Integrating preservation into librarian workflows

The core mission of libraries is to ensure perpetual access to the record of knowledge. As a review of the NASIG webinar (formerly North American Serials Interest Group), 'Integrating Preservation into Librarian Workflows', by Jill Emery and Sunshine Carter, this article examines working models constructed to sustain perpetual access for their institutional communities. In reflecting on these data-intensive practices, both presenters now recognize that previously impactful collection development business decisions were being made in the dark. Reviewing the webinar also reveals that this issue of preservation access has two critically distinct aspects, which should not be conflated as interchangeable. One is concerned with long-term preservation and the other addresses a library's ability to provide post-cancellation access to its user community, given budgetary or physical space constraints. The following is an analysis of how effective the processes explored in the webinar are in addressing both post-cancellation access and long-term perpetual access goals. Based on a 2018 NASIG survey, results indicated that many organizations in scholarly communications lacked preservation policies. In June 2022, as a result of the survey, NASIG released the model digital preservation policy as a template to guide consequential and explicit decision-making by addressing issues including scope, roles, responsibilities, tools and techniques. These policy issues are important for librarians to understand before negotiating content licenses, in sustaining long-term discovery and access, and when developing collaborative access frameworks to address collection development and maintenance challenges.

Keywords

academic libraries; electronic resources licensing; post-cancellation access; digital preservation; perpetual access; open access

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Introduction

The webinar introduces how preservation and post-cancellation access (PCA) rights have consequential impact on multiple stages of the e-resources management life cycle. The second segment of the presentation provides a complimentary comparison of differing sized institutions, between Jill Emery, who serves as the Collection Development & Management Librarian at Portland State University Library, and Sunshine Carter as Director for Collection Strategy & eResource Management at the University of Minnesota at Twin Cities Library (UMN). Emery outlined her experience at a Carnegie Classification of Institutions of Higher Education research level two institution, and how she was able to leverage her community's commitment to preservation by establishing good records and documenting post-cancellation e-journal coverage together with overlap of print holdings. Carter supports a larger, level one research institution, and describes the complexities of preservation and executing multiple PCA analysis projects, as an eight-year journey. What began as a series of PCA discussions across several years, eventually led to collaboration incorporating multiple departments and partners and deeper contemplation of the institution's role in long-term preservation responsibilities.

'Ensuring digital preservation is a bold statement with multiple meanings'

Ensuring digital preservation is a bold statement with multiple meanings, but emerging electronic resource management (ERM) workflows may increase librarians' degree of confidence that 'everything will be okay' when institutions face canceling e-journal subscriptions or withdrawing print serials and books. Managing e-resources is

complex considering licensed perpetual access, leased content, open access (OA) and hybrid access. This digital landscape is clouded with ambiguity and complexity when it comes to two main types of preservation access. First there is the library's legacy role to support long-term preservation of content ensuring digital scholarly content in all formats remains available to future users. The second aspect considers integrating digital preservation into librarians' workflows, including: incorporating perpetual access in publishers' license agreements, leveraging PCA terms and managing resulting metadata to operationalize data-driven decision-making. PCA workflow steps are focused on local community users receiving uninterrupted access to content, regardless of whether a subscription continues. This is a review of the NASIG webinar (formerly North America Serials Interest Group), presented by Jill Emery and Sunshine Carter, 'Integrating Preservation into Librarian Workflows'.[1] With these two aspects in mind, it examines whether local PCA workflows practices can also reclaim the library's time-honored mission and ensure its role as perpetual knowledge keeper in the digital age.

'preservation begins with many conversations both inside the academic library and with local stakeholders'

Discussion/background

Given limited library resources in terms of labor, money and technology, Emery and Carter both emphasize that preservation begins with many conversations both inside the academic library and with local stakeholders. Initiating collection development guidelines and policies encompasses: 1) what should be preserved and 2) how the resources should be preserved. Sparking these discussions can be challenging, even when cancellation and withdrawal decisions loom. Situations that open opportunity for these discussions are typically imposed as a last-resort crisis mode of operation calling for immediate action. The urgency of the matter pushes aside the opportunity to gather business data, educate and crowdsource options and weigh the merits of various strategies. Decision-making under these circumstances then suffers from insufficient information and an incomplete understanding by all stakeholders. Instead, focus shifts to more immediate objectives such as stopping large payments when under budgetary pressures, or the logistical co-ordination needed to clear physical space when library real estate is in demand. Considering both aspects of preservation, even when conversations supported the resulting evaluation mechanisms, both of the presenters' institutions focused primarily on PCA. Local policy tends to hone in on that portion of knowledge having the greatest significance to its community's scholarship and research. This approach prevents a comprehensive evaluation of the collection. Workflows typically aim to hunt out portions of the collection having contractual PCA rights, but stop short of analyzing titles without such protections. Although time and insufficient resources are likely to be the barrier, librarians should consider this as an opportunity to establish the sustainability of content without PCA rights for these disciplines of local importance, when compared against the long-term preservation ecosystem and strategize as a community to advocate for its safeguarding. Placing emphasis only on content with PCA rights may deflect from the library's content vunerabilities that loom in the absence of long-term preservation protection.

