funds collected from 16 universities. The authors compiled descriptive statistics and conducted an analysis of the research impact of a subset of the publications. In addition, the details and criteria of 55 active library OA funds were collected in order to better contextualize impact and identify trends in funding models.

The scholarly communications landscape is currently in a state of flux. Plan S was rolled out in the fall of 2018, with the goal of "making full and immediate open access a reality" (cOAlition S, n.d.). The University of California system has made headlines by canceling access to Elsevier after failing to agree on funding for OA publications (Kell, 2019). Librarians are exploring options and deciding how to best support OA efforts, and this research will inform these efforts. Those considering the implementation of a new fund, thinking about making changes to funding support for OA, or designing marketing and outreach plans around OA may find the results of this study to be useful.

LITERATURE REVIEW

In Knowledge Unbound, Suber (2016) defines the APC in this way:

> A fee charged by some OA journals when accepting an article for publication, in order to cover the costs of production. It's one way to cover produc-

Table 1. List of Universities that Contributed Funded Article Information to the Study Dataset

George Mason University	University of Massachusetts Amherst
Johns Hopkins University	University of North Carolina at Greensboro
University of California, Irvine	University of Oklahoma
University of California, San Francisco	University of Pennsylvania
University of California, Santa Barbara	University of Pittsburgh
University of California, Santa Clara	University of Rhode Island
University of Colorado Boulder	Virginia Tech
University of Iowa	Wake Forest University

tion costs without charging readers and erecting access barriers. While the invoice goes to the author, the fee is usually paid by the author's funder or employer rather than by the author out of pocket. (p. 413).

University of California Berkeley librarians laid out their argument for institutional open access funds as early as 2010 (Eckman & Weil, 2010). That same year, however, an opinion piece in D- *Lib Magazine* argued *against* institutional funds for paying gold OA APCs in favor of green OA self-archiving mandates (Harnad, 2010). Regardless, North American libraries have been providing OA funds to pay APCs since 2008, according to SPARC's (2018) *Open Access Funds in Action* report. Often these funds combine Gold OA with Green OA by paying APCs but also requiring authors to deposit manuscripts in the institutional repository.

The research on open access funds is sparse, and generally focuses on surveying librarians about perspectives on OA, or collecting feedback from fund recipients. There are also a number of case studies describing the implementation of specific OA funds (Pinfield, 2010; Price, Engelson, Vance, Richardson, & Henry, 2017; Sinn, Woodson, & Cyzyk, 2017; Zuniga & Hoffecker, 2016), which will not be discussed in this review

of the literature. Similarly, while concerns about the rise of so-called predatory publishing have been well documented, their implications for open access funds have not been well researched (Berger, 2017).

An international survey of libraries published in 2015 showed that almost one quarter of the respondents offered OA funding to authors provided by the institutional administration, library or academic departments (Lara, 2015). Librarians surveyed about their libraries' funds all used these funds to promote OA on their campuses to some degree. Monson, Highby, and Rathe (2014) found that some were "ambitious advocates" who hoped for "significant changes in campus culture," while others simply hoped to convince faculty to consider OA publishing a viable option (p. 317-318). A survey of faculty at large public universities that explored opinions about and behaviors toward OA demonstrated that respondents had varying expectations of library OA funding. Around 30% of total respondents felt that the library should not be expected to pay APCs, while half of the life sciences or medical faculty felt that it was appropriate for the library to contribute from $500 to $4,000 for APCs (Tenopir et al., 2017).

In 2015, librarians at Grand Valley State University surveyed the 50 recipients who received funds to pay OA article process-

ing charges over the 4 years that the fund had been active. Most faculty indicated that they chose to publish OA in order to increase the visibility of their work. Many expressed support for the OA movement, and noted that they would not have been able to pay the APC without the library OA fund (Beaubien, Garrison, & Way, 2016). University of California Berkeley librarians also surveyed the 138 recipients of APC funding from the Berkeley Research Impact Initiative (BRII). Funding recipients felt that "that their articles received more attention and had a greater impact that they might have had in a subscription journal" (Teplitzky & Phillips, 2016).

AIMS

This study was designed to explore the impact of the literature supported by library OA funds, as well as summarize fund guidelines and criteria. Our research questions include: What types of authors and publications are libraries supporting with OA funds? What is the research impact of these publications? How are library OA funds structured and maintained? Answering these questions allowed us to consider of future viability of OA funds in academia, as well as identify trends and potential best practices for institutions looking to establish or evaluate an OA fund.

