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As I See It! Impact Factors and Usage Factors: Testing Alternative Metrics

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academic library in the U.S. that didn't somehow do business with **Blackwell's**. Their conference receptions and hospitality suites were legendary. They had veteran reps you heard about all the time. A few years into my career they had an online database for customers to order their books. Later, they had tables-of-contents. And they always had that thesaurus, which subdivided so many subjects into so many parts.

But above all they had England. The name itself, **Blackwell "North America"** said that the United States and Canada were outposts of a sort. England was home base, and not merely England, Oxford, where the **Blackwell's** bookshop and its neighbor across the street the **Bodleian** were a pair of world institutions. At **Yankee John Secor** used to say, only half joking I think, that maybe we needed to buy a cottage on Lake Winnepesaukee to counter the **Blackwell** custom of offering hospitality to visiting American librarians at the family estate, known to us only as "the castle." How many American professors had visited Oxford, had spent hours in the bookshop? Once more, can't count. How many were comforted to know that their own library bought books from **Blackwell's**?

One whose library didn't — this was my customer, and so his library's books were bought in New Hampshire — a professor of English History and even a journal editor in the field who taught at a remote state university campus, used to write an annual memo to the University Librarian arguing that the library should throw us out and bring back **Blackwell's**, whom we had displaced to his everlasting frustration. Each year on my visits we'd face off, I'd hear all about **Blackwell's**, and the memo would follow.

I'm sure this unlucky historian would rather have been conducting seminars at **Yale** or **Princeton** than on the campus where he did

teach, but at least there'd been **Blackwell's** before he'd gotten stuck with me. Meanwhile, we'd displaced **Blackwell's** on quite a few other campuses. Their reps came to seem not so formidable. In fact through mutual curiosity we got to know them, and they got to know us, at conferences over drinks. A tavern on King Street in Charleston, now gone, was a notable venue for these summits, where it was impossible not to get awfully friendly as we caught up on industry gossip and exchanged our best tales about customers and about other vendor reps who didn't happen to be present.

One time at a Charleston reception, as I stood with **Dan Halloran**, **Blackwell's** president at the time, a mutual librarian-friend walked up to ask what we were talking about. "We're fixing prices," I said. How we wished we could have. This must have been almost ten years ago, but it was clear even then as we fought for accounts in contests that frequently established new discount thresholds and higher service bars too, that our industry was spiraling in an unhealthy direction. Smaller companies were the first to pay the price. In the U.S., **Blackwell's** acquired **Ballen** and then **Academic**, and in the U.K., **Heffers** and then **W.H. Everett**. **Everett**, until that sale, in 2003, referred to themselves as the world's oldest independent bookseller, founded as they were in 1793 and until the end embedding an image of **St. Paul's Cathedral** in their logo. **YBP**, in the meantime, had picked up **Lindsay & Howes** in 1998, and so finally had a U.K. foothold.

It became difficult not to think about **Blackwell's** as librarians so often had. Friendships were common across company lines and respect grew in both directions. I'll always remember a boss telling me, once we'd begun to seriously challenge them and were feeling maybe a bit too cocky, "They're a good company, believe me. They've survived world wars. They survived a depression." At some point I visited the Oxford bookshop myself, and so had my own fine memories of time spent browsing the shop's aisles and then, in a warm pub just

doors away, inspecting the purchases.

So when the news broke recently, partly it was something everyone thought about in a business way, but partly in the vendor world it seemed a family affair too, one affecting friends. The phone calls and emails and conversations among people who'd been there across the years, in one way or another, began at once and haven't stopped. The other day I was talking to **Wendell Lotz**, now my colleague at **Ingram**, who reminisced that he'd gotten his start in the business at **Baker & Taylor** by being put in charge of transferring into the **B&T** approval system the profiles of libraries who were caught when **Richard Abel** went under. In turn I reminisced to **Wendell** that when **YBP** was acquired by **B&T**, I'd been put in charge of a group transferring the remaining **B&T** profiles — most libraries had switched companies by then, but a lot of small to medium sized profiles were still active — into the **YBP** system. No doubt I'd had my hands on some of **Wendell's** profiles.

