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Predicting Use: COUNTER usage data found to be predictive of ILL use and ILL use to be predictive of COUNTER use.

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Predicting Use: COUNTER usage data found to be predictive of ILL use and ILL use to be predictive of COUNTER use.

Abstract:

More and more libraries are investigating the possibility of breaking apart or unbundling their Big Deal publisher packages. In doing so, libraries acknowledge and ready themselves for the possibility of a significant portion of journal use shifting to interlibrary loan (ILL), and attempt to estimate what this shift from subscription to the ILL mode means in terms of costs. This study investigates three years of ILL usage data for 169 journals prior to undertaking subscriptions and then COUNTER usage for these same journals over a three year subscription period. The result suggests a predictive ratio of ILL requests to COUNTER uses and COUNTER uses to ILL requests.

Keywords: Big Deals, electronic journals, usage statistics, Interlibrary Loan, collection evaluation, COUNTER

Introduction:

Unbundling or breaking apart publisher “Big Deals” has become a popular topic and practice within academic libraries that subscribe to these large, often nearly comprehensive, collections of publisher content. Whether driven by financial exigencies or simply a desire to extricate their collections from the inflexibility that subscriptions to multiple Big Deals can create, a shift has occurred and more libraries have or are considering breaking away from Big Deals. The informed exercise that most libraries go through when investigating this option requires a thorough analysis of the publisher package, both as a whole and at the title level, its use data, package subscription costs, and--if breaking the package apart—the subscription costs of subscribing to these journals individually.

Most often, the main metric considered when breaking apart big deals is Cost per Use (CPU); measuring the cost of one journal use (COUNTER use). Placed alongside the expected cost of interlibrary loan (ILL), the main method our users will rely on to obtain unsubscribed content, libraries can compare and determine instances in which not subscribing and allowing users’ needs to be met with ILL to be a more financially responsible use of collection dollars. Steering down this path requires an acknowledgment that unbundling these packages and subscribing individually to a small portion of the content will mean turning over a considerable amount of journal use to ILL.

Even supported by use and cost metrics, libraries traveling down this path will invariably be faced with difficult decisions about journals that show a high year to year use but a CPU that is above a set threshold and are therefore considered too expensive to renew. Following cancellation, users must rely on ILL for access-- but this service is not routinely used by all. Some users will not even consider ILL due to the unfamiliarity of the process and the learning curve involved, the lack of instant gratificationⁱ, or because they are strictly reliant on articles that are available via full-text.ⁱⁱ Therefore, it’s safe to assume that a COUNTER use does not parallel an ILL request in a 1:1 ratio —one journal use does not equal one

future ILL request. With that in mind, what would be helpful for libraries undertaking package evaluation or even individual subscriptions based on usage would be an estimate or ratio to help calculate how a set number of COUNTER uses will correlate to a number of ILL requests, as well as the reverse, a ratio for predicting the number of COUNTER uses a title will have based on ILL use numbers. This study investigates ILL requests for titles that were subscribed to as publisher packages and compares ILL requests from UW-Milwaukee users prior to the package subscriptions, the COUNTER uses of these same titles after subscription, yielding a ratio of ILL: COUNTER use that has predictive applications for libraries considering package or title cancellations. This ratio should help to better estimate the number of COUNTER uses potentialized by a certain number of ILL requests, as well as the number of future ILL requests that might correlate with a known number of COUNTER uses accumulated while subscribed.

Literature Review:

Big Deals have become an unavoidable piece of library collections. In 2014, Strieb and Blixrud discussed a 2012 ARL survey that asked about Big Deal subscriptions and they reported that e-journal bundles adoption was mostly complete and large publisher packages dominated libraries' licensed content.ⁱⁱⁱ Machovec discussed Big Deal proclivity as an addiction, one increasingly difficult to break from as publishers have made sure that their "pricing packages encourage the greatest expenditures since walking away would mean a significant loss in content for most libraries."^{iv} Despite our addiction, many are considering walking away. Although dated, in a 2010 survey from EBSCO, 58% of the responding libraries reported that they were likely to break up e-packages and renew only the most used content. In the 2011 survey, that number was up to 62%.^v

