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Preface

*Perspectives on Scholarly Communication: Volume One* is a student-created open monograph. Graduate students in the University at Buffalo’s Department of Information Science authored this compilation for the LIS 503: Scholarly Communication course during the fall term of 2019. Each chapter is the culmination of a student’s semester-long investigation into a personally compelling aspect of scholarly communication for which he or she has established an informed, and often provocative position. The text was developed under the a Creative Commons license (CC BY-NC-SA 4.0) as an open educational resource (OER) that can be adapted for future sections of the Scholarly Communication course or for similar courses offered in library and information programs at other institutions.

The original version of *Perspectives on Scholarly Communication: Volume One* was compiled on a local, non-public drive; a complete and unedited copy will remain there in perpetuity. Some of the original chapters were excluded from this public edition to accommodate students who did not wish to have their work openly available, to account for students who did not sign a required institutional agreement allowing for digital conversion, access, storage, and preservation, or to respect common and reasonable standards of academic quality. This edition was modified from the original to align with criteria for posting to the University at Buffalo’s institutional repository; particular attention was given to screen readable accessibility standards. Only minor edits were made to the text to address misspellings, glaring grammatical errors, and issues of stylistic inconsistency. To maintain the integrity of students’ coursework, no further adjustments were made.

The instructor offers his most sincere thanks to the LIS 503: Scholarly Communication students who provided a leap of faith in the development of this volume, which was the product of an ambitious open pedagogy experiment. Albeit, this undertaking was a new and sometimes uncomfortable learning exercise for this progressive group of students, they embraced the ideals of open education, renewable coursework, and educational experimentation and innovation. Readers of this text will encounter imperfections that are characteristic of student coursework; so be it. Of greater effect, readers will also encounter an abundance of student passion for the scholarly communication problems that are interrogated, the positions that are argued, and the solutions that are proposed.

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The Decline of the Scholarly Monograph in the Humanities and Social Sciences

Matthew Alexander

Introduction

The decline in the Humanities and Social Sciences (HSS) has been a well-documented issue in both academic and Library and Information Science (LIS) literature for almost 50 years. While universities and cultural institutions began sounding the alarm in the late 1970s and early 1980s, LIS staff and acquisition management had been voicing their concern for almost a full decade prior. While early conversations primarily focused around the issue of journal inflation costs, LIS practitioners repeatedly warned that unsustainable subscription fees for academic journals had begun to encroach upon collection development and acquisitions in other areas, most notably for the purposes of this discussion, academic monographs.

Unfortunately, few heeded this warning. As the cost of journal subscription rates rapidly outpaced the US consumer price index (with subscription costs increasing by 180% from 1986-2006, while inflation grew by only 84% during this same period, according to Association of Research Libraries reports (Brienza, 2012, p. 161)), and with a market control of over 64% by just four publishing houses (Elsevier, Springer, Wiley-Blackwell, and Taylor & Francis/Informa), and subscription fees accounting for just under 10% of overall library budgets, scholars finally began to listen to the warnings of LIS practitioners. As a direct result of these trends, sales numbers for academic monographs were steadily declining as library acquisition budgets were being redirected towards journal subscriptions. According to Thompson (2005), from 1985-1989, there was 27.76% decline in monograph purchases by libraries. A follow-up
study in 1997 found a continued 21% decrease during the subsequent time period. Harvard University Press, one of the largest and most successful university publishers, reported a substantial projected sales loss for academic monographs, noting that in the 1970s, publishers could expect to sell between 1250-1500 copies, primarily to academic libraries: by the early 2000s, that number had dwindled down to 275 copies worldwide (Thompson 2005), and recent figures place that number between 150-250 (Thatcher 2015). First on the budgetary chopping block were the HSS fields, as the bulk of library monograph purchases were in these subject areas, accounting for 31.98% of all monograph acquisitions in 1989: by 2000-2001, that number was down to 15.6% (Thompson 2005).