METHODS
Dataset Collection
Using SPARC's 2016 list of library OA funds, we contacted 63 college and university libraries to request data on funded OA publications (Scholarly Publishing and Academic Resources Coalition [SPARC], 2018). We provided a spreadsheet template (see **Appendix A** for included fields) with instructions to either send existing data or complete as much of the template as possible. The 16 libraries listed in **Table 1** responded. From these responses we built a dataset of almost 1,200 articles, including data on discipline, authorship, journal, publisher and DOI. We chose a subset of 453 articles – those published in 2014 and 2016 - for additional impact analysis.

Impact Analysis
In March 2019, we collected citation counts and Altmetric Attention Scores for each article published in 2014 and 2016 using the Dimensions database (Digital Science, n.d.-b). We also collected Journal Impact Factors (JIF) from Journal Citation Reports
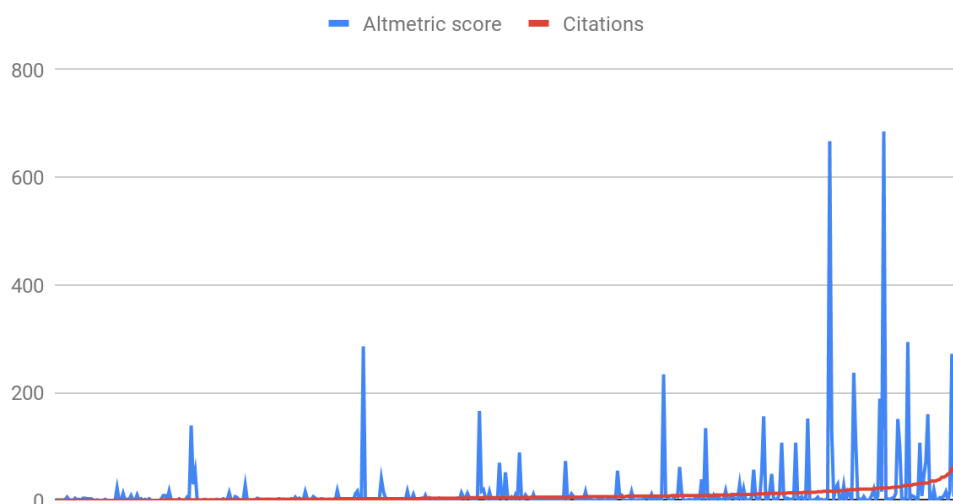
Citations and Altmetric Attention Score

Figure 1. Comparison of citation counts and Altmetric Attention Scores for all articles in the 2014/2016 publication dataset.

and Scimago Journal Ranking (SJR) from ScimagoJR for each journal, along with their inclusion status in the Directory of Open Access Journals (DOAJ).

Finally, we used Web of Science to identify the higher h-index between the first and last author of each article for 450 of 453 publications. We were unable to find author information in Web of Science for three articles.

To compare the relative impact of the articles in our dataset to that of similar publications, we measured the average weighted Relative Citation Ratio of all 2014/2016 PLOS publications in our dataset as compared to all PLoS articles published in the middle (late June/early July) of the same year ("Relative Citation Ratio," 2017).

Fund Identification and Criteria Analysis
The November 2018 version of the SPARC Open Access Funds in Action sheet listed 64 current and former college and university OA funds (Scholarly Publishing and Academic Resources Coalition [SPARC], 2018). To update this list, we searched Google for additional funds, using the search statement "site:.edu 'open access fund.'" We found an additional 23 OA funds, for a total of 87 identified funds. Note that the SPARC list is based on self-reported data, and thus its accuracy depends on librarians knowing that it exists and also sending fund information annually. Only 55 of the 87 funds appeared to be currently active - the remaining 32 funds had either indicated a cease in operations on their website or on the SPARC list, or no longer maintained a discoverable website. In July 2019, we collected informa-

tion from these 55 websites regarding the funds and their criteria, using Google to identify each individual fund website. We entered information regarding each fund's guidelines and criteria into a Google Form (see **Appendix B**).

FINDINGS
Funded Article Dataset
The average number of funded articles per OA fund per year ranged from 3 to more than 46, with an average of 21 and median of 16 articles.

