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Darby Orcutt

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It's High Time — Metrics in the Administration of Higher Ed

Column Editor: **Darby Orcutt** (Assistant Head, Collections & Research Strategy, North Carolina State University Libraries, Box 7111, Raleigh, NC 27695-7111; Phone: 919-513-0364) <dcorcutt@ncsu.edu>

Column Editor's Note: *This column is a revised and abridged version of my remarks as a part of the National Information Standards Organization (NISO) Virtual Conference, Advancing Altmetrics: Best Practices and Emerging Ideas, December 13, 2017. — DO*

A Bird's Eye View

We're going to look at this subject from a higher-level view, focusing on the uses and potential uses of metrics at the level of university administration, and particularly with regard to research strategy. This perspective on the subject is important for understanding the larger context of the work that libraries do, and potential roles for libraries in addressing these sorts of higher-level needs — the sorts of things we as libraries or librarians may be asked to do, should appropriately do, or should avoid doing. Perhaps most importantly, we need to be thinking about how we not just as librarians but as faculty of our institutions could and should be contributing to the ongoing alignment of our metrics with our overarching institutional goals and mission.

What is Data For?

I find it useful to consider data through the lenses of its purposes, and these are often overlapping, but we basically can consider that some metrics are for more or less mundane decision-making, some are for a communicative purpose (say, quantitatively representing the extent of faculty publication for marketing purposes or for an associational survey), some metrics are for a specific tactical purpose, and some are for a much more broadly strategic purpose.

It is always extremely important that we focus on these ends when we are working with any metrics, so that the cart doesn't drive the horse. There is an old adage in scientific practice that the "scale creates the phenomenon," and we should keep this firmly in mind. With traditional scholarly publishing metrics, for example, we often look for higher numbers of citations or better impact factors for journals. And it can be seductive, for tenure committees or for individuals, to look at some numbers and to allow them a certain intrinsic authority. But we need to bear in mind that all these quantitative measures are only significant to the extent that they serve as *proxies* for quality.

Faculty versus Administrator Views

Individual faculty tend to approach metrics from an on-the-ground perspective, and generally simply their own. Their first interest is in "their" numbers, how they themselves are represented. I was reminded of this yet again in a meeting between a metrics vendor and our faculty governance group; the preponderance of questions and concerns from faculty revolved around issues of how data was collected, was it a fair process, and why were certain measures reported and not others. From a faculty standpoint, the hazards of traditional metrics are often well-known, well-feared, and can widely vary by discipline. What, quite frankly, they tend to misperceive are the risks associated with these hazards; in other words, how likely are the bad-case scenarios? From spot checks of some services conducted by others, faculty across institutions often seem more likely to unintentionally omit publications from their own CVs than to lose credit for publications due to auto-harvesting errors.

Of course, we need to tease out the two major kinds of "error." A discrete error generally stems from a specific mistake with a specific piece of metadata (say, an author's name was spelled incorrectly). A systematic error derives from a larger coding issue, and may still be a simple mistake (for example, a column was accidentally omitted from the formula that sums citations) or from an intentional coding choice (for example, deciding not to count data for "proceedings" because, while these are considered highly significant

within engineering disciplines, they are considered supplementary at best within many other disciplines).

Faculty often fear that their contributions, especially contributions of certain kinds, will not be "counted" by their administration. Thoughtful and well-informed university administrators, however, are cognizant of the issues with metrics, of the sorts of differential impacts that systematic issues may have, and of the cultural and practical differences between how these play out across various disciplines.

"If You Have a Hammer, Everything Looks Like a Nail"

Quantitative measuring (that is, counting) should never simply substitute for thinking. We need to always bear in mind that our metrics at best approximate, indicate, or correlate with our genuine interests. High rates of citation often accompany scholarly work of quality and significance, but the latter are our true aims.

Considered properly, counting can significantly enable thinking — but again, it must be contextualized in a great many ways.

For one example, all data covers a range of time. To put it in the language of the fine print on your mutual fund statements, "past performance does not guarantee future results." But it certainly may be indicative of such. In addition, some metrics by their nature only reveal trends when considered in aggregate over longer periods, particularly data that tends to fluctuate over shorter terms.