This time period also coincided with a significant decline in institutional support and federal funding for HSS research, leading many to suggest that the humanities were being, “permanently devalued within the academy,” (Thompson, 2015, p. 122). While attaching a causative relation between declining monograph sales and a devaluation of HSS fields is spurious at best, it is reflective of the continued diminution of these research areas. Enrollment in 4-year HSS programs is down by nearly half since the 1990s in the field of English and Literature, and 45% in History (Schmidt 2018). Pippins, Belfield and Bailey (2019) paint a more optimistic picture, noting that due to an increase in enrollment in Visual and Performing Arts (VPA) programs (an HSS field), the absolute number of HSS degrees has remained steady. However, they only arrive at this conclusion by including 2-year Community College and Associate degree program data, which skews numbers substantially, as students in such institutions who have not declared a major are automatically listed as Liberal Arts majors, which is under the broader HSS umbrella, and account for almost 40% of the data provided. Discounting these inflationary numbers and VPA degrees, Pippins, et al. still found a one third
decline in HSS bachelors degrees awarded, from 12% of all degrees in 2000, down to 8% in 2015.

**Problem**

What is clear is that HSS fields such as English and Literature, History, Philosophy, and Comparative Literature—all of which have classically relied on the scholarly monograph as the preferred means of research dissemination and career advancement—are waning, both in terms of institutional support and library acquisition budgets. More concerning, however, is in the midst of these troubling and highly publicized figures, a persistent refusal on the part of HSS scholars to adapt to and embrace modern forms of Scholarly Communication (SC) was regularly documented. Consistently plummeting sales numbers did little to sway HSS preferences for academic monographs as the primary method of SC, and the fields were painfully slow to embrace journal and digital publication as viable forms of research communication. While tenure considerations, which still favor scholarly monographs, played a substantial role in perpetuating this preference, institutional policy and funding support (or lack thereof) is not solely to blame.

Using evidence from a review of current literature on scholarly monograph publishing practices and researcher attitudes in the HSS field, this paper argues that HSS scholars’ persistent refusal to modernize their SC practices to the digital era played an important role in the decline of the monograph and HSS research in general. A particular reluctance to embrace digital publishing methods, which persisted well into the 2010s (almost two full decades after Science, Technology, Engineering and Mathematics (STEM) fields had transitioned to the digital landscape), has added to HSS’s precarious standing in modern scholarship. Unfortunately, as HSS programs continue to be defunded, library acquisition budgets continue to fall, and
scholarly publishing continues to favor STEM areas, it seems inevitable that the academic monograph as it has been classically known is at an end. While digital publishing options may offer a lifeline to this hobbled area of SC, substantial change is not only inevitable, but also preferential if HSS is to preserve its institutional viability.

**Literature Review**

Understanding the crisis of scholarly monograph publishing requires an understanding of the principles and economic models applied to the commoditization of information resources. Gary D. Byrd (1990) explores the topic under the wider umbrella of journal publishing and pricing trends using Garrett Hardin’s influential essay “The Tragedy of the Commons” (1968) to draw out the economic principles at play in the scholarly market. Byrd provides a critical assessment of the process of valuation for information resources, and how information objects defy standard economic models in that their value can only be determined after consumption.

Byrd utilizes a cross-disciplinary literature review on the economic concept of use-value as it pertains to information as a commodity and its specific implications for research library collection development and acquisition practices. One of the largest areas of debate in the scholarly monograph crisis is not simply the need to reduce costs, but to establish effective business models that support both author and publisher interests, but Byrd demonstrates that under current monopolistic conditions in the academic publishing market, there is no incentive for publishers to change their practices. As such, it is imperative that HSS scholars critically assess their role within this system, and how institutional and research practices enable scholarly exploitation. Unfortunately, HSS’s over-dependence on traditional research dissemination practices, and its reluctance to embrace technology-driven alternative publishing methods, left
the discipline firmly in the grip of the status quo, effectively reducing HSS to a cornered market completely under the thumb of vast, for-profit publishing enterprises. In short, while HSS’s preferred method of SC was clearly under attack, there was no demonstrable initiative on the part of scholars to modernize practice, as will be seen in the following sections.

While recognition of the deepening monograph crisis was widespread and well documented, it had little effect on HSS scholarly practice. This was largely a product of researcher perceptions coupled with career advancement concerns, as institutions similarly favored monograph publication for HSS tenure considerations over the increasingly more common journal article utilized by other scholarly fields. As such, an important factor in understanding the monograph crisis is understanding the practices and opinions of scholars, parent institutions, repositories, and even publishers.

