

Indispensable or unnecessary?: a data-driven appraisal of post- cancellation access rights

When breaking out of 'big deals', some libraries and consortia have found that they can save money by negotiating away post-cancellation access (PCA) to subscribed resources after the subscription concludes. Using subscription data regarding major publisher contracts at several US research libraries, this article reviews options around PCA for libraries and presents a model for assigning a value to PCA content when negotiating a renewal contract.

Keywords

post-cancellation access (PCA); e-journal package value; online journal usage; aggregated databases; big deals; open access



PETER MCCRACKEN
Electronic Resources
Librarian
Cornell University



MICHAEL LEVINE-
CLARK
Dean of Libraries
University of Denver



JOHN MCDONALD
Director of Product
Management
Analytics &
Assessment
EBSCO Information
Services



JASON PRICE
Research and
Scholarly
Communication
Director
Statewide California
Electronic Library
Consortium

Introduction (Note 1)

Many libraries with comprehensive journal packages, or 'big deals', are exploring options to cancel these contracts. Whether these decisions are driven by cost or philosophy or both, many librarians are confronting this issue. Perhaps most notably, the California Digital Library (CDL) announced in early 2019 that it could not come to an agreement with Elsevier and did not renew its deal.¹ In deciding not to renew their deal, the CDL was very open about their decision and very intentional about providing a variety of alternative means of getting access to articles.² In guides provided at the time of cancellation (and since archived on the CDL site now that they have reached a deal with Elsevier), the CDL recommended ways of finding an open access (OA) version of an article, requesting the article from the author using a social network, or getting it from the library. It is interesting to note that in the library-produced graphics, only one of the options is to get the article from the library; it seems that the library is no longer the primary access point for scholarly articles. What does it mean for the library if it no longer presents itself as the primary source for an article? How much should the library try

'the library is no longer
the primary access
point for scholarly
articles'

2 to provide access to resources? Is an open access, preprint version of the article sufficient for the researcher? If these options are sufficient, how important is continued access to the journal titles that the library previously accessed electronically? And what does this suggest about the long-term value of existing big deals?

Understanding post-cancellation access (PCA) is central to making a decision about canceling big deals. Post-cancellation access specifically identifies the licensed content that is accessible to a subscriber after the cancellation of a big deal. It is also occasionally referred to as post-termination access, backfile access, or perpetual access – these are all terms for the same access path. Generally speaking, libraries that subscribe to specific journals in a big deal will maintain access to those journals after the end of the big deal contract, though only for the publication period when they paid for a subscription. The journals for which a library did not have a direct subscription but could access through the big deal, are only accessible while the big deal is active. When the big deal ends, access to those journals is lost. Post-cancellation access varies by publisher and has often been based on historical agreements, but there are two broad flavors. The first is a model in which the library subscribes to a core set of journal titles. The library pays an additional fee to maintain access to all other serial content provided by the vendor. When the big deal ends, the library's post-cancellation access will consist of only the subset of subscribed titles; the library will not have access to all of the titles they could access during the subscription period. The second is a database model, in which a library maintains access to all of the titles and articles it could access during the subscription, but, again, only for the period when the subscription was active. Elsevier is an example of the first and Wiley is an example of the second.

'Several secondary paths of access exist for libraries that cancel a big deal'

Several secondary paths of access exist for libraries that cancel a big deal. A library will be likely to maintain a few select subscriptions to journals with particular importance to some of its community members. In addition, some of the content that the library would like to continue accessing will be available as open access content, and some will be available in aggregator packages, as well. In canceling a big deal, a library must consider these multiple forms of access and the relative convenience (or inconvenience) of each for its users.

Unsub, a tool that allows libraries to predict future availability and cost based on past use of journals, gives us some examples of alternative modes of post-cancellation access.³ Unsub allows a librarian to consider the impact of leaving a big deal, by identifying the different ways that patrons will be able to access all of the journal articles that had been available through that contract. To use Unsub, a librarian loads publisher-provided COUNTER reports into the Unsub system and adds some institution-specific information. From there, it is fairly easy to make some adjustments to predict what the institution's availability of a particular publisher's journals will look like under different scenarios over time. This takes into account open access availability, backfile access and also any continuing subscriptions the library might have. Figure 1 shows an example of an Unsub report in which 26% of the usage reported on a particular publisher's COUNTER JR1 report would be available via open access and 16% would be accessible through its backfile, based on this institution's post-cancellation rights. In this example, Unsub assumes 20% of current use could be converted to interlibrary loan, which might be better described as lost access, since it is no longer directly available to this institution.