While Cost per Use (CPU) should not be the only consideration, it has become the main metric in which we judge our electronic content and evaluate Big Deals. While many have discussed the reliability of COUNTER or publisher reported usage statistics^{vi}, it remains our best measure and one relied on by many libraries to pursue the breakup of Big Deals. Blecic^{vii}, Glasser^{viii}, Jones^{ix}, Rathmel^x, and Lemley^{xi} have contributed excellent work evaluating Big Deal packages based on COUNTER use and developing

CPU metrics for the package as a whole and by individual title. Breaking apart Big Deals and how individual libraries have taken on that challenge is a much discussed topic within library literature and many examples exist beyond the few listed and provide excellent templates for conducting a local Big Deal review.

What is largely missing from the library literature is the calculated effect that breaking apart Big Deals and walking away from thousands of titles and thousands of uses can mean in terms of ILL. All discuss and understand that there will be a correlational impact, as ILL becomes the gateway to this now unsubscribed content, but mostly the discussion warns that the effect on ILL should be a concern of libraries considering breaking apart a package. Some have gone so far as to consider the potential cost of ILL but treat COUNTER uses and ILL requests as if a 1:1 correlation. In 2008, while acknowledging that not all COUNTER uses would become ILL uses, Botero^{xiii} defended the cost of a package subscription by estimating that there was a cost saving based upon Big Deal access and that if the same number of COUNTER uses had been requested through ILL the potential costs would be \$774,072, well beyond the cost of the package subscription.

Nabe and Fowler^{xiii} get closer to estimating a more accurate effect COUNTER uses have on ILL when they reported on 5 years of data following several Big Deal breakups. 32% of titles that were a part of a Wiley package saw at least one request over the five year period and 47% had no ILL requests, even though these titles had 2361 downloads the last year of the Big Deal subscription. In total, they reported that there were 1118 ILL requests for all of the titles and that these titles had reported 11,254 downloads the last year of subscription. ILL demand was thus 10% of prior use. Similarly, Rathmel and Currie^{xiv} attempted to more accurately project the estimated ILL cost of unbundling by preparing budget projections based on a 1:1 ratio of COUNTER: ILL, a 10:1(10%) and finally a 100:1 (1%).

Another aspect to this, and one largely undiscussed due to that fact that many libraries have lived in a perpetual state of cancellation, is the potential correlational impact of ILL requests to COUNTER uses when adding to the collection based on high volume ILL use. Despite only being used by a segment

of a library's user population, ILL has traditionally been considered a predictor of need and if the quantity of requests for a specific title are considerable, and yearly copyright and other transaction costs are high, then ILL can be used as an indicator of a collection gap and possibly a need representative of the wider campus community. Alongside a review and eventual breaking apart of several publisher packages, Pedersen et al. illustrates the combined collection effect of evaluating based on COUNTER use and adding to the collection based on ILL use and refers to it as the "building the user centered journal collection."^{xv}

UW-Milwaukee data analysis:

In 2009 the University of Wisconsin-Milwaukee subscribed to the Elsevier Science Direct Freedom Package, and in 2013 a Wiley Online Package and a Springer package was added to the collection. This study extracted ILL data from 2006-2009 for the corresponding Elsevier titles and 2009-2012 for Wiley and Springer titles. The collected data yielded the total number of ILL requests for these individual titles over a three year period, from which we averaged the number of ILL requests and compared these totals and averages to the following three years of average COUNTER usage for these same titles---which had been made accessible to all UWM users via subscription. In order to see if any variance existed among publishers the titles were also coded by publisher. This data is illustrated in Table 1.

Table 1:

Table 2:

Combining these data points allows for a ratio to be calculated. Table 3 shows the number of ILL requests per COUNTER use, or an ILL:COUNTER use ratio. Based on the analysis of these 169 titles, an ILL COUNTER ratio of 19.15 or rounding up, 20 exists.

Table 3:

As seen in Table 4 and 5, this correlates to an average of 20 COUNTER uses for every ILL request and then when reversed, 1 ILL request for every 20 COUNTER uses.