Thompson’s (2005) award-winning and regularly cited study on the decline in scholarly monograph publication explores changing scholarly communication practices and opinions in the HSS field. The study’s methods are largely derived from Lindholm-Romantschuk & Warner’s (1996) empirical study of the role of monographs in philosophy, sociology and economics. The purpose is to provide insight into scholarly publishing patterns in the Humanities through citation analysis in order to draw conclusions about preferred and emerging formats of publication, the importance of currency in sources, and influence of core authors, works, journals, and publishers. The study’s findings demonstrate a persistent reluctance on the part of HSS scholars to embrace advances in SC, even as scholarly monographs continued to decline in sale and publication. Most alarming was the near absence of considerations of electronic publishing options by HSS scholars, with electronic resources accounting for less than 0.07% of cited materials. Though the age of the paper is important to note, as it slightly predates the widespread proliferation
electronic research databases, this is still a shockingly low number for a period marked by rapid information discovery advancements.

Williams, et al. (2008) similarly investigated HSS perceptions and attitudes regarding the monograph as a means of scholarly communication, and the possible future of the academic monograph afforded by the widespread availability of digital publication. The qualitative study analyzed interview responses from 17 HSS academics to better understand the views and attitudes of publishing scholars within the disciplines; specifically, the documented preference among HSS scholars for monographs over journal articles, evolving perceptions of digital monograph and print-on-demand services, as well as how these practices are perceived as they relate to career advancement; an important factor in cultivating widespread participation by HSS academics in the electronic publishing world. The study was designed to, “discover how the writers and users of Arts and Humanities research monographs ascribe value to this means of scholarly communication,” the role they play in career advancement, as well as attitudes “towards the potential electronic publication of academic monographs in the future,” (p. 68).

They list seven aims and objectives, focused on research discoverability and use, the preference of monographs over journal articles, differences in monograph perceptions and use between Arts and Humanities disciplines, attitudes and possible roles of the e-monograph, and the roles monographs play in both scholarly activities, and career-advancement goals.

Williams, et al.’s (2008) findings mirror previous studies in that HSS researchers were still hesitant to embrace journal and e-publishing dissemination methods, due in large part to concerns regarding the quality of scholarship. A repeated concern is that the decline of monograph sales has resulted in an emphasis on salability over quality research, and uncertainty regarding institutional acceptance of alternative publishing methods for career advancement.
While interviewees remain reticent regarding e-publishing and Open Access (OA) methods, researchers found increased interest and awareness as compared to the previously discussed study by Thompson (2005), as well as an increased interest in print-on-demand services.

A more recent study by Collins and Milloy (2012) considered scholarly attitudes and awareness of open access monograph publishing, which has been touted as a solution to the ever-worsening monograph crisis. The pilot study is part of the larger Open Access Publishing in European Networks – United Kingdom (OAPEN-UK) benchmark study exploring author, publisher, and steering group awareness and attitudes towards OA.

In the pilot study, publishers supplied 29 “matched pairs” of academic monographs. Pairs were established based on similarities in year of publication, format, sales history, and subject. One title from each pair is randomly selected for OA publishing, while no changes are made to its counterpart. The supposition is that differences in sales, usage and citations can then be attributed to its publication business model. A qualitative survey was then distributed to authors, publishers, and steering groups to measure changes in cultural attitudes towards OA models over a three-year period. The survey asked participants to rank five common motivations for scholarly publishing identified by the larger benchmark study, and their perceptions of how the OA process satisfies these goals. Findings suggest a continuous increase in awareness and interest in OA monograph models among HSS scholars and publishers, and a potential willingness to finally adapt to the digital SC practices.

Steven Pinfield (2015), also explored the changing attitudes of scholars, institutions and practitioners towards OA, though through different methods than the previous studies. Using an extensive literature review and textual analysis process to better elucidate on the current discourse surrounding OA, Pinfield composited a graphic representation and thesaurus detailing
the key issues addressed by current literature, highlighting what appears to be a noticeable transition from the theorization of issues surrounding OA, to the development and launch of institutional and private initiatives.