'Unsub allows a librarian to consider the impact of leaving a big deal'

The Colorado Alliance of Research Libraries (CARL) recently negotiated a new contract with Elsevier (and author Michael Levine-Clark was part of the negotiating team).⁴ In this new deal, the Colorado Alliance saved 15% over the end cost of the previous deal by giving up post-cancellation access rights – meaning that after the contract period concludes at the end of 2023, CARL members will not have access to the journal articles that have been accessible during the big deal contract period, if they do not sign a subsequent contract. Essentially, Elsevier and the Colorado Alliance agreed that post-cancellation access rights

3 were worth about 15% of that overall contract, though of course the relative value of this access will vary by library. In assessing the value of continued access to journal articles, a library might consider the value of post-cancellation access rights in multiple ways. By subscribing to a specific journal in print, the library ensures that it will maintain perpetual access to that material indefinitely. This allows for a cancellation to have a more gradual impact rather than a sudden impact on the users in that community.

In addition, the size of the post-cancellation list matters: a library with post-cancellation access rights to a large percentage of a big deal will assess cancellation differently than will a library with post-cancellation access rights to just a handful of titles. Librarians considering cancellation of a big deal will be likely to weigh all of these factors.

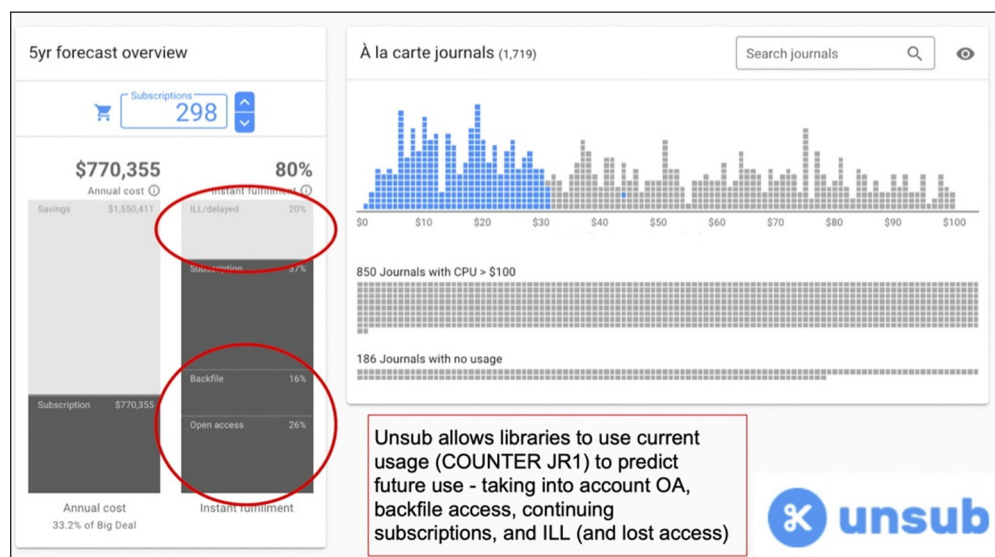


Figure 1. An example of an Unsub prediction for an institution with a US\$770,355 big deal

In both of these examples, CDL and Unsub are suggesting alternative modes of future access to content that is currently available as a result of the library's big deal agreement. Libraries considering cancellation or revision of a big deal need to carefully consider what post-cancellation access will look like for them and their patrons, and how it relates to other types of access.

Literature review

The challenges associated with managing post-cancellation access are well-known; some solutions have been presented, but rarely with specific guidance in how one might fully assess (or even manage) the information around PCA's value and utility. Calvert⁵ reviewed the challenges associated with determining PCA in a small university library. Numerous challenges, from limited availability of past invoices that might indicate when access began, to grace periods for access to journal content that prevents the library from determining if permanent access has been granted, makes it difficult for libraries of any size to determine if PCA is being granted properly by vendors. Calvert highlights an important point about the time commitment a library must invest when trying to maintain this access: though the publisher was obligated to provide access to the content, 'a point of diminishing returns could be reached where the number of hours spent gaining access to an additional one to two years of content was not worthwhile, especially when the content was available elsewhere in another form'.

'a point of diminishing returns could be reached where the number of hours spent gaining access to an additional one to two years of content was not worthwhile'

Bullock⁶ provides examples of several paths for keeping track of perpetual access; they range from simple to complex, and one only hopes that at least some libraries are able to manage PCA with the simplicity of some of the processes described by Bullock. Donahoo

4 and Aguilera⁷ highlight one specific process used in the Albertsons Library at Boise State University, where they had many journals with varying degrees of access, based on big deals that had been broken apart over the past few years.