Table 4:**Table 5:**

In terms of how these publishers compare to one another, it is revealing to see how much more demand there was at UW-Milwaukee for Elsevier content prior to a package subscription and how much use those journals generated once subscribed. Taken in this context, the data seems to indicate a clear need for the Elsevier package at UW-Milwaukee while the lower ILL totals and lower COUNTER usage for Wiley and Springer packages suggest these package subscriptions could possibly have been avoided, with user needs being met by selective individual subscriptions. So, while the 20:1 ratio does serve as a general estimate of COUNTER uses in relation to ILL requests, it's entirely possible that variations among publishers may be observed at other libraries too—which would complicate any consistent “rule of thumb” approach—and thus also may present an area for future study. As the data shows, Elsevier usage totals for these journals was nearly three times greater than the other publisher packages at UW-Milwaukee, thereby creating a much smaller ratio of COUNTER:ILL uses, which in turn creates considerably different estimates for Elsevier content. This greater use of Elsevier content is not just observable in the small sample of titles but also in comparison of the usage of the packages as a whole. Table 6 illustrates these usage differences by showing a three year average of recent package COUNTER use at UW-Milwaukee.

Table 6:**Conclusion:**

Several factors limit this study and should be taken into consideration. In terms of design the data only considers a relatively small sample of journal titles. These projections are also entirely reliant upon COUNTER uses—uses whose veracity is commonly questioned and uses that offer no clear insight into user motivation for downloading or use after downloading.^{xvi} Motivation for ILL is also not considered and what's missing from this perspective is the possible shift in users' research interests or even institution-specific programmatic changes and new academic directions that could effectively shift the

ILL journal demand that this study is attempting to quantify. Finally, while the vast majority of these ILL requests were for content that was made available via the package subscription, a small portion of the ILL requests were for publication years contained only via backfile subscriptions and whose data ranges would not be covered by the package subscription.

Despite these limitations, these findings do offer libraries a glimpse into the predictive power of ILL requests as they relate to COUNTER uses and COUNTER uses as they relate to ILL requests. While conducting a review of UW-Milwaukee's publisher packages and evaluating them at the title level with use, subscription costs and CPU as the main metrics of importance, it became apparent that there were many easy decisions about what to keep, many easy decisions about what to cut and yet also many challenging decisions also to be made. Setting a CPU threshold---any title with a CPU over this set threshold would become a title to be considered for not retaining---meant that there would be journals with use averages between 50 and 150 yearly uses that would potentially be on the chopping block due to their high subscription cost. By using this ratio and estimating that 1 in 20 of these would become ILL requests, we found we were able to more effectively predict how the COUNTER stats we're evaluating correlate to ILL and more effectively predict the financial impact of cancellation upon ILL. While further evaluation of some of these high use/high CPU titles would undoubtedly lead to their retention, it's clear that the cost savings libraries attempt to realize with the unbundling of these journal packages are diminished when the choice is made to subscribe to the titles individually rather than rely on ILL for access.

Breaking up a publisher package requires a leap a faith on the part of a library. In order to achieve considerable cost savings, a library will only be re-subscribing to a very small portion of the package content, which means shutting the door of access on thousands of titles and thousands of uses. Cutting our users off from this volume of access is not an act that comes easily to librarians-- but many of us are facing financial situations where this is unavoidable. It makes the leap easier to know that the hard decisions---the higher use, high cost titles---that will not be retained won't create large ILL expenses and

that our journal use data can be predictive of the number of ILL requests to expect when access to that title has ended. Libraries have also always considered ILL as a valuable predictor of larger need or a means to identifying gaps in the collection. Wherever we can add titles and have ILL data to review for those previously unsubscribed titles, the observed correlation should also allow us to reasonably predict COUNTER uses upon subscription.