Nearly ¾ of funded applicants were classified as faculty. Seven of the responding institutions tracked faculty status, and in those institutions, 56% of funded articles were published by faculty classified as "tenure," including tenure- track faculty. Authors were predominantly affiliated with either medicine/health, or science institutions or departments, with 69% of articles in the dataset published in these combined categories. Similarly, 2/3 of the journals in which funded articles appeared were classified as science or medicine. Articles were published in PLoS One more than any other journal, representing 19% of total funded publications.

The dataset included payment data for 885 articles, demonstrating that these 16 libraries had paid more than 1.2 million USD for APCs between 2009 and 2018. Note that some of these funds had been in existence for close to a decade, and some for just a couple of years. A few funding programs had ended by the time we requested data on the supported publications.

For additional demographic information and descriptive findings from the initial

Table 2. Disciplinary Breakdown of Average Citation Count and Altmetric Attention Scores in the 2014/2016 Publication Dataset

	Agriculture	Engineering	Humanities	Medicine/ Health	Sciences	Social Sciences
Average Citation Count	9.22	11.66	1.67	8.88	8.77	3.58
Average Altmetric Attention Score	10.61	8.72	0.33	14.95	20.01	11.25

dataset, please refer to slides from a 2016 presentation (Click & Borchardt, 2017).

Impact

To better understand the impact of library funded OA publications, we analyzed several metrics at the article, journal, and author level for articles published in 2014 and 2016. Additionally, in order to better contextualize some of these citation counts, we compared citation ratios from PLoS articles in our dataset with all PLoS articles published mid-year in the same years.

Article-level Metrics

Article citation counts varied widely, with a range from 0 to 194 for the combined 2014 and 2016 article dataset. The average citation count was 8.9, while the median was five. The Altmetric Attention Scores for our article subset ranged from 0 to 685. The average Score was 15.8, and the median was 2. The Altmetric Attention Score is "a weighted count of all of the mentions Altmetric has tracked for an individual research output, and is designed as an indicator of the amount and reach of the attention an item has received" (Williams, 2016). It includes mentions in policy documents, blogs, tweets, course syllabi, Reddit and more (Digital Science, 2015). **Figure 1** directly compares the citation count and Altmetric Attention Score for all articles.

Breaking down articles by journal subject category, we found a range of average citation counts and Altmetric Attention Scores for each discipline. The highest average citation count was for articles published in engineering journals, at 11.66 average citations, while articles in science journals had the highest average Altmetric Attention Score with 20.01, as shown in **Table 2**.

Journal-level Metrics

The majority of the articles (65%) in the 2014 and 2016 dataset were published in journals that had Journal Impact Factors (JIF), ranging from .451 to 40.137, with an average JIF of 3.7 and median of 3.234. For context, the mean 2016 JIFs for social science journals was 1.199, engineering and technology 1.989, and clinical medicine 2.976, although a direct comparison with our data is not appropriate as the subject categories are not necessarily defined in the same way (Larivière & Sugimoto, 2019). By contrast, 90% of the articles in the subset were indexed by SCImago and had Scimago Journal Rank (SJR) scores. The SJR scores ranged from 0.106 to 18.389, with an average of 1.75 and median of 1.455. See **Table 3** for average JIF and SJR by discipline. The range of JIFs and SJRs for all articles are displayed in **Figure 2**.

Author-level Metrics

H-indices were found for all but three publications in the 2014 and 2016 dataset. The h- index is an "author-level metric calculated from the count of citations to an author's set of publications" ("H-index," 2017). If an author's h- index is seven, this means that the author has published at least seven articles and each of them have been cited at least seven times. In this study, we looked up the h-index for the first and last author of each paper in the subset of articles, and used the higher numbers. We looked at both because in some disciplines the lead author is first and in others last. H-indices ranged from 0 to 108, with an average of 25.3 and median of 22.

OA Funds and Criteria

Of the 87 funds identified, only 55 (63%) were active as of July 2019. We collected and summarized fund guidelines and evaluative criteria related to author eligibility, publication eligibility, and funding details.

Author Eligibility

Nearly all of the funds analyzed listed faculty as eligible fund recipients, with the majority (50 out of 55) listing all faculty, with another four specifying tenure-track or non-tenured faculty. Graduate students were the next most common group, listed by 48 of the 55 funds (including 1 fund specifically for graduate students), followed by staff and post-docs. Undergraduate students and researchers were also listed at lower rates, with a few other groups, such as emeriti and fellows, selectively mentioned.