Carter and Toyota-Kindler⁸ succinctly highlight the challenge of tracking PCA at the macro and micro levels; the subscribing library may know which publishers offer PCA, but knowing which journals have PCA, and for what years, when these journals often move between publishers, is much, much more difficult. In their library, Carter and Toyota-Kindler developed a 'Post-Cancellation Access Determination Project' to figure out PCA rights on a title-by-title level. They highlight numerous challenges that libraries face in ensuring access to content is maintained, particularly in the face of journals transferred from one publisher to another. Though publishers are expected to support and maintain this access, the authors found that, in reality, libraries 'often bear the burden of proving their PCA years to the receiving publisher'. In the case of one small university, managing PCA came at too high a price, and when publishers chose to deliver jump drives containing past serial content, rather than hosting the content online for the institution, 'it was decided that the most effective solution in the absence of self-hosting resources, was to provide access through interlibrary loan, foregoing perpetual access within their own collection'.⁹

'libraries "often bear the burden of proving their PCA years to the receiving publisher"'

Methods

This study assessed usage data from four research libraries and five major publishers. Two of the four libraries serve R2 institutions (Doctoral Institution – High Research Activity) and two serve R1s (Doctoral Institution – Very High Research Activity) in the Carnegie Classification of Institutions of Higher Education.¹⁰ Of the five publishers, three typically provide post-cancellation access to the entire package while two generally provide post-cancellation access to a subset of directly subscribed titles. We used a combined file of eight EBSCO aggregator databases to assess reasonable aggregator coverage of this content in libraries. For usage data, we used COUNTER Release Four JR1 (Number of Successful Full-Text Article Requests by Month and Journal) and JR5 (Number of Successful Full-Text Article Requests by Year-of-Publication [YOP] and Journal) reports.¹¹

'This study assessed usage data from four research libraries and five major publishers'

Unsub's computing power and assumptions made this analysis manageable. Unsub allows one to load a list of titles to which the library maintains post-cancellation access. In order to test different scenarios, we loaded these files twice, each with a different cut-off date to represent an aging of perpetual access rights. This included loading these with the actual subscription dates and then again with a date range of 2010–2014, representing the oldest five years in the data, as a stand-in for assessing post-cancellation access five years after the cancellation of a big deal. We also loaded aggregator title lists and followed a similar process of changing the dates of coverage. It is important to note that, at present, one cannot load both a PCA rights list and an aggregator access list into Unsub at the same time. By importing each file, separately, we were able to estimate aggregator coverage in relation to PCA coverage.

Usage analysis based on year of publication was completed outside of Unsub, at a time when Unsub was not able to process JR5 reports. Unsub can now utilize JR5 reports for more specific analysis.

Results

Looking at all sources of access after cancellation, including the licensed post-cancellation access rights, the aggregator rights and the open access rights – some of which often overlap – we see that for the three publishers that offer full post-cancellation rights for the big deal, between 69% and 74% of the articles published would be available, while the two

5 publishers with partial post-cancellation access rights had a smaller percentage. Figure 2 shows this information in several forms. For publisher 3, for example, 22% of the articles in the journals covered by PCA limitations would be available through open access sources, such as open access articles in hybrid open access journals, post-prints available from institutional archives or other open access resources. Just 4% of the articles in this group are likely to be available from aggregators, and 43% are provided through post-cancellation access. Unsub estimates that 69% of the articles remain available from some source after the big deal is canceled, and the remaining 31% of the articles will not be accessible after the contract has ended.

'69% of the articles remain available from some source after the big deal is canceled'

For the five publishers, open access (shown in orange in Figure 2) would cover between 18% and 30% of current usage. But anywhere from 26% (for publisher 1) and 64% (for publisher 4) of current usage would not be covered at all by a combination of open access, aggregator access and PCA. When considering open access as a percentage of this lower number of retained access, open access content accounts for about a third of access paths for publishers 1, 2 and 3, about half for publisher 4, and well over half for publisher 5. Publishers 1 to 3 feature a database-access model that provides post-cancellation access to all of their titles, while publishers 4 and 5 provide PCA to only a subset of titles.