References

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- ⁱ C. Kenefick and J. DeVito, "Google Expectations and Interlibrary Loan: Can we ever be fast enough," *Journal of Interlibrary Loan, Document Delivery & Electronic Resources* 23, no 3 (2013), 157-163.
- ⁱⁱ C. Cooke-Cottone, K. Dutt-Donner, & D. Schoen, "Understanding student article retrieval behaviors: Instructional Implications," *Research Strategies* 74, no 2 (2007), 379-388.
- ⁱⁱⁱ K. Strieb and J. Blixrud, "Unwrapping the Bundle: An Examination of Research Libraries and the "Big Deal," *Portal: Libraries and the Academy* 14, no.4 (2014), 587-615.
- ^{iv} George Machovec, "Consortia and the Future of Big Deal Packages," *Journal of Library Administration* 54, no. 7 (2014), 629-636.
- ^v Boissy, R. et al, "Is the Big Deal Dying?" *Serials Review* 38 (2012), 36-45.
- ^{vi} Terry Bucknell, "Garbage in Gospel Out: Twelve Reasons Why Librarians Should Not Accept Cost-per-Download Figures at Face Value," *The Serials Librarian* 63, no. 2 (2012), 192-212.
- ^{vii} Blecic, D. et al., "Deal or No Deal? Evaluating Big Deals and Their Journals," *College and Research Libraries* 74, no. 2 (2013), 178-194.
- ^{viii} Sarah Glasser, "Judging big deals: Challenges, outcomes, and advice," *Journal of Electronic Resources Librarianship* 25, no. 4 (2013), 263-276.
- ^{ix} M. Jones, D. Marshall, and S. Purtee, "Big Deal" deconstruction," *The Serials Librarian* 64, no. 1-4 (2013), 137-140.
- ^x A. Rathmel, L. Currie, and T. Enoch, "Big Deals" and squeaky wheels: Taking stock of your stats," *The Serials Librarian* 68, no. 1-4 (2015), 26-37.
- ^{xi} T. Lemley and J. Li, "Big Deal" journal subscription packages: Are they worth the cost?" *Journal of Electronic Resources in Medical Libraries* 12, no. 1 (2015), 1-10.
- ^{xii} C. Botero, S. Carrico, and M. Tennant, "Using comparative online journal usage studies to assess the Big Deal," *Library Resources & Technical Services* 52, no. 2 (2008), 61-68.
- ^{xiii} J. Nabe and D. Fowler, "Big Deal" ...Five Years Later," *The Serials Librarian* 69, no. 1 (2015), 20-28.
- ^{xiv} Rathmel, Currie, and Enoch, "Big Deals" and squeaky wheels," 26-37.
- ^{xv} W. Pederson, J. Arcand, and M. Forbis, "The Big Deal, Interlibrary Loan, and Building the User Centered Journal Collection: A Case Study," *Serials Review* 40, no. 4 (2014), 242-250.
- ^{xvi} Bucknell, "Garbage In, Gospel Out," 192-212.

Table 1: ILL requests for subscribed package content

Publisher	Titles	Sum of ILL requests 3 yr. prior	3 yr. mean of ILL
Elsevier SD Freedom Collection	61	2,762.00	45.28
Springer	44	257.00	5.84
Wiley	64	295.00	4.61
Grand Total	169	3314.00	18.58

Table 2: 3 yr. COUNTER use of titles as subscribed package content

Publisher	Titles	Total 3yr. COUNTER use	3 yr. mean of COUNTER use
Elsevier SD Freedom Collection	60	35,166	586.10
Springer	44	12,085	274.66
Wiley	64	13,221	206.58
Grand Total	168	60472	355.78

Table 3: Aggregate ratio of COUNTER/ILL Uses

Publisher	Titles	3 yr. mean of ILL	3 yr. mean of COUNTER use	COUNTER/ILL ratio
Elsevier SD Freedom Collection	61	45.28	586.10	12.94
Springer	44	5.84	274.66	47.02
Wiley	64	4.61	206.58	44.82
Grand Total	169	18.58	355.78	19.15

Table 4: Applying the data to COUNTER Use and expected ILL use

COUNTER Use Avg.	COUNTER:ILL ratio	Estimated ILL requests
100	1:20	5
200	1:20	10
300	1:20	15
400	1:20	20

Table 5: Applying the data to ILL requests and expected COUNTER use

ILL requests	ILL:COUNTER ratio	Expected COUNTER Use
5	20:1	100
10	20:1	200
20	20:1	400
30	20:1	600

Table 6: 3 yr. Use average by publisher package:

Publisher	Titles	3 yr. mean of usage	3 yr. mean use per title
Elsevier SD Freedom Collection	2220	224,653	101.20
Springer	3232	36,272	11.22
Wiley	2426	76,006	31.33