'Placing emphasis only on content with PCA rights may deflect from the library's content vunerabilities that loom in the absence of long-term preservation protection'

Academic libraries misconception of preservation

Social media conversations around preservation often conflate a library's local digital preservation strategy with ownership, aiming for electronic access to be the equivalent stability of print, observed Emery, co-author of *Techniques for electronic resource management: TERMS and the transition to open*.[2] When e-content cancellation is necessary, Emery suggests pursuing alternative preservation strategies such as ready access to print, collaborative print retention programs, PCA with the vendor or via third-party preservation entities such as CLOCKSS[3] or Portico.[4]

'conversations around preservation often conflate a library's local digital preservation strategy with ownership'

Although policymaking was beyond the webinar's scope, it is worth highlighting the NASIG Model Digital Preservation Policy, a newly launched tool that offers comprehensive guidance for creating a lasting commitment to preserving scholarship.[5] Given institutions are all distinctly organized, there is great flexibility built into the tool for local customization. But all tactics are directed towards efforts that achieve long-term preservation and guard against loss of the scholarly record. This aim of comprehensive long-term preservation may seem overly aspirational, given the extraordinarily complex and urgent nature of making either budgetary or withdrawal decisions, which are prone to be based on documenting current PCA status. It is because the model policy delves into the complexities of long-term preservation as an archiving process, this contrast facilitates distinguishing this from rights of access and PCA.

Emery emphasizes that well-established collection plans, priorities and strategies provide the road map to determine the degree of effort to expend on preservation. She defers to larger institutions, indicating they may be the only players able to self-host content, but acknowledges uninterrupted access to content is a critical component of every subscription cancellation decision. Emery stresses the importance of knowing the license terms and entitlements to what content is retained in PCA. She makes a key point, that immediate local access is not the only consideration, but strategic planning encompasses a broader understanding of access and preservation by combining third-party preservation entities, regional collaborators with shared print retention agreements and interlibrary loan (ILL) as a holistic delivery environment. In Carter's case, rather than examine PCA due to budgetary constraints, her library faced a mandate to free up physical space, with the goal of repurposing an area currently housing print stacks. She notes that their processes throughout the prior years did not reveal 'the magic formula' to solve collection downsizing but that the incrementally constructed robust metadata broadened the preservation focus and discussions, not only to ensure local access, but also responsibly considered long-term preservation safeguards. Using the e-resources management system for record-keeping, these discrete metadata projects ranged from classifying licenses according to PCA terms to recording print access coverage mapped to electronic holdings as useful metadata to deduplicate the collection. Given many of these projects were completed in years prior to receiving the mandate for space repurposing, this series of prior projects provided important and timely preservation access data to make informed de-accessioning decisions. Additionally, as a result of this series of projects, the UMN library administration placed this issue of long-term preservation on the strategic goals list for the upcoming year.

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Evaluation considerations

Identifying a starting point to initiate this complex work can be difficult. The Techniques for Electronic Resource Management (TERMS) framework was introduced as the management model used by both librarians to determine at what workflow stages preservation considerations required improvement, including more detailed data analysis and record-keeping. Emery lays out six areas within the iterative e-resources life cycle where preservation considerations might be incorporated into librarians' workflows:

- investigating new content
- purchasing/licensing
- implementation
- troubleshooting
- accessment
- sustainability.

By inserting preservation considerations into discrete life cycle stages, this approach is useful for librarians in two ways. Firstly, it is a helpful pathfinder to identify and target local priorities. Secondly, this offers a discrete starting point rather than tackling everything at

once, given efforts required in advocating for project support, the challenges of working with complex and non-standardized data and developing appropriate knowledge building and workflows for library personnel.