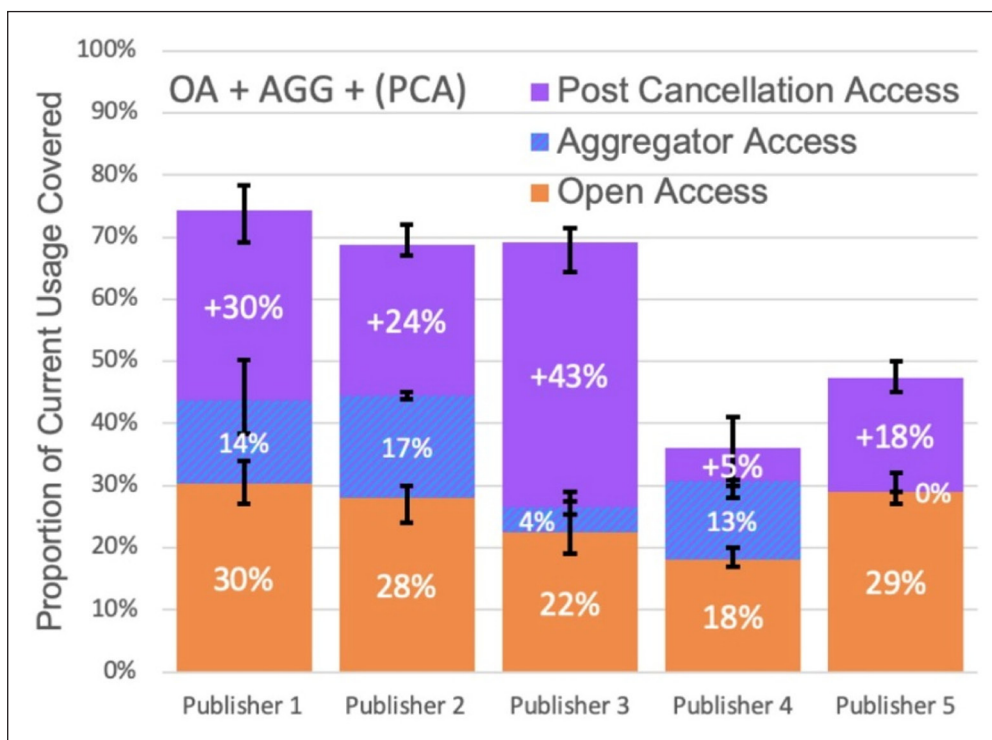


Figure 2. Proportion of current usage covered in the first year after cancellation: open access, aggregator access and post-cancellation access. (No deduplication between aggregator and PCA)

Aggregated databases, as a tool for providing access to these articles, make relatively little difference for publishers 3 and 5, but a bigger difference for the other three. Publisher 3 tends to embargo their titles with aggregators while publisher 5 does not distribute their titles through aggregators at all. When combining open access and aggregator access paths, post-cancellation access accounts for only 5% of the potential usage for publisher 4. For publisher 3, the publisher for which PCA is arguably most valuable, post-cancellation access only accounts for 43% of current usage (or future potential usage).

Since most usage occurs soon after publication, the value of post-cancellation access is highest in the first year after publication. Other paths to access, such as open access and aggregator coverage, can diminish usage on the publisher's website. Depending on availability through open access and aggregator solutions, PCA can account for between 5% and 43% of usage in the year after cancellation. A library that cancels a big deal will find

6 that its post-cancellation access rights vary by publisher, but in no case would PCA need to account for a majority of usage since so much of that usage can be covered by open access and aggregator access. But what happens over a longer time frame?

To look at PCA usage five years out, we took the same data but separated out the PCA usage over five years. As shown in Figure 3, we can see that the PCA usage is significantly diminished when looking forward five years for all five publishers. When incorporating aggregator access, open access and PCA, we found that for publishers 2 and 4, PCA usage was reduced to effectively nothing, and was significantly reduced for the remaining three publishers, as well.

'PCA usage is significantly diminished when looking forward five years'

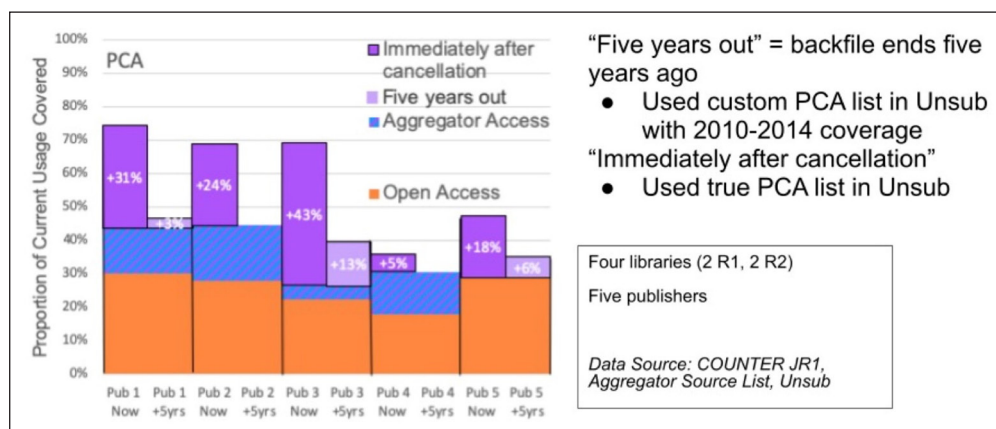


Figure 3. Proportion of current usage covered by open access, aggregator access and post-cancellation access in years one and five