What does it mean? is the question everyone gets to at some point, us book vendors and no doubt librarians too in their conversations, as we all assess the new landscape whereby **Baker & Taylor**, the leader prior to **Blackwell's**, now dominates the U.S. market again, and far more than ever before, via the new **YBP**, whose U.K. foothold **Lindsay & Howes** — renamed some time ago as a by-product of an earlier acquisition — **Lindsay & Croft**, is now swapped to **Blackwell's**. A couple of lessons, at least, are clear enough. One is that nothing stays the same for too long. Last month at a library whose account my present company, **Coutts**, had just won, one of the collections coordinators asked a member of the vendor selection committee, "Why didn't you choose **Blackwell's**?" A week later, **Blackwell's** was history. Which brings up the other lesson about the business of library bookselling: While the playing field may be the offices and meeting rooms of academic libraries, this is one tough game. 🐾

As I See It! — Impact Factors and Usage Factors: Testing Alternative Metrics

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The conventional measure of a journal's "quality" is the Impact Factor, devised by **Dr. Eugene Garfield** as an indicator to scientists of the relative merits of journals in their chosen area of research. It is a ratio of number of citations in a given year to articles published in the journal in the prior two years. Impact Factors are calculated each year and published by **Thomson Reuters** in its *Journal Citation Reports*.

Impact Factors are used as a measure of quality or research impact. They are now

used in ways that were never envisaged when **Dr. Garfield's** simple guide for scientists was first formulated. Research grants, tenure and promotion are judged on measures that include the Impact Factors of the journals in which the candidate has published. Governments base their assessments of the quality of individual university research outputs on Impact Factors as well as peer review of published research. Libraries base collection development in part of the Impact Factors of journals in the collection or being considered for acquisition.

Authors want to publish only in journals with a high Impact Factor, which now assumes an importance as a shorthand measure of quality that was never intended, and which it should not have to bear.

It must also be said that **Thomson Reuter's** selection of journals for indexing and citation analysis is heavily biased to STM — science, technology and medicine. Its coverage of the humanities and social sciences is much less comprehensive.

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None of this is intended to be a criticism of the Impact Factor as a quality measure of STM journals. It is accepted by the whole academic community and is embedded in today's academic culture. It remains the best indicator of the impact of research that we have. Its value lies in its simplicity as a numerical measure. The problem is that it is used as a definitive measure in contexts for which it was never intended.

What the Impact Factor cannot measure is how useful journals might be outside the research environment. Journal articles are used in teaching undergraduates. They are read, and applied, by practitioners. They are used in industrial and commercial research in bringing new products and services to market, by people of great responsibility and expertise who, nevertheless, may never write an article, with citations, for publication. There is room for other metrics.

In 2007 the **United Kingdom Serials Group (UKSG)** funded a project to assess the feasibility of developing a Journal Usage Factor (JUF): a simple metric that itself would be a ratio of usage measured against the number of articles published in a given period. The resulting report (**Shepherd P. T.**, *Final Report on the Investigation into the Feasibility of Developing and Implementing Journal*

Usage Factors, **UKSG**, 2007) was based on interviews with authors, editors, librarians and publishers and on a Web-based survey of authors and librarians. It found broad support for such a measure, not to replace the Impact Factor but to complement it by providing an additional metric based on the use made of the journal, irrespective of whether that usage is for research purposes, for real life applications or for teaching the up-coming generation.

As a result, **UKSG**, in partnership with the UK's **Research Information Network**, a policy unit within the university and research communities, commissioned a further project to explore the practical issues that arise in implementing a JUF, supported by an international group of publishers.