Pinfield’s study in many ways marks a turning point in that it demonstrates a definitive change in focus and attitudes of scholars and practitioners, moving the conversation beyond questions of whether OA should be used, to how it can be made to improve SC. Using a large-scale textual analysis of peer-reviewed literature on OA to scholarly resources from 2010 to 2015, this extensive literature review included peer-reviewed journal literature, professional and higher education press, grey literature, informal communications (blogs, emails, and professional listservs), and open-access data sources. A total of 680 relevant objects were identified, though as the study required full-text access for data analysis, only 589 were aggregated. The full text of all materials was then downloaded and compiled into, “a single text corpus comprising 2,506,880 words,” (p. 607). Using a method developed by van Eck and Waltman (2010, 2011, 2014), the text was analyzed using VOSviewer tool, which identifies the most significant word occurrences, and maps them according to relevance, relatedness and frequency. 305 terms were identified and mapped. While the article identifies the most common areas of OA publishing currently being considered and developed within the professional literature, it supports the position of previous studies that OA has been steadily growing its acceptance by the larger academic, publishing, and institutional communities, and that the conversation has moved to operationalizing, adapting policies and peer review systems, and creating sustainable models for OA publication and dissemination.

While economics have clearly been the driving factor behind the scholarly monograph crisis, particularly in the areas of HSS, the problem goes beyond the corporate structure.
Academic research funding is almost entirely dependent upon subsidies from parent institutions and government grants to supplement the costs of research development, publishing, and manufacturing processes. As government and academic institutions continue to reduce available funding for HSS research in favor of the far more profitable STEM areas, options for offsetting publication costs are becoming increasingly scarce, thus dissuading publisher interest in producing scholarly monographs. Unfortunately, as Wright (2018) demonstrates, there has been little action in adapting grant allocation policies and requirements to the new SC landscape on the part of HSS.

Wright identifies major funding areas that have yet to be addressed regarding OA monograph publication, and stresses the need to consider what the disruptive phenomena reveals about scholarly publishing in general; mainly, that it is heavily dependent on public funding. Citing findings from previously mentioned studies such as the Collins and Milloy (2012) OAPEN-UK project, Wright asserts that despite progress by scholars and practitioners, there is still, “insufficient data on the cost and revenue models for monographs” (p. 178). Among the most glaring areas yet to be addressed is that little change has been made to the grant allocation process for HSS scholarship as it pertains to sales and distribution metrics. Post-research-development grants depend upon performance reporting, which is yet to include standard policies on measuring downloads, print-on-demand requests, and chapter versus full-book views. Furthermore, digital versions also require different post-production costs that need to be offset by publishers (generally through grants), including metadata creation, platform updates, and the cost of digital storage and delivery systems. Lastly, centralized databases for OA monographs are yet to be solidly established, and as such, there are increased marketing and dissemination costs if information objects are to be broadly discoverable by the research community.
In short, while HSS is finally making strides towards adapting to new digital publishing options, economic models and institutional policies are still woefully unprepared to address the myriad of econ, institutional, and technical considerations necessary for establishing a sustainable digital market and funding system for OA scholarly monographs. While OA options are clearly the most viable solution for preserving the scholarly monograph, HSS’s slow response to changing trends has left many unanswered questions. Given HSS’s rather dire circumstances in the academic milieu, it may lack the institutional support necessary to develop sustainable policies and practice for long-term viability. To put it bluntly, it may be too little, (far) too late.

Discussion

Scholarly publisher exploitation and interest in OA options came to a head in 2012 following Timothy Gower’s call to boycott Elsevier Science, and the subsequent “Academic Springs” movement that he inspired. While support for the basic principles of this call for open-access and pricing control is widespread (and enthusiastically shared by the author of this paper), few considered the repercussions for non-established scholars, particularly in compromised disciplines such as HSS. But as Brienza (2012) argues, the academic spring’s goals would negatively affect scholarly communication for many researchers and fields through a lack of institutional recognition of alternative forms of publishing for career advancement, limited access to marketing and information resources, and the potential to negatively effect academic research practices through a lack of peer-review processes. Furthermore, this would increase pressure on already beleaguered academic publishers such as small university presses by emphasizing salability over quality scholarship in order to remain in the black: all concerns that
were still being raised by scholars like Wright in 2018, again reflecting the slow response of HSS to the crisis.

Brienza’s warning is particularly potent for HSS scholars, as she rightly anticipated researchers and disciplines that “are most vulnerable…face the greatest potential personal threat from the academic spring’s publishing revolution,” (p. 166). Compromised areas such as HSS risk the greatest threat to their discipline through prestige-journal boycotts and open-access publishing as the scarcity of funding for research is already a prohibiting factor for publishing in these disciplines. With few options to offset pre-publication, printing, and dissemination costs, the guiding principles of the academic springs would essentially render HSS research unprofitable and insolvent, and does not “translate into better career outcomes for individuals or increased disciplinary or institutional strength,” (p. 166).