Several libraries give priority to graduate students, early career faculty, and applicants who have not previously received OA funding. Some require that the corresponding or lead author apply for funding.

In total, 36% of funds had some form of policy dealing with multiple authors. Often, these policies indicated that the level of funding would be prorated by the number of authors, and funding would only be given proportionately to the percentage of authors associated with the institution.

Most of the funds also specified that the funds only be used when the author had exhausted other sources of funding, though this criteria was variously worded. While most stipulated that library funds be considered "last resort," some specifically excluded researchers with grant funds, such as those with an NIH grant.

38% of the funds either requested or mandated that a version of the article be placed in the institution's repository. The wording often indicated that this step was automated, usually by the library, as part of the funding process.

Publication Eligibility

Every one of the funds covered journal articles, though their journal inclusion criteria differed as discussed below. It was found that 15 explicitly cover monographs, 12 cover book chapters, 4 cover conference proceedings, and 3 cover datasets. However, in the vast majority of cases these other publication types are not specifically excluded - but neither are they mentioned - leaving their final eligibility unknown (or perhaps simply untested).

Every fund listed criteria the publication must meet in order to be eligible for fund-

Table 3. Disciplinary Breakdown of Average Journal Impact Factor (JIF) and Scimago Journal Rankings (SJR) for Journals in the 2014/2016 Publication Dataset

Academic Discipline	Average JIF	Average SJR
Agriculture	3.129	1.509
Engineering	3.101	1.323
Humanities	2.441	1.013
Medicine/Health	3.761	1.675
Science	4.002	2.061
Social Science	2.933	1.036

ing, though in many cases, several criteria were used in conjunction to determine eligibility. The most common criterion mentioned was inclusion in the Directory of Open Access Journals (DOAJ), followed by Open Access Scholarly Publishers Association (OASPA) membership or compliance with OASPA membership criteria. See Figure 3 for the most common publication criteria. Although we did not track this specifically, we noticed that many funds require authors to include an acknowledgement statement with their articles, such as "Publication of this article was funded by the ABC University Libraries Open Access Publishing Fund."

Hybrid publications, or journals which require a subscription but make individual articles open access for an additional fee, were excluded by 50 of the 55 funds. Of the remaining five, two explicitly allowed for hybrid publication funding, one evaluated hybrid journals on a case-by-case basis, and two were unknown based on the listed criteria. One fund that allows hybrid publications offers a higher pay rate for fully OA versus hybrid. In a previous survey with a smaller sample, 6 out of 10 libraries declined to provide OA funds for hybrid publications (Monson et al., 2014).

Funding

For 43 out of 55 funds, a definitive source or sources of funding were identified. Of those, 93% indicated that funding came from the library, while 14% listed the Provost's office. Also listed were Offices of Research, Vice Provost or Vice Chancellor's offices, individual schools or colleges, Office of Academic Affairs, faculty senate, and an emeriti association. A small survey of 10 universities published in 2014 also found the Provost's Office and the Office of Research to be common funding partners for OA funds (Monson et al., 2014).

Most of the library funds (87%) have a maximum reimbursement per article, ranging from 750 CDN (570 USD as of 5 August 2019) to 4,000 USD. The most common reimbursement maximums are 1,500 USD and 3,000 USD (see **Figure 4** for more detail).

The few funds that specifically address monographs commonly have a 5000 USD limit, although one offered 7,500 USD. In addition, 2/3 of the funds have a maximum reimbursement per author per year, most commonly 3,000 USD. Interestingly, two funds require that authors first request a waiver or reduction of publishing charges prior to applying for library OA funds.

DISCUSSION

Impact

We observed that science and medicine largely dominated both the overall funded publication output as well as impact metrics, which is generally consistent with disciplinary trends in higher education (Clarivate Analytics, n.d.; Digital Science, n.d.-a).