Figure 3 is based on usage from COUNTER JR1 reports, which display usage across all publication dates in a given time frame. JR5 reports, however, report on usage by publication date. This allows us to understand how PCA value changes over time, particularly between publishers. Figure 4 shows that, though usage varies by publication date, it does not vary by publisher. Some variation does occur over time due to some publishers having a greater focus on humanities and social sciences than others, but over ten years, that variation disappears. Most usage occurs for articles published in the current year, then tails off over time.

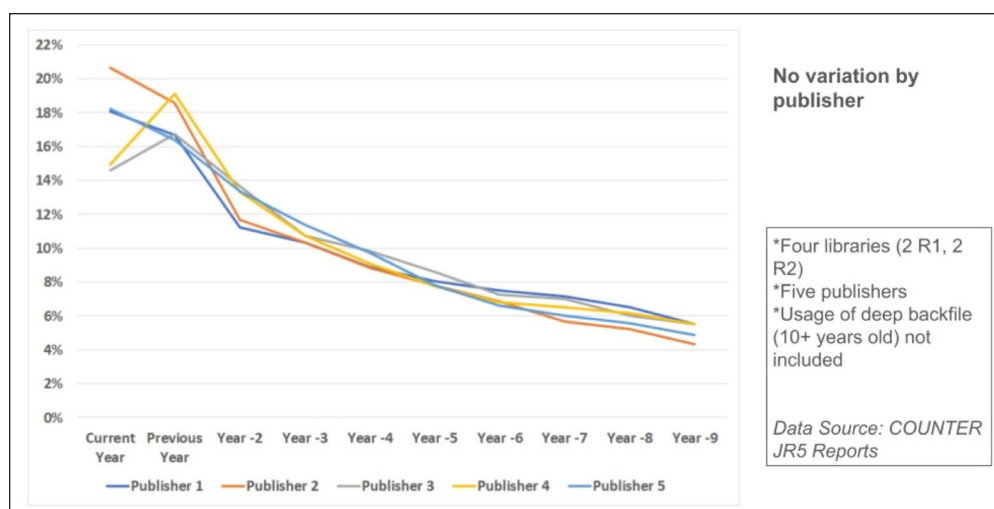


Figure 4. Usage change by year of publication

This analysis, in fact, shows a nearly equal division of usage, based on a two/three/five/ten year pattern. The current and previous year of publication provided about 25% of the library's usage. The next three years provided another 25% of the library's usage, followed by years five through ten, and then the ten year or greater backfile provided the final 25% of usage.

7 Figure 5 shows how demand will be likely to be filled over time. In most cases, libraries using Unsub aim to cut spending by about 75%, while retaining about 50% of expected usage. Over a ten-year period of usage by library users (not including the deep backfile of articles ten or more years old), PCA provides most of the content in the first year – about 90% – but dwindles to nearly nothing after ten years, as represented in Figure 5. After ten years, about half of the articles sought by users will be provided through individually selected journal subscriptions, and about half will need to be provided by some other solution.

'libraries using Unsub aim to cut spending by about 75%, while retaining about 50% of expected usage'