As previously mentioned, STEM areas, having embraced the evolution of digital scholarship much earlier than HSS, were better positioned for such a change, having already largely transitioned away from scholarly monographs in favor of journal publication as the preferred method of research dissemination. However, the OA movement does offer some hope to the monograph (again, probably better described as a lifeline), but still faces major hurdles due to HSS’s lagging research funding and lack of policy development that, shockingly, still is yet to be properly addressed. As previously discussed, Wright (2018) has identified the major role of institutional and public funding for offsetting pre- and post-publication printing costs, essentially subsidizing the scholarly publishing industry, and safe-guarding publishers against potential losses. Issues of post-research-development grants, and the lack of policies designed to weigh digital metrics for funding consideration were discussed in the previous section, but particularly
in the type of OA scholarly landscape called for by the academic springs, pre-production costs will receive more emphasis.

OA carries its own set of funding concerns, with the most popular models being the “Green” and “Gold” models. Director of the OAPEN Foundation, Eelco Ferwerda (2014), describes these models and their associated costs, which have been primarily utilized in the field of e-journals. However, the author is quick to note that e-books “do not substitute printed books in the same way e-journals are substituting printed journals,” (p. 35), and therefore their impact may be significantly less palpable in disciplines such as HSS, and its heavy preference for print and book-length research materials.

Hybrid models that utilize both print and e-book formats have shown some success, particularly the “Freemium” model; a proven system that has been active since the mid-1990s, in which publications are freely available online in HTML format, while “premium” editions with enhanced services are available for sale, which helps to offset publication costs. This is an important consideration, particularly given the ever-increasing costs of Gold Model OA agreements, which charges “author fees” to maintain copyright, usually after a lengthy embargo period. These author fees are more often than not subsidized by research institutions, and given the scarcity of funding for HSS scholarship, poses similar (though marginally less prohibitive) associated costs to that of traditional publication models.

What is clear is that any sustainable business model will require a fundamental rethinking of the academic book publishing and funding processes. Unfortunately, HSS has made painfully little progress on this front over the last 50 years, seemingly ignoring the problem until the last decade. Several projects offer some evidence-based results for effective OA scholarly monograph publishing business models, but all require significant institutional cooperation and
support, and seeing as HSS is still largely in the policy-development stages of this process, it may lack the time and institutional motivation necessary to make the kind of immediate progress needed to stop the bleeding.

The model that seems to offer the most hope is the Consortium Based Model, which has some proven success in the field of HSS monographs. Thatcher (2015) outlines the system, drawing upon his experiences in OA publishing through the proposed but unrealized Committee on Institutional Cooperation (CIC), which he later adapted for the development of Penn State’s Office of Digital Scholarly Publishing (ODSP). This model, primarily utilized by institutions with access to existing university presses, creates a network of cooperating partners who contribute to a joint fund. Partners will have unlimited access to research materials through the cooperating network, while subscription fees are charged to individual users and outside institutions. Production and post-production costs are shared by the institutions, and utilizes existing library resources and staff in the design and editing processes. While this model significantly reduces publishing costs and increases availability and dissemination, it requires a high degree of coordination between institutions and lengthy planning and policy development stages. While many state university networks have embarked on such projects, the pressing need in the HSS field, and the rapid defunding of HSS programs, may not be able to survive the wait.

Conclusion

At the risk of sounding glib, the academic monograph in its traditional form is an endangered species, and the destruction of the ecosystems that support it is expediting the process. As HSS programs continue to be defunded (as is the case of the parent institution of the author of this paper), research investment becomes increasingly scarce, and academic publishers
have fewer marketing options for their product, the very foundation that supported HSS research is disappearing. Unfortunately, the field’s frustratingly slow response to changing scholarly communication practices has left it two-decades behind most other academic disciplines. Simply put, with HSS programs struggling to maintain their footing in academia, the likelihood of finding institutional support for large-scale projects with undetermined investment returns seems unlikely at best. While journal-price inflation may have undermined the scholarly monograph by demanding ever-larger percentages of library acquisition budgets, HSS researchers’ refusal to adopt the journal article and electronic information resources as the primary vehicles of scholarly research dissemination in the modern age has been damning. The great irony is that while highly exploitative journal-pricing practices did obvious damage to the monograph, HSS’s reluctance to embrace the journal article has only further marginalized research contributions. The sad reality is that, as of this point, the damage is likely irreversible, and the solutions too expensive to be operationalized by institutions that seem bent on eliminating HSS programs. While the decline in the scholarly monograph cannot be causally equated with the decline in HSS, it should have served as an obvious bellwether of the need for immediate change. Unfortunately, for HSS scholars, tradition won out amongst researchers, but not in their parent institutions. In short, HSS’s place of prominence in the STEM-obsessed academia is beyond recovery, and so too is the scholarly monograph.