Looking at the impact metrics, both the range of citation counts and h-indexes were broader than we had anticipated. Clearly, some high-impact research is being funded with library OA funds, despite two common fund restrictions that could limit impact: The "last resort" requirement makes it less likely that a grant-funded project would be funded (on the assumption that grant-funded projects have a higher likelihood of being high-impact research), and the near-universal limit of hybrid publication funding mostly eliminates the ability to fund articles for publication in many of the highest-impact subscription model journals. These high-impact publications confirm that faculty's self-reported interest in OA publishing to increase their visibility discussed earlier is legitimate, and can result in not only a high citation count but also in a high Altmetric Attention Score (Beaubien et al., 2016; Teplitzky & Phillips, 2016).

However, the RCR comparisons for the PLoS articles indicate that, based on the limited comparison, these funded articles have a slightly lower impact based on their citation counts as compared to similarly published research outside the dataset. This could be due to the two limiting criteria for funds described above. Regardless, it represents an opportunity for libraries with OA funds to increase outreach efforts to researchers and labs considered to be high-impact at their institution. While we see some mixed results from overall relative impact and attention of this dataset, messaging around visibility remains a viable selling point to faculty considering OA publication, with plenty of examples of high-visibility work being funded.

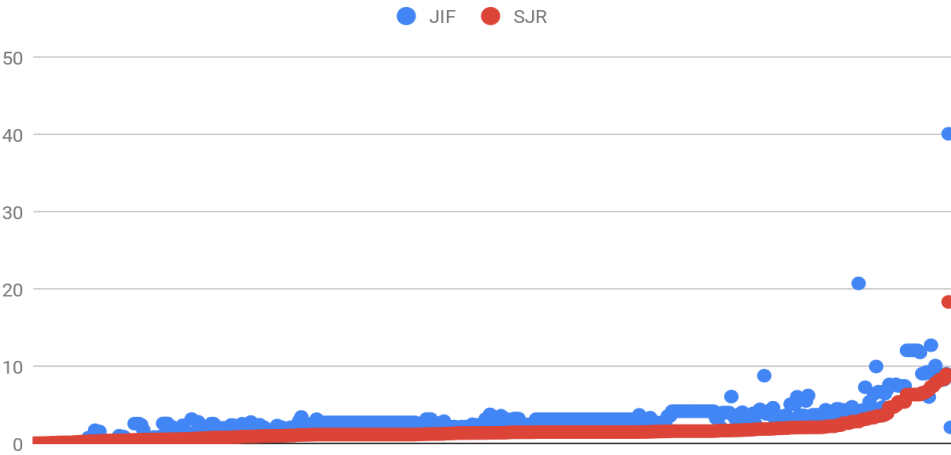## Journal Impact Factor (JIF) and Scientific Journal Rankings (SJR)

Figure 2. Comparison of Journal Impact Factor (JIF) and SCImago Journal Rankings (SJR) for journals in the 2014/2016 publication dataset.
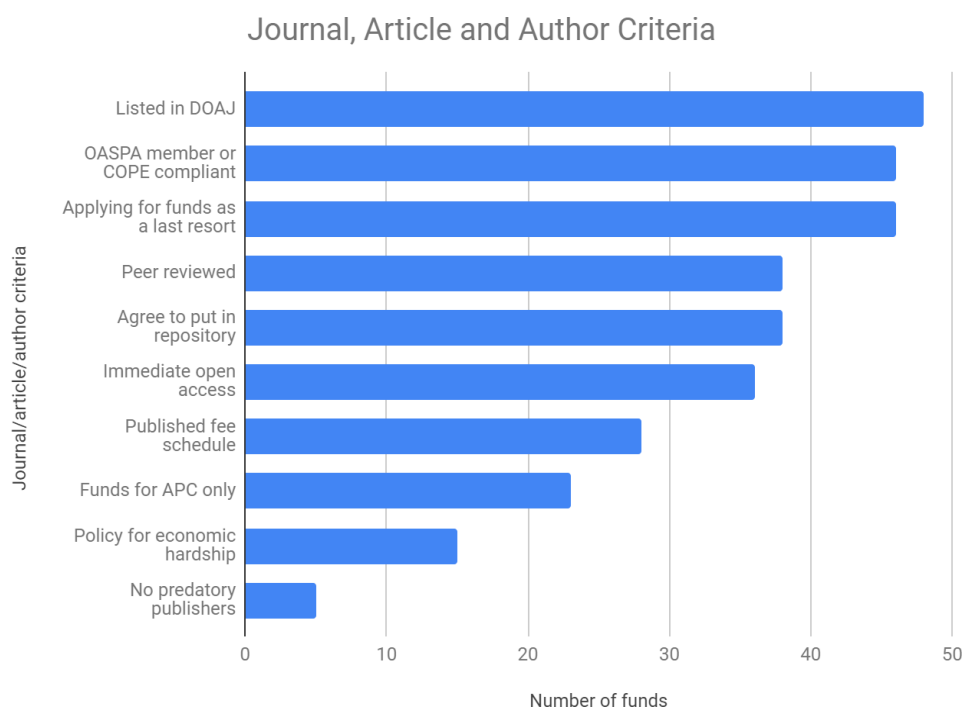
Figure 3. Most commonly-mentioned journal, article, and author criteria present on OA fund websites.