For another example, the scale at which datasets are used may make all the difference. Is the data suitably scoped for the intended purpose? For most traditional metrics, for example, allowing counting to substitute for thinking in the evaluation of a single faculty member or even academic program would generally be irresponsible; however, using diverse counts at an aggregate university level might be "close enough" to note certain trends.

Library Roles and Contributions

In the present environment, and I think we'll see this trend growing, research offices and other university administrators are ending up in new and different relationships with their libraries. On some campuses, much of the work of gathering, reporting, and even interpreting various metrics is being shifted to the libraries. On other campuses, the libraries are being left out of the conversation altogether. And, of course, there are all sorts of possibilities in between these poles. There are many new commercial players too in the realm of academic metrics, but many of them are already familiar to us in libraries, as many are vendors we have worked with already for many years as library vendors, and they are now redefining themselves as information brokers in order to reach new markets within our larger institutions. Many of the databases, tools, and technologies used to create metrics and dashboards and related products, from Web of Science to CrossRef, are already familiar to us, and draw from librarian skill sets in search strategies, metadata creation, and fostering information interoperability — just to name a few.

One of the librarian's key roles traditionally has been in promoting information literacy, and in the realm of data that includes educating our user communities regarding the full contexts of data. I do think we can responsibly help assuage the fears of individual faculty regarding the reliability of certain metrics, but we also should play a role in educating our administrators as to appropriate uses of metrics. Perhaps most significantly, the values of librarianship can help properly steer campus practices. Not only do we promote ethics around the informed use of contextualized information, but we are advocates for the sharing of information — and transparency across the community is key to the responsible use of metrics. This transparency is both of the data itself (individual scholars will be less

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The Scholarly Publishing Scene — 2019 PROSE Awards

Column Editor: **Myer Kutz** (President, Myer Kutz Associates, Inc.) <myerkutz@aol.com>

I've been a **PROSE Awards** judge for well over a decade. (The awards program was run by the Scholarly and Professional Publishing Division of the **Association of American Publishers (AAP)**, but now it's administered by AAP headquarters staff. You can read about the program at proseawards.com. The categories I'm responsible for are: astronomy and cosmology; chemistry and physics; earth science; environmental science; mathematics; multi-volume science and mathematics reference works; single-volume science and mathematics reference works; popular science and mathematics; textbooks in physical sciences and mathematics. Most of the entries publishers submit to the awards program are books. They also submit journals and electronic-based products.

I access journals and electronic-based products online. The books arrive in cartons delivered throughout November to the doorstep of my home near Albany, NY. This past fall, while I had two particularly interesting journals to evaluate, an unprecedented event, if memory serves, there was a drop-off from the past several years in the number of printed books I received.

Now I did receive a full complement of popular science and mathematics books, many but not all of them from university presses. Apparently, scholarly publishers continue to see robust markets for these books, most of which consider serious subjects and some of which can be quirky while others are very personal. I did receive the usual complement of upper-level textbooks. Some of these books, as in years past, resulted from many years of classroom testing and were further improved by extensive recommendations from colleagues.

Where I sensed a marked drop-off was in the multi- and single-volume references deal-

ing with scientific topics. Of course, a single year's worth of entries doesn't necessarily signify a trend. I'll have to see the numbers of entries for several years before I would hazard an opinion about the possibility of a trend. I don't have any evidence, anecdotal or otherwise, that major publishers may have determined recently that there are diminishing markets for very large-scale scientific reference works. What I can say, based on the quality and sheer size of the several dozen other high-level scientific and mathematics monographs, textbooks and reference books that I received, is that a possible reason for the fall-off is not that publishers aren't willing to devote resources in terms of time, personnel, and money to developing and distributing expensive titles. Trim sizes were large and illustrations were extensive in numerous cases. Color illustrations, expected in undergraduate textbooks, also turned up in monographs and reference works.