References


Using Linked Data to Promote Self-Archival Metadata Control

Bridget Baker

Self-archiving in an academic context is carried out by authors and researchers from all disciplines, most of whom are untrained in metadata schemas or cataloging theory. Without supports in place to assist them in this task, however, the potential for unwanted outcomes is high – incorrect or missing metadata, frustration or anger for the researcher, and unwillingness to attempt self-archiving again. Active support measures, such as classes, one-on-one assistance, or metadata remediation after the fact can prove time-consuming and costly. By drawing on methods from user experience design, social media and search engine optimization, traditional metadata quality control, and linked data, institutional repository (IR) input methods can support a streamlined input interface and increase the quality of self-archived item metadata.

In the early stages of IR, people believed that self-archiving was the way of the future. They optimistically pictured repositories teeming with scholarly output, a portfolio of the scholarly works and achievements of the university at large, and all filed and tagged with information by the person who understood the content the best – the individual authors. The reality is much less rosy. Repositories suffer from limited faculty buy-in (Kim 2010), and self-archiving practices result in low-quality metadata, which hinders item discoverability.

Kim (2010) looked at why faculty chose whether or not to self-archive their work. Seven factors emerged as significant, and three of these – copyright concerns, technical skills, and additional time and effort – can be potentially addressed and their effect mitigated by the design of the IR infrastructure. A design that simplifies and streamlines the input process in order to get
more accurate metadata may have additional benefits of simplifying and increasing knowledge about copyright, reducing anxiety about the inputter’s technical skills, and reducing the perceived and/or actual time and effort to self-archive.

Looking from the perspective of data management, Park and Tosaka (2010) conducted another large-scale study, targeting department heads in cataloging and technical services. Eighty-one percent of respondents either agreed or strongly agreed that quality control is essential for resource discovery and sharing, and 82% responded positively that having content standards for metadata creation was “critical to the maintaining of quality metadata” (p. 706). The authors suggested that building quality assurance into the metadata creation process is crucial to “ensure accurate, complete, and consistent interpretations and applications of given metadata standards” in projects with different metadata creators who may not be “familiar with metadata application” (p. 708). The authors also found that accuracy and consistency of metadata are prioritized over completeness, which supports the idea that a simplified entry system, designed with easy-to-access guidelines and examples for metadata entry, may help produce more consistently accurate, useful metadata.

One area of potential problems with metadata control is in author’s names. Names can be misspelled in publishing errors or changed due to marriage, divorce, or other circumstances. An author may use their first and middle name in one publication, their first in another, and their initials in a third. Different academic disciplines may have formal or informal conventions on how authors’ names are displayed. Chapman, Reynolds, and Shreeves (2009) noted the need for author name authority control and disambiguation in their study of three DSpace IR repositories.

Downey (2019) looked at the combination of campus user identity management system profiles and third-party disambiguation tools – namely the Library of Congress Name Authority
File (LCNAF), Virtual International Authority File (VIAF), and Open Researcher and Contributor Identifier (ORCID) to see which combination performed best to successfully disambiguate existing IR records. All three methods proved difficult to disambiguate authors after the fact, but after noting that authors not linked to monographs would not be present in the LCNAF listing no matter how prolific they were, she suggested encouraging ORCID registration and use during data deposit.

Baessa, Lery, Grenz, and Vijayakumar (2015) demonstrated that integration of ORCID registration into the IR deposit and management process can lead to high adoption rates of the researcher identity service, with 82% of faculty, 52% of postdocs and 13% of research scientists linking their new or existing ORCID ID into their IR profile (2015). By linking a repository item to a researcher profile in a service like ORCID, especially while that item is being deposited, it is unambiguously linked to the exact author. This makes the item more discoverable by nature of having quality, correct author metadata, but it also links that item to the citations of other potentially interesting works of that author.