Effectiveness of OA Fund Criteria

In a 2015 study, only 1/3 of the libraries that provide OA funding indicated that they had evaluative criteria in place for funding requests. Some respondents noted that funded articles must be published in fully OA journals and hybrid journals do not qualify, with 35% requiring listing in the DOAJ. This study found that 27% of the libraries simply provided funding on faculty request (Lara, 2015). Our study observed a much higher rate of evaluative criteria, with virtually every OA fund listing guidelines and requirements on their websites, indicating a large trend toward the development of criteria in the past several years.

We were interested to explore the effectiveness of these criteria, and did so by checking the journals in our sample for predatory publishers. Predatory publishers – sometimes called deceptive publishers – charge publication fees but make false claims about their publication practices. These p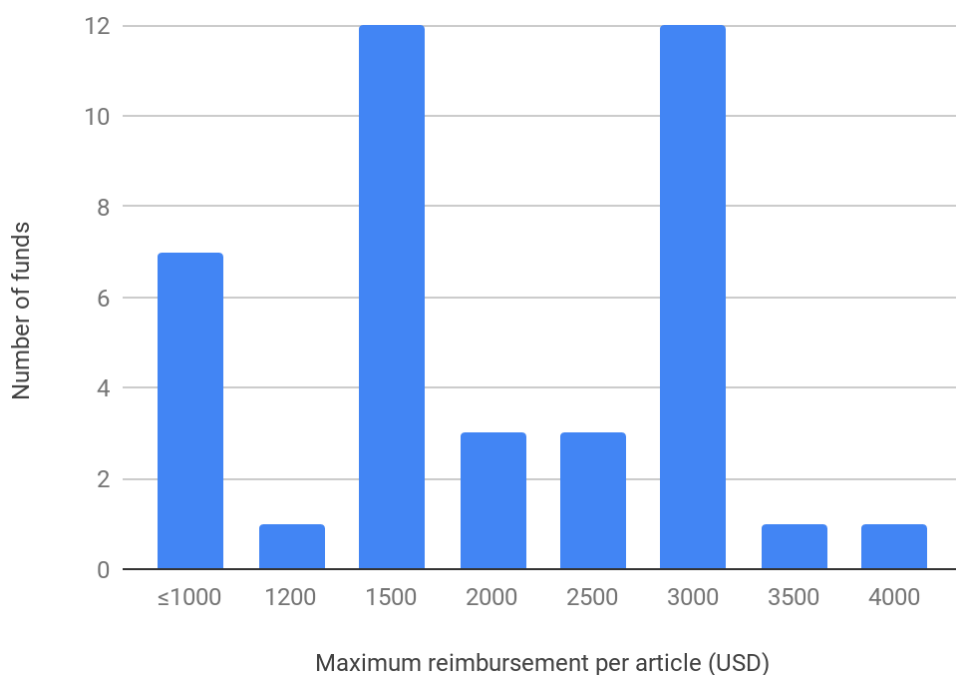ublishers, which tend to be OA, may accept and publish articles with little to no peer review or editing, falsely list scholars as editorial board members, and/or fail to be transparent regarding APCs. Identifying predatory publishers can be a challenge. Jeffrey Beall ran a popular website tracking predatory publishers, which was deactivated in 2017 (Basken, 2017). Currently, Cabell's provides a blacklist of deceptive and predatory journals, using a list of criteria that are categorized as severe (e.g., the journal gives a fake ISSN, the journal includes scholars on an editorial board without their knowledge or permission), moderate (e.g., the journal's website does not have a clearly stated peer review policy), and minor (e.g., the publisher or its journals are not listed in standard periodical directories or are not widely catalogued in library databases) (Toutloff, 2019). We used a different tool, however, to evaluate journals in our sample. We identified 20 journals in our 2014/2016 sample that were not indexed by ScimagoJR. We used a list of questions from Think. Check. Submit to evaluate those 20 journals (e.g., Is the journal clear about the type of peer review it uses?) and found 4 did not "pass" this checklist (Think. Check. Submit., n.d.). However, we could not determine whether these four journals were predatory, or simply struggling publications with unclear or incomplete information on their websites. For example, one of the four journals is a Sage publication, but does not provide APC information or discuss adherence to or compliance with any open access initiatives such as COPE, OASPA, or DOAJ. The lack of clarity for these four journals mirrors Jain and Singh's (2019) findings that predatory publishers are 'evolving' with criteria checklists, making these kinds of evaluations more difficult, though they base their findings on Beall's criteria rather than Think. Check. Submit.