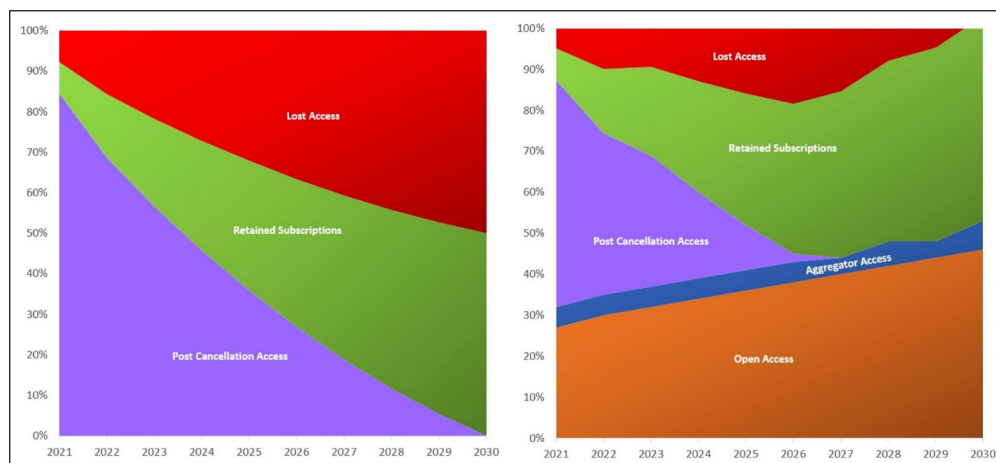


Figure 5. Usage from PCA titles declines to about 50% of total usage within four years and disappears entirely within ten. Taking into account other forms of access including aggregator and open access, PCA access declines entirely within seven years and lost access is almost entirely covered by aggregator and open access

The right side of Figure 5 shows some of the solutions for addressing that lost access, focusing primarily on open access options and secondarily on aggregated databases. Over time, up to 20% would not be accessible through either path, most likely leading one to need to use interlibrary loan or another solution. But over the same ten-year time span, post-cancellation access value declines faster when taking into account open access and aggregator access usage.

Calculating the dollar value of post-cancellation access rights

The expected value of an institution's post-cancellation access for a publisher package can be forecast based on current usage patterns, open access and aggregator article availability and library subscription cost. Multiplying usage of articles from each year of publication during the calendar year before cancellation by the percentage of that usage that would be uniquely covered by PCA rights yields a total number of uses covered by PCA. That product can then be multiplied by the institution's pre-cancellation cost per use to estimate the dollar value of the PCA. Figure 6 illustrates this valuation process in more detail with a grid enumerating ten years of access after package cancellation.

Each cell in Figure 6 represents content from a single year of publication, shown on the y-axis, and a single year of access or anticipated usage, shown on the x-axis. The lower left quadrant tracks historical package spend, recording each year's costs in thousands of dollars as an annual purchase of the content each year. In 2020, for example, this library spent US\$400,000 on this package. The upper right quadrant shows the continued investment, assuming a 75% cut in spending, and a 7% increase per year, and the number of gap years between the current year and the end of package access. The lower right quadrant tracks the usage of content uniquely covered by post-cancellation access over time.

This package provided 94,520 uses in the year before cancellation, which can be multiplied by the projected percentage of usage that is uniquely covered by the post-cancellation access each year (e.g. 31% for 2021). From this, one can extrapolate a total number of requests that can be fulfilled by post-cancellation access to the prior years of access (i.e.