A Journal Usage Factor (JUF) has to be based on consistent definitions and standards of measurement. The **COUNTER Guidelines** provide that standard, which has become increasingly accepted as trustworthy throughout the scholarly community. The next stage of development is to test a JUF against a variety of variables — different publication periods, different usage periods, and different types of content — articles alone, or all content.

A number of international publishers are contributing usage data for analysis. Journals in five broad subject areas will be investigated: physical sciences, engineering, medicine and associated life sciences, social sciences and the humanities. In addition, two sub-disciplines

where practitioner use is significant will be examined.

One of the early practical issues to be faced has been the reluctance of publishers to allow their usage data to be accessible by any third party. Such raw data is commercially sensitive, and most publishers see it as confidential and proprietary. As a result, if publishers are to calculate the JUF for their journals themselves, there has to be a robust and impartial system of governance that is seen to be trustworthy by the entire community.

There are parallels in other types of publishing. Magazines depend on their circulations (paid subscriptions, news stand sales, and giveaways) in order to price the advertising they carry. Advertisers and advertising agencies buy advertising on the basis, amongst other factors, of circulation. Magazine publishers calculate their own circulations — the raw data is commercially sensitive — but do so according to rules laid down by an auditing bureau owned by both publishers and advertisers. The **Audit Bureau of Circulation (ABC)** is universally accepted by all stakeholders in the magazine industry as trustworthy and authoritative. It audits the magazine publishers to ensure that the declared circulation is accurate and calculated in accordance with the rules. **ABC** has now extended its standard setting and audit to digital media. This provides an analog of the type of governance that will be required for the JUF.

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Another practical issue that comes to the fore is what usage “counts” for the purpose of measurement. The data that will be tested will be data supplied by the publishers based on usage of their server. But there are other sources of usage that, in a fully implemented JUF system, should be incorporated. Chief among these are aggregated databases. The student using an article does not know or care whether the article is from the publisher’s server or from an aggregator; his or her use is valid either way. Other sources of usage, albeit quantitatively less significant, include e-reserve or hosting in a local course management system such as **Moodle** or **Blackboard**, or usage of locally hosted journals. The decision has to be made by the community whether to include usage of Accepted Versions or Versions of Record posted to subject-based or institutional repositories. These are practical issues that will have to be addressed in the future.

What the JUF potentially offers is simple shorthand metric to indicate how much a journal is used. The investigation may well compare the JUF with the latest Impact Factor, where the journal is indexed by **Thomson Reuters**. As the two metrics are based on different criteria, it is possible, even in STM, that they may differ significantly. Indeed, it would be surprising if the “top ten” journals in each discipline are going to be the same. But we will not know until the testing has been completed in mid-2010.

Most author surveys indicate that authors publish because they want to communicate with their peers. In choosing a journal, authors are driven by a number of factors: speed of publication, the Impact Factor, quality of peer review and retrievability through abstracting and indexing services. The JUF will add an additional factor, which the *Shepherd Report* found to have widespread support among editors and authors. The journal is clearly still a “brand” of significance to authors. The JUF has the potential to be another component in the perceived reputation of the journal.

What about readers? While readers want to identify information of relevance at the article level, the journal in which it is published — the container, or “brand” — is an indicator of the worthiness of the article. The journal itself confers the imprimatur of quality that the journal itself has achieved. Whether readers’ expectations can be satisfied by subject-based or institutional repositories, that lack the information infrastructure that has been built up over the past ten years, remains to be seen. What is important in the context of a metric based on usage is that all uses, whatever its immediate source — the publisher’s server, a local host, an aggregated database, or a repository are considered.

Technology Left Behind — DeepDyving into Journal Article Rental

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On October 27, 2009, **DeepDyve** announced the launch of its journal article rental services, offering access to scholarly journal articles for \$0.99 per article. Likened to **iTunes** and **Netflix**, the California-based **DeepDyve** bills itself as the “largest online rental service for scientific, technical and medical research.” While **DeepDyve** is still in beta, there is a robust library of journal articles already available. As of December 3, 2009, over 32 million articles are available for rent from thousands of journals.