Carter's series of projects began with analyzing data associated with the management of record-keeping for the purchasing/licensing life cycle stage. The second project focused on the stage of assessment, comparing print holdings against electronic PCA coverage. Eventually, when the mandate came to free up physical library space, all of the prior data projects were immediately applicable. Then building upon that work, a new review process was established, requiring that a title and its corresponding coverage dates must have three alternative sources of access. Content fulfilling these criteria provided assurance that its deselection would not affect the life cycle phase of sustainability.

Purchasing/licensing

Carter's initial project concentrated on the purchasing/licensing workflow and began with a comprehensive review of the contractual fine print of license agreements. 'The perpetual access rights "problem,"' tackles the identification and documentation of PCA rights derived from e-resources licenses.[6] Her unit found many variations in the level of access that would follow cancellation. They considered grading these differing levels of access, but in the absence of such a system, Carter shares the 'flavors' of PCA rights could generally be grouped into the following categories:

- third-party preservation entities (e.g., Portico)
- delivered (e.g., jump drive)
- vendor hosted and some with fees
- rolling PCA allowed access to the most recent five years of content, so with every year of subscription more and more content would become inaccessible.

The classifications are useful to other libraries interested in similar analysis of local licenses. Out of the four categories, only third-party preservation entities ensure a long-term preservation scheme. When faced with PCA goals, Emery flags some third-party preservation entities with caution, noting librarians should look critically at this practice if access occurs only after a trigger event such as when a publisher ceases operation, but does not offer content in a post-cancellation event. This type of preservation arrangement is referred to as a dark archive so that only when a trigger event occurs, which would cause content to entirely disappear from the internet, is content made available through open access. Alternatively, a vendor might offer to continue hosting the content after subscription ceases, supporting the goal of post-cancellation access. Emery's emphasis on post-cancellation access may be at odds with perpetual, long-term preservation, which is less assured, should a vendor's business fail and, in the absence of back-up copies, result in a vanishing scholarly record. This highlights how a library's policy goals within the framework of PCA can be at cross purposes with a more assured long-lasting outcome. Achieving both access goals may require adopting multi-pronged safety nets. Although this may result in some redundancy, multiple copies also increase the assurance that access and discovery will be available to future scholars. Carter applies this principal of security using a three-sources duplication measure for the deselection project, discussed in more detail later in this article.

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Although not an in-depth portion of the webinar, the specific terms of a license can be key for the prospects of sustained perpetual access and have the ability to collaborate in long-term preservation practices. 'NASIGuide: Talking Points and Questions to ask Publishers about Digital Preservation', equips librarians with tools to use in these important conversations with vendors.[7] When investigating new content or in preparation for a license renewal, librarians can also evaluate a vendor's participation in preservation to date, using the Keepers Registry

(Keepers). 'The International Standard Serial Number (ISSN) Centre tracks third-party preservation archiving agencies which serve as long-term stewards (Keepers) of the digital content issued as continuing resources including e-serials. The Keepers is a global monitor of the archival status of digital content assigned an ISSN. The three main purposes of the Keepers are 1) to enable librarians and policy makers to find out who is looking after what e-content, how, and with what terms of access; 2) to highlight e-journals which are still 'at risk of loss' and need to be archived and 3) to showcase the archiving organizations around the world, who are the Keepers, which provide the digital shelves for access to content over the long term.'[8] As to Emery's concern with third-party preservers that do not provide post-cancellation access, remedies might include requesting multiple Keepers, and requesting PCA arrangements with their Keepers, as strategies that prevent a mutually exclusive proposition.

Electronic access is not the only solution

Returning to Emery's observations on preservation conversations circulating on social media, she espouses a broader ecosystem supporting PCA. Rather than the popular opinion that electronic access should be the equivalent stability of print, she suggests access alternatives that include ready access to print resources and collaborative print retention programs, as well as third-party preservation entities such as CLOCKSS or Portico. Carter also describes recording all PCA entitlements, in the article, 'Assessing e-journal post-cancellation access'.[9] She referred to this as a voluminous, long-term project to record post-cancellation access determination (PCAD) involving deduplicating print serials against electronic, given the goal to free physical library space. UMN's workflows included comprehensive review of order records and vendor entitlement reports. Each institution used different collections in their overlap analyses, to measure the assurance of PCA. A different set of criteria may be necessary to measure the long-term stability of these collections. Considering alternative formats, as well as dispersed geographic distribution of physical materials, are added best practices that can ensure both PCA and persistence of the scholarly record. Carter's observations about this work repeatedly emphasized that there is no one-size-fits-all magic bullet in this process.