A 2017 commentary in Nature Human Behavior discussing stakeholders affected by predatory journals suggests explicit exclusion of predatory journals in OA fund criteria as one mechanism for deterring researchers from predatory publication (Lalu, Shamseer, Cobey, & Moher, 2017). Two older papers that surveyed librarians also mentioned using Beall's List in OA fund criteria to identify predatory or low quality journals (Lara, 2015; Monson et al., 2014). However, 2 of the 55 OA funds we examined still mentioned Beall's list - a sign that libraries have not entirely kept current with OA journal evaluation practices (or, at the

Figure 4. Distribution of maximum reimbursement per article amounts present in OA fund criteria.

> » **Funding sources could also play a critical role in the future viability of these funds. In a 2015 survey of libraries that provide OA funding, 70% stated that OA funds came from the existing materials budget, and 24% indicated that they came from a new budget allotment unrelated to materials (Lara, 2015).**

very least, that their websites are no longer accurate reflections of current practice). Librarians and other OA funders must continue to monitor evolving practices for evaluation of predatory publications, such as Cabell's and Think. Check. Submit, in order to maintain the effectiveness of OA fund criteria.

Viability of OA Funds

Thirty-Seven percent of the OA funds that we identified via our data collection, SPARC's OA Funds in Action list, and Google searching are no longer active as of summer 2019. Given the relatively short time that OA funds have been in existence, this rate of default points to a potentially troubling viability for OA funds. Whether OA funds will continue to be funded may largely depend on other concurrent OA and library initiatives, such as big deal cancellations and Plan S compliance, which could help determine the future OA landscape and more sustainable funding models.

Funding sources could also play a critical role in the future viability of these funds. In a 2015 survey of libraries that provide OA funding, 70% stated that OA funds came from the existing materials budget, and 24% indicated that they came from a new budget allotment unrelated to materials (Lara, 2015). We posit that, in the age of uncertain library budgets for many libraries, identification of non-library campus partners may be critical for the long- term continuation of these funds. Examples of distributed funding includeIUPUI's fund, which lists no less than 13 campus partners contributing to the fund;and Wake Forest, which cost-shares publication fees equally between the library, Office of Research and Sponsored Programs, and the author's department (IUPUI University Library, n.d.; Wake Forest University Library, n.d.).

We observed several cost-saving mea-sures employed by OA funds, including maximum article and author fees, as well as article funding at less than 100%, all of which may also help contribute to the sustainability of these funds. In the 2015 survey, "about 80% of respondents were unsure or stated that there is no established maximum, 19% stated that there is a maximum fee in place. Nearly all of the respondents whose institutions have an established ceiling for funding placed the maximum price in the range of $2,000–3,000" (Lara, 2015, p. 7). This shift from 19% in 2015 to the 87% of funds in 2019 with price capping suggests that future viability may be dependent on limiting these funds, at least for now. One of the more innovative approaches to price capping we observed was University of Massachusetts Amherst's OA fund, which started at 50% fee coverage, with increased coverage earned through additional criteria, such as early-career authors, first-time applicants, a non-profit or society publisher, and having an ORCID (UMass Amherst Libraries, n.d.).

Future Research & Directions

We see an opportunity to further investigate OA funds in order to establish more concrete best practices. We have seen shifts in criteria models used by funds - but have these shifts contributed to the success or failure of individual funds? Are funds with more distributed funding models more sustainable? Our findings hint at these possibilities, but more research would help clarify these potential best practices. We also see value in continuing to monitor institutional funding for OA as the scholarly communications landscape continues to change. Many possibilities for OA rely on financial support from libraries, and a coordinated approach toward funding models may be the key to the success or failure of broad OA adoption.