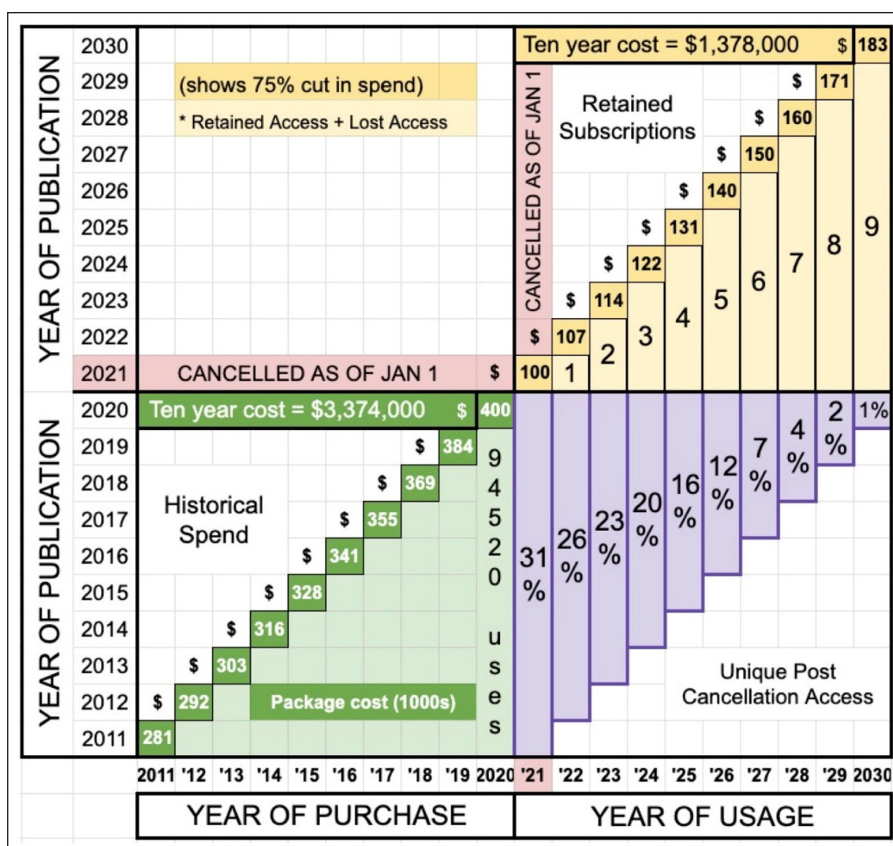


Figure 6. PCA value grid. This example models the value of post-cancellation access for a single library's package from a single publisher assuming a 75% cut in spending to optimal titles based on an Unsub model. It leverages data from the 2020 JR5 (usage by year of publication) and historical package costs to estimate the proportion of usage uniquely covered by PCA rights over a ten-year period. The purple bars indicate the shrinking percentage of total usage covered by the ten years of rights included in the model (2011–2020). As the year of usage increases, the gap between the current year and the end of post-cancellation access grows, as illustrated by the light yellow bars which indicate the number of years in the growing gap

29,290 uses in 2021). We can then extend that 31% of PCA uses across all ten years of access (Figure 7a). The JR5 usage decay curves offer values (26%, 23%, 20%, etc.) that allow us to extend the 29,290 uses across the remaining publication years of content (Figure 7b). Using the 2020 cost per use of US\$4.23 (US\$400,000/94,520) we can then calculate the value of PCA for each year of usage. In this instance, the value comes out to US\$124,000 for 2021 (i.e., 29,290 times = US\$4.23 cost-per-use estimate). Looking at the reduced usage that is expected five years later, we can see that the around 11,000 uses filled by the post-cancellation access in 2026 have an estimated value of about US\$48,000.

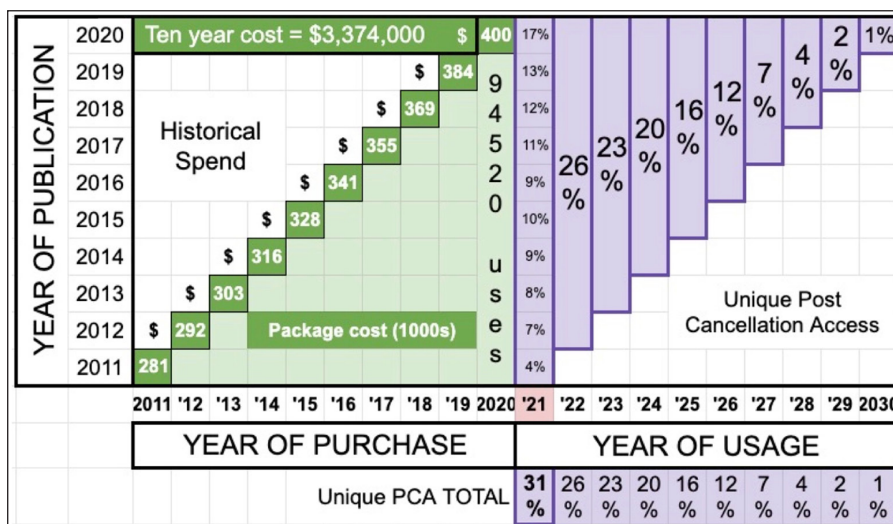


Figure 7(a). This model projects unique post-cancellation access usage across year of publication by percentage and expected number of uses

Conclusions

'The more money that a library aims to save through significant cancellations ... the greater the value of their post-cancellation access rights'

Is post-cancellation access indispensable, unnecessary or somewhere in between? This analysis aims to provide a structure by which libraries can review their own subscription data and attempt to assess the value of PCA in their institution and for their patrons. This research has identified several meaningful observations that merit further discussion. The more money that a library aims to save through significant cancellations, and thus the fewer subscriptions a library plans to retain after these cancellations, the greater the value of their post-cancellation access rights. Similarly, if a library never cancels its big deal package, then there is no value in the post-cancellation access, and PCA can be seen as cancellation insurance. To the extent that libraries are banking on a greater proportion of hybrid or embargoed open access content within a package, alongside the perception that they are providing much more access than they need, post-cancellation rights should be seen as diminishing in importance. The use of tools to guide users to open access or aggregator content can also decrease the importance of PCA for libraries.