Open access and born digital

Not all e-resources have alternative formats. As an example, Carter indicates it can be difficult to determine where long-term preservation access will come from if an OA journal ceases to exist. As more campuses support OA, such as through subscriptions or adopting read and publish agreements, she has diminished confidence in perpetual access for their local user community. For UMN, their goal for OA is to identify a method to measure a clear preservation mechanism. She finds the current OA PCAD obstacles frustrating in the more immediate day-to-day operations, as they produce a black hole in their data, requiring ongoing effort researching questions raised by acquisitions staff, and negatively impact efficient and effective troubleshooting. This unease of Carter's is well founded. Mikael Laakso and colleagues in the article, 'Open is not forever: a study of vanished open access journals', produced concerning data about this developing scholarly publishing model, saying, 'If there is no general agreement whose responsibility it is to preserve electronic resources, no one will be responsible, and we risk losing large parts of the scholarly record due to inaction.'[10] Both PCA and long-term preservation access are at considerable risk of disappearing given the current situation. Often OA is a born-digital format, but even subscription-based titles can be born digital and vulnerable without a third-party digital preservation strategy. Deferring reliance on ILL or exclusive access through a publisher's platform, is a high-risk proposition. Both types of access, PCA and long-term, are equally susceptible to disappearance. Emerging standards are beginning to address this situation such as cOAlition S, which includes mandatory technical requirement for deposit of content with a long-term preservation, or archiving programs such as CLOCKSS or Portico.[11] Another initiative,

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Project Jasper, is a pilot project between CLOCKSS, the Directory of Open Access Journals (DOAJ), Internet Archive, Keepers Registry and the Public Knowledge Project (PKP), aimed at finding a solution that will reduce the number of unarchived open access journals.[12]

Confidence in withdrawals

Carter's third project was reliant on the prior PCAD work and established a new workflow to support the withdrawal of print serials with confidence based on a triple layer of preservation assurance. The Ex Libris Uers of North America (ELUNA) presentation, 'It's Complicated: Using Print- and Electronic-Holdings to Deduplicate Print Serials', details this process which remains in continuous use at UMN.[13] When a title is withdrawn from UMN, it requires a triple layer of preservation from the Big Ten Academic Alliance Shared Print Repository, Portico, and PCA rights that include ILL privileges. This overlap also has a multi-format safety net, along with a third-party preservation entity. The webinar did not include data concerning the percentage of the collection that met this criteria, or what remained at-risk content.

The scholarly literature written about digital preservation underpins how complex and multi-facted these decisions are in identifying long-term preservation solutions. Carter's triad approach meets a mix of considerations, including multi-formats, as well as regional and global safety nets. Another factor for consideration, found in the literature, is the element of trust. In the article 'A Social Model for Archiving Digital Serials: LOCKSS', Seadle speaks to the social construct of trust, saying, 'The most important trust factor would seem to be whether a particular archive should be trusted long term to keep an unaltered copy of the genuine original.'[14] The Big Ten Academic Alliance Shared Print Repository, has built historical trust through membership. Portico, the second pillar, is a global approach described as '…certified as a trusted, reliable digital preservation solution that serves the needs of the library community.'[15] As to PCA rights, Keifer emphatically states that, 'Commercial hosting is not preservation … they are not in the business of long-term preservation.'[16] When libraries are faced with a project of this magnitute, the complexity of analyzing a collection overlapped with a triple layer of protection may seem excessive. However, this factor of trust is a crucial element, to prevent confusion between PCA as a business practice in the short-term, and an enduring scholarly record accessible to future generations.

Workflows, mindsets and magical thinking

'the greatest challenge … is one of communication and influencing mindset'

Although the webinar documents concrete steps to analyze and record appropriate metadata, that primarily addresses serials to a great extent, and e-books to a lesser degree, there is added urgency to look for solutions to address other formats such as databases, datasets, streaming media and Abstract & Index (A&I). But maybe the greatest challenge, about which both speakers concur, is one of communication and influencing mindset. Carter reflected that, over her career, her efforts have faced a strong headwind. She described it as a pervasive sentiment by the academic library community, where there is this generalized thinking that 'maybe everything is fine', although this conclusion is reached without any concrete evidence. Librarians are optimistic that everything will turn out in the end, but sometimes Carter senses there may be some 'magical thinking' when it comes to expectations for what will happen to the preservation of commercially published content to which libraries subscribe. She emphatically knows that UMN has not worked it all out yet, but over eight years, some of her projects have moved their library further along on a continuum of understanding the ephemeral nature of library content. From an external perspective, conclusions can be drawn from UMN's data collection and workflow initiatives, that over time, this process broadens education, improves expectations across the library, increases confidence in decision-making outcomes and effectively influences change management. It is more difficult to determine whether PCA alone is better understood, or if long-term access is also furthered along this continuum.