Content

DeepDyve is really two tools in one, both an A&I database, indexing content from a wide variety of publishers, and a journal article rental service, enabling users to obtain access to the articles found via the index. The **DeepDyve** search interface allows users to enter entire paragraphs or even longer segments of text, up to 25,000 characters, searching the deep Web, including resources such as government databases, patents, open access journals, scientific publishers and more. (**Ojala**)

Thus far, **DeepDyve** has focused its efforts on providing access to content in the fields of medical and life sciences. According to the Website, there are plans afoot to expand into other subject areas. The site boasts content from a long list of publishers, including **Wiley/Blackwell**, **Taylor and Francis**, **IEEE**, and a wide variety of society publishers. Noticeably absent from **DeepDyve**’s list of participating publishers are some prominent names, such as **Elsevier**, the **Institute of Physics**, the **American Chemical Society**, and **Springer**.

The full text of some of the content that **DeepDyve** indexes is freely available. Examples include articles from **Medline** or open access journals. Premium articles, those typically accessible via journal subscription, are available for rental through **DeepDyve** for the \$0.99 fee.

It is important to understand that **DeepDyve** does not offer ownership of any content. Articles are strictly made available as a rental for a 24 hour period of time, and are viewed on the **DeepDyve** site, via **DeepDyve**’s proprietary Flash-based viewing system. (**Ojala**) The articles cannot be printed, downloaded, copied, pasted, or even screen-captured.

Some content in **DeepDyve** is labeled as Preview Only. These are articles for which **DeepDyve** does not have an agreement with the publisher to rent the article.

For those users that are interested in obtaining Preview Only content or in long-term, permanent access to a Premium article, **DeepDyve** provides

“Download Article from Pub-

lisher” links, which direct the user to the publisher’s site where he or she is able to purchase the article for download or printing.

Pricing Plans

Under **DeepDyve**’s Basic plan, articles cost \$0.99 with no ongoing commitment. Users create a free account, and then customize their profiles, entering words and phrases that indicate topics and areas of interest. **DeepDyve** uses this information to update the user’s personal **DeepDyve** homepage on a daily basis with articles that match the designated research interests. Users have the ability to bookmark favorite articles for easy referral, and **DeepDyve** maintains a complete history of every article that each user has rented and viewed. Users can also create alerts from their search results; the **DeepDyve** system will run the user’s query automatically and notify the user via email or RSS feed when new articles become available. Use of **DeepDyve**’s alerting and bookmarking features is free.

In addition to the Basic plan outlined above, **DeepDyve** also offers two different monthly plans. At a price of \$9.99 per month, the Silver plan allows users to rent up to 20 articles per month, viewable for up to 7 days. The Gold plan, which runs \$19.99 per month, permits users to rent an unlimited number of articles, viewable for an unlimited amount of time. Currently, **DeepDyve** is offering 14-day free trials of the Gold plan.

Payment for both individual articles and the monthly plans is handled via PayPal. **DeepDyve** does not accept credit card information on its Website, and, while the company is working to establish other payment options, at this time PayPal is the only accepted method of payment.

DeepDyving in the Library

While not specifically marketed to libraries, **DeepDyve**’s A&I index and article rental service present an interesting opportunity for libraries. **DeepDyve** does not currently offer an institutional or library subscription. However, there do not appear to be any restrictions prohibiting libraries from taking advantage of **DeepDyve**’s existing services and pricing plans.

At this time, if a library subscribes to a title through one of the publishers with which **DeepDyve** is partnering, the Download Article from Publisher link directs the user to the publisher’s Website, where he or she can access articles through the library’s subscription. As long as the user is coming from a publisher-recognized IP address, the user is given access to the full text and is not asked to purchase the article. I do not know if it is part of **DeepDyve**’s plans, but it is my hope that one of the next steps for the company is to OpenURL enable the site, allowing users to link from **DeepDyve** into those resources to which their library subscribes, whether it be electronically or in print.

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