I should point out that, for me personally, one benefit from not receiving as many cartons of multi-volume sets this year as in the past is that I didn't have to spend as much time in my cold garage (and Albany winters can be really cold) perusing the sets in their heavy cartons that I left out there rather than dragging them through the house to my office, which was already too crowded with four dozen or more books submitted to the **PROSE** competition.

Among the entries I received, there was a sizable number of titles that dealt with topics of major significance to environmental health. For example, there were titles that addressed plastics contamination in aquatic environments, global flood hazards, down-scaling wide-ranging environmental impacts to small areas, and working in facilities built

on the permafrost. The winning entry among all the physical science and mathematics categories was an inventive new journal, called *GeoHealth*, which deals with the intersections of environmental and health sciences. It's published by the **American Geophysical Union** in conjunction with **Wiley**. The founding editor was **Rita R. Cowell**, the eminent environmental microbiologist and scientific administrator, who has written or co-authored 19 books and more than 800 scientific papers. Much of her work has focused on such water-borne diseases as cholera. She was the first female director of the **National Science Foundation** (1996-2004) and in 2008 founded **CosmosID**, a bioinformatics company that makes equipment that identifies microbial activity in ecosystems.

The **PROSE Awards** program's ultimate prize (the **R.R. Hawkins Award**, named after the Chief of Science and Technology Division of the New York Public Library from 1942 to 1957) went to an equally timely entry, an **Oxford University Press** book entitled *Cyberwar: How Russian Hackers and Trolls Helped Elect a President – What We Don't, Can't, and Do Know*, written by the well-known scholar and author **Kathleen Hall Jamieson**, director of the **Annenberg Public Policy Center** at the **University of Pennsylvania**. The best evaluation of the book and the issues it deals with can be found in **Jane Mayer's** article in *The New Yorker* issue of October 1, 2018. **AAP's** February press release following the **PROSE Awards** luncheon, which takes place at **PSP's** annual conference, said, "the book is scholarship at its finest, a narrative page-turner that could not be of greater consequence."

Of additional interest is **Porter Anderson's** February interview with **Jamieson**, which you can find on his Publishing Perspectives website. It's well worth reading. The interview focuses on **Jamieson's** "Library of Alexandria moment," which is "a warning to publishers that their essential content could go up in cyber-flames." **Anderson** has numerous alarming quotes in his interview. "How are we protecting the integrity of the publishing enterprise — which is now digital — from the kinds of intrusions that would alter the meaning of texts that are secured right now inside ... digital libraries?" **Jamieson** asks at one point. For example, could someone wipe out the digital files of books that have gone out of print? "How are we going to protect against people who would ... alter the substance of information inside the scholarly publishing world?" she asks at another point in the interview. For example, could a religious zealot wipe out the digital files of books that discuss a religion that she disparages? Could some government actor wipe out or alter all references to any dastardly acts perpetrated by his government? The answer to **Jamieson's** concerns, which ought to be taken seriously, in my view, is likely to be very expensive. Where will the money come from? 🐼

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fearful and more supportive of data efforts if they can see and double-check the information about themselves and their work) but also this transparency is very importantly of the policies and practices around administrative data. How is it to be used? How should it not be used? Such transparency is especially useful in the training of new administrators, to ensure that a culture of responsible use of metrics persists despite personnel changes.

In all of this, we as librarians probably ought to tread carefully, as many of the potential roles for libraries in this new landscape put us in new — and perhaps unwanted — relational structures with our users and institutions. Could existing relationships with individual researchers be potentially tainted by new per-

ceptions of librarians as part of the "them" of upper university administration? How can we effectively remain in the hallowed "neutral" territory of facilitating information sharing and proper use if we ourselves are enmeshed in the gathering, outsourcing, and reporting of institutional metrics? Obviously, any of the potentially fraught issues in this regard might further play out differently across institutions with varying histories, librarian faculty status and tenure differences, funding realities, governance structures, etc. — but the first step at every institution is having a seat at the table and making clear how universities can leverage the existing expertise of their libraries to help foster success at this level of the institution as well. 🐼

Next time: Altimetrics in the Administration of Higher Ed. — DO