Obstacles to supporting long-term preservation

E-resources and print are both vulnerable to a variety of threats, from natural disasters, hardware or software corruption to economic failure. Preservation requires sustained and direct action to counter these threats. Carter cites two quotes from *Techniques for electronic resource management: TERMS and the transition to open,* which convey key concepts in this discourse. Jeremy Morse says, 'it's not just a technology issue but a commitment of resources over time and ultimately, preservation is a series of decisions.'[17] Carter agrees, adding, 'The commitment to preservation takes a lot of voices, a lot of conversations, so that policy and processes begin to work in alignment, beyond the issues of technology.' Carter has great optimism based on these conversations, which seems logical given libraries' long history of forming co-operative partnerships when local efforts are insufficient.

The second quote, from Casey Hoeve, observes, 'the preoccupation with immediate access of information, … has subsequently resulted in the neglect of sustainable preservation practices.'[18] Carter agrees UMN is not immune to this inclination, getting caught up in the need to fulfill access for local users, which sometimes pushes aside these important conversations about sustainable preservation practices. She says, this happens even at their institution, despite best intentions, a big budget and a lot of invested staff.

The factors of success or failure for long-term preservation, according to Morse, Hoeve and Laasko, all point towards economics. In 2010, the Blue Ribbon Report on sustainable preservation and access, expressed concern over the sustainability of digital preservation, as this type of service is susceptible to, what they called, free-rider economics:

'The factors of success or failure for long-term preservation … all point towards economics'

'Preserved digital assets are non-rival in consumption because once one party preserves the assets, they are for all intents and purposes preserved for all. In these circumstances, the incentive for any single party to incur the cost of preservation is weakened since the other parties can free ride on the benefits.'[19]

This webinar demonstrates that PCA workflows effectively produce data directly benefiting their local community of users. When it comes to long-term preservation, roles and responsibilities become fuzzier. It seems likely that the free-rider economics theory may account for why the library community, without evidence, tends to say that 'maybe everything will be okay'. After eight years, the progression of UMN conversations seems headed toward discussing who is responsible for long-term preservation.

Review conclusion

Emery and Carter agree there is a high degree of difficulty required to integrate preservation into librarian workflows. Data gathering, interpretation, validation and complex problem-solving appear to be in direct proportion to an institution's collection size and affiliated partnerships. Carter recommends, 'every institution, regardless of size or circumstances, should consider undertaking this work, given multiple benefits from ready access to this metadata'. Although both indicate leveraging PCA metadata produces greater assurance that 'everything will turn out okay', this might be true in the short term for a small subset of knowledge but seems a risky proposition without also addressing long-term preservation for the entirety of the collection.

Local preservation record-keeping alone cannot sustain an enduring scholarly record. Given that more than a decade has passed since the Blue Ribbon report, the magical thinking among librarian professionals seems likely to be the hope that other institutions will pay the cost for long-term preservation and to anticipate that they will locally freely reap the benefits from others' efforts. One way for libraries to move from irresponsibility, and rebuild trustworthiness as keepers of knowledge, is to leverage this same PCA data to quantify locally at-risk content. Campus scholars and researchers have come to rely on libraries as the caretaker of this public good. Libraries can collectively assess and compare institutions' efforts at mitigation to focus solutions for this measurable gap, in addition to the PCA focus.

Awareness and peer comparison may draw administrators' time, attention and resources with this important data. Following Emery and Carter's models for metadata collection, repurposing the data may be the artillery necessary to dispel magical thinking and energize library leadership.

This NASIG Digital Preservation Committee webinar is part of a continuing education series to learn about the broader long-term digital preservation landscape. In May 2022, NASIG approved the committee's Model Digital Preservation Policy, introducing a new tool designed to help measure, grow and publicize an organization's commitment to preserving its scholarship. The framework provides flexibility to fit a variety of institutions by size, type, needs and resources. The committee aspires to iteratively revise the policy through shared library use cases, which Emery and Carter so expertly provided.

Abbreviations and Acronyms
A list of the abbreviations and acronyms used in this and other *Insights* articles can be accessed here – click on the URL below and then select the 'full list of industry A&As' link: http://www.uksg.org/publications#aa.

Competing interests
The author has declared no competing interests.

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