Though sometimes users search for a specific item through a known item search, they may also wish to browse items on a topic by searching by subject keywords. Hanrath and Radio (2017) analyzed text strings searched in an IR and tested resolving the searched text with the entries in the OCLC Faceted Application of Subject Terminology (FAST) vocabulary database. In their research, they found that a significant section of user queries are subject related, and that accuracy in subject classification may improve discoverability of IR records.

Another article by the same authors, Radio and Hanrath (2016) examines small samples of IR items from three academic departments were hand-cataloged in two different subject vocabularies to explore enhancing IR records with the use of linked data (LD). They noted
difficulty in mapping several terms in both vocabularies, and suggested that “a keyword field for terms of semantic value seems like an appropriate compromise for capturing appropriate aspects of the resource that are out of FAST’s scope” (p. 87). They additionally noted that no vocabulary chosen will be perfect, and that introducing a controlled vocabulary, however imperfect, can help “introduce order and decrease noise” (p. 92) just as in traditional cataloging, and expose the repository to the emergent possibilities of LD and the Semantic Web.

There are some potential issues in connecting IR records with third-party databases without careful consideration for the information contained within the records. Chapman et al. (2009) noted that terms serving as keywords may have different meanings in different academic contexts, which adds a layer of complexity in instituting a controlled vocabulary for subject metadata and suggests that simple mediation by a subject expert will help prevent mismatches in links to database entries for record enrichment. Additionally, careful selection of a controlled vocabulary or database for enriching records helps to make sure that the records are enriched and not made unusable by way of inaccurate subject headings.

Kumar (2018) also explores enrichment of IR records using LD, but he chose a more generalized database, DBpedia, using his own previously published model. This paper outlines the process for implementation in which potentially enriched content is manually linked to database entries (but an autosuggest feature assists). The enriched data is displayed within the same frame on the completed record. This allows users to make decisions regarding the item’s relevance to their search without having to examine the item itself (2018). The author notes that although the current design does not include it, natural language processing could be used to automatically enrich scholarly content, potentially making this model an attractive option for retrofitting existing IRs with enriched content records.
With minimal additions, these IR design elements can add additional functionality to the IR design. Clark and Rossman (2017) examined the use of search engine optimization (SEO), social media optimization (SMO), and linked data for discoverability and engagement with library-purchased databases. Applying SEO and linked data methods to these web pages resulted in a nearly 400% increase in engagement. They also saw healthy changes in other common engagement metrics. One key takeaway is that in addition to changing the front end of the inputting process for new IR content, care should be taken to utilize the inputted metadata to the fullest by incorporating it into the displaying page’s metadata for indexing and discoverability. Metadata can be mapped to the code elements of the page so that search engines can understand the metadata and index it properly, increasing discoverability.

In addition to improving metadata quality for the IR administrator’s benefit, many simple considerations can be taken into account when designing the IR input mechanisms. Betz and Hall (2015) took a look at the IR input process, breaking the interaction down based on Dan Shaffer’s microinteractions model to identify and attempt to correct points of frustration by reducing the number of decisions required. The participants’ design recommendations included making the next step in the process more obvious by use of visual clues on the page, connecting the login process with the user’s university credentials so they do not require a second login, moving already known information about the user forward by prepopulating forms, and using clear language around potential trouble spots such as copyright permissions. They also included a confirmation page providing information on when to expect the item to go live and thanking them for their addition to the repository. The authors suggest that studying usability of IRs should be one of many tools employed to help improve IR self-archiving rates.
Early attempts at IR self-archiving processes may have struggled to take root within the culture of the academy. With new developments in web technology and user design, as well as a better understanding of why the initial attempts did not thrive, IR self-archiving has the potential to blossom. When taken together, these ideas can be synthesized into a roadmap for the development of a more user-friendly IR input process that supports quality metadata. These provide a user experience rooted in reducing frustration, giving faculty inputters the supports and structure to input their data correctly, and provides incentives to faculty for their participation.

Reducing faculty frustration can be accomplished by removing unnecessary complication and decisions from the input process, while striking a balance by providing choice and support for more complex input tasks. First, the IR and input pages should be easy to navigate with clear visual markers for each step. Any required fields are clearly marked and carefully chosen to strike a balance between keeping the minimal required effort for deposit low and making sure that all records have enough information to be discoverable (Betz & Hall 2015, Kim 2010).