Alternative OA support models are already emerging. For example, Reinsfelder and Pike (2018) urge a shift away from libraries spending funds on APCs and towards crowdfunded models like Knowledge Unlatched, SCOAP3, and Unglue.it. They argue that $25,000 would pay approximately 12.5 journal APCs, but would fund 471 new OA books through a Knowledge Unlatched pledge. Likewise, Berger (2017) argues that advocacy by libraries for different funding models de-commodifies scholarship, and will also "mortally wound" predatory publishers' viability. Some universities in the U.S. are starting to make this shift. In 2019, the University of Arizona Libraries transitioned away from their Open Access Publishing Fund, establishing an Open Access Investment Fund. Instead of paying individual APCs for OA publications, the Libraries will now pay for institutional memberships with specific publishers that include APC discounts, as well as initiatives with "wide potential global impact" like arXiv and the Open Textbook Network (University of Arizona University Libraries, 2019).

CONCLUSION

Libraries in North America are clearly dedicated to supporting the OA movement, and in recent years this has meant providing authors with funds to pay APCs. This study explores the articles published via library OA funds at 16 universities and their impact, as well as the guidelines and criteria set forth in 55 funds. Findings indicate that research impact is a useful tool for increasing faculty support of OA and that existing fund criteria have been refined over recent years to encourage publication in mostly high-quality journals. OA funds have supported researchers in a wide range of disciplines and career stages, with STEM fields and researchers being the most frequently-supported by these funds. However, there is some evidence to suggest that these funds may not be sup-

porting the highest impact research, possibly as a result of fund criteria restrictions. The overall OA landscape is shifting, and the APC model may not prove to be viable. Price capping of funds and distributed funding models may increase the sustainability of these funds in the future. Regardless of the administrative details behind funding, the ways that institutions choose to financially support OA will continue to evolve as the OA movement develops. ∎

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Appendix A. Library Fund Data Collection Fields

Institutional Details	Publication Details
Institution Name	Journal Title
Private or Public	Indexed in DOAJ (Y/N)
Carnegie Classification (e.g., R2)	Hybrid (Y/N)
Author Details	Journal Impact Factor
Discipline	Journal Publisher
Author Name	Article Details
Co-Authors (Y/N)	Article Title
International Collaborators (Y/N)	Reimbursement Amount
Status (e.g., faculty, grad student)	Reimbursement Year
Tenure (Y/N)	Publication Year
Email	doi
H-index	

Appendix B. OA Fund Criteria Data Collection Form

Name of University: _____

Who is eligible for these funds? (check all that apply)
- ☐ Faculty (all)
- ☐ Faculty (tenure track specified)
- ☐ Staff
- ☐ Undergraduate students
- ☐ Graduate students
- ☐ Postdocs
- ☐ Researchers
- ☐ Other: _____

What types of publications are eligible? (check all that apply)
- ☐ Journal articles
- ☐ Book chapters
- ☐ Monographs
- ☐ Other: _____

Which criteria must the publication meet? (check all that apply)
- ☐ Peer reviewed
- ☐ Listed in DOAJ
- ☐ Listed in DOAB
- ☐ OASPA member or compliant
- ☐ Immediate open access
- ☐ Published fee schedule
- ☐ Policy for economic hardship
- ☐ NOT on Beall's list
- ☐ No predatory publishers
- ☐ Agree to put in repository
- ☐ OA fund is last resort
- ☐ APC only (e.g., no submission fees)

Other: _____

Hybrid allowed?
- ☐ Yes
- ☐ No
- ☐ Case-by-case
- ☐ Other: _____

Is there a maximum reimbursement per article?
- ☐ Yes
- ☐ No

What is the maximum reimbursement per article? _____
_____
_____

Is there a maximum reimbursement per author per year?
- ☐ Yes
- ☐ No

What is the maximum reimbursement per author per year? _____
_____
_____

Limited to 1 publication per author per year?
- ☐ Yes
- ☐ No

Multiple author policy?
- ☐ Yes
- ☐ No

Source of funds? (check all that apply)
- ☐ Provost's Office
- ☐ Library
- ☐ Other: _____

Notes: _____

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