Post-cancellation access will clearly be more valuable when it applies to the full package, rather than just a selection of subscribed titles. PCA will also be more valuable when a publisher does not disseminate content through aggregated databases or has a limited open access publication program. Our research highlights the fact that PCA is clearly not created equally and can vary dramatically from publisher to publisher. In addition, because there is a greater interest in newer publications than in older ones, post-cancellation access is most valuable in the first years after cancellation; its value declines significantly over time. Each library must assess for itself how important PCA is for its users. After assigning a value to that content, the library may want to consider including PCA as a negotiating point in future contract discussions.

'Each library must assess for itself how important PCA is for its users'

Note

1. This article is based on work presented at the ER&L Virtual Conference 2021, as 'Indispensable or unnecessary?: a data-driven appraisal of post-cancellation access rights,' by Michael Levine-Clark, John McDonald, and Jason Price, on 8 March 2021.

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 authors have declared no competing interests. While author John MacDonald works for EBSCO Information Services, the work represented herein is based on objective quantitative analysis of data and was not influenced by any business interests held by EBSCO.

References

- Lindsay McKenzie, "UC Drops Elsevier," *Inside Higher Ed*, March 1, 2019, <https://www.insidehighered.com/news/2019/03/01/university-california-cancels-deal-elsevier-after-months-negotiations> (accessed 13 January 2023).
- Office of Scholarly Communication, "Accessing Elsevier Articles," University of California, December 19, 2019, <https://osc.universityofcalifornia.edu/2019/12/accessing-elsevier-articles/> (accessed 13 January 2023).
- "A Better Way to Analyze Your Big Deal," Unsub, <https://unsub.org> (accessed 13 January 2023).
- "Colorado Alliance Signs 3-Year Contract with Elsevier," Colorado Alliance of Research Libraries, <https://coalliance.org/news/colorado-alliance-signs-3-year-contract-elsevier> (accessed 13 January 2023).
- Kristin Calvert, "Starting from Scratch on Perpetual Access," *The Serials Librarian* 65, no. 1 (2013): 69–73, DOI: <https://doi.org/10.1080/0361526X.2013.800464> (accessed 13 January 2023).
- Chris Bulock, "Techniques for Tracking Perpetual Access," *The Serials Librarian* 68, no. 1–4 (2015): 290–298, DOI: <https://doi.org/10.1080/0361526X.2015.1017711> (accessed 13 January 2023).
- Nancy S. Donahoo and Arthur Aguilera, "An Ongoing Treasure Hunt: One Library's Practical Experiences Documenting Post-Cancellation Perpetual Access," *The Serials Librarian* 76, no. 1–4 (2019): 83–85, DOI: <https://doi.org/10.1080/0361526X.2019.1586234> (accessed 13 January 2023).
- Sunshine Carter and Yumiko Toyota-Kindler, "Assessing E-Journal Post-Cancellation Access," *Against the Grain* 31, no. 4 (2019), <https://www.charleston-hub.com/2019/10/v314-assessing-e-journal-post-cancellation-access/> DOI: <https://doi.org/10.7771/2380-176X.8412> (accessed 13 January 2023).

9. Michelle Polchow, "Exploring Perpetual Access," *The Serials Librarian*, 80, no. 1–4 (2021): 107–113, DOI: <https://doi.org/10.1080/0361526X.2021.1883206> (accessed 13 January 2023).
10. "Carnegie Classifications," The Carnegie Classification of Institutions of Higher Education, <https://carnegieclassifications.acenet.edu/> (accessed 19 January 2023).
11. "The COUNTER Code of Practice for Release 4," COUNTER, <https://www.projectcounter.org/code-of-practice-sections/usage-reports/> (accessed 13 January 2023).

Article copyright: © 2023 Peter McCracken, Michael Levine-Clark, John McDonald and Jason Price. This is an open access article distributed under the terms of the [Creative Commons Attribution Licence](#), which permits unrestricted use and distribution provided the original author and source are credited.



Corresponding author:

Peter McCracken

Electronic Resources Librarian

Cornell University, US

E-mail: phm64@cornell.edu

ORCID ID: 0000-0002-0145-4253

Co-authors:

Michael Levine-Clark

ORCID ID: 0000-0003-3001-0261

John McDonald

ORCID ID: 0000-0003-4499-6295

Jason Price

ORCID ID: 0000-0001-9865-603X

To cite this article:

McCracken P, Levine-Clark M, McDonald J and Price J, "Indispensable or unnecessary?: a data-driven appraisal of post-cancellation access rights," *Insights*, 2023, 36: 5, 1–11; DOI: <https://doi.org/10.1629/uksg.601>

Submitted on 02 July 2022

Accepted on 23 August 2022

Published on 28 February 2023

Published by UKSG in association with Ubiquity Press.