Secondly, faculty IR accounts should be linked to their university credentials, so there is no separate login information to remember (Betz & Hall 2015, Downey 2019). Finally, permissions and public access will be handled with an expandable list of options. As initially presented on the page, inputters can choose to have the item they are inputting be public (full public access) or private (only accessible by themselves.) By clicking to expand more options, they will have access to a wider range of more nuanced options, including a date-based embargo and adding access to private files for other collaborators who have an institutional login with read-only or edit permissions. This keeps the decision-making simple for the majority of inputters, while allowing the flexibility and fine-tuning for those with more complex permissions requirements.

Copyright permissions will be handled similarly, with the addition of some specific helpful
guides to understanding copyright agreements, particularly the SHERPA FACT suite of tools for information on publishers’ open access policies (Betz & Hall 2015, Curry 2017, Kim 2010).

To balance the faculty’s needs with those of the IR administrators and users, support for quality metadata must be put into place. First, the use of an author name authority control registry such as ORCID is highly suggested or mandated, depending on the institution’s policies. Users should be able to follow a link directly to signing up for this registry if they do not already have an account. Their unique registry identifier should be saved with their IR account so it will not need to be retyped for later deposits (Baessa, Lery, Grenz, & Vijayakumar 2015, Betz & Hall 2015, Chapman et. al, 2009, Downey 2019). Secondly, as inputters enter metadata, natural language processing should be used to identify potential matches for subject classification terms in a database such as DBpedia. These matches are autosuggested to the inputter, and they can accept or reject the match. Accepted matches are linked with Semantic Web linked data properties to database entries to enrich the text, while text with rejected or no matches is left in the record as entered as a free text subject classification (Chapman et al. 2009, Hanrath & Radio 2017, Kumar 2018, Radio & Hanrath 2016). Third, information buttons are available to provide additional information on how to enter and format each piece of information. This keeps the form clean and uncluttered, while offering more information for inputters who want it (Kim 2010, Park & Tosaka 2010). Fourth, a help button is available on each page of the entry form. When pressed, a message containing everything entered into the form so far plus space to describe the issue is generated. This allows inputters to email IR staff with questions and problems without having to copy lots of information forward themselves (Betz & Hall 2015, Kim 2010, Park & Tosaka 2010).
The best system design means nothing if the target users do not actually use it. Faculty members can be incentivized to try the new system despite previous misgivings, and will hopefully adopt IR depositing into their scholarly dissemination checklist. First, all the entered record metadata is mapped to the appropriate browser-readable metadata locations, allowing the page to be correctly indexed by search engines and increase discoverability, potentially increasing the access statistics for their IR items (Clark & Rossman 2017, Radio & Hanrath 2016). Secondly, a thank you page lets inputters know that their information has been received, thanks them for their effort, and provides information on when to expect the final record to go live (Betz & Hall 2015). Third, faculty should be able to access a clean, formatted page detailing all of their IR inclusions that includes access and download statistics, appropriate for inclusion in tenure portfolios or other assessments (Kim 2010). Fourth, for each repository upload that has gone live on the repository, faculty will have the opportunity to generate announcements formatted for popular social media websites, listservs, and personal websites that includes the permanent link to the item’s repository record. They can also generate an announcement linking to their public-facing repository profile with links to all publically available materials, appropriate for marketing themselves and their work (Clark & Rossman 2017).

The development of an IR input mechanism to support quality metadata output from non-information professionals is a multifaceted, interdisciplinary task. This topic requires drawing on studies incorporating web design and discoverability, Semantic Web and linked data, controlled vocabularies in both cataloging and web contexts, identity management and disambiguation, as well as barriers to the adoption of self-archiving practices. As a result, this complex topic requires a broadly cast net of study to fully realize the benefits for IR practices to adopt the strategies of linked data for enhancing metadata within their records.
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doi:10.12688/f1000research.6502.1


doi:10.1080/01639370902735020


Seven factors affect faculty self-archiving behavior:
1. Altruism
2. Self-archiving culture
3. Copyright concerns
4. Technical skills
5. Age
6. Academic reward
7. Additional time and effort (Kim 2010)

81% of surveyed cataloging and technical services department heads either agreed or strongly agreed that quality control is essential for resource discovery and sharing. (Park & Tosaka 2010)

Applying search engine optimization (SEO) and linked data methods to library database webpages resulted in a nearly 400% increase in engagement with those pages. (Clark & Rossman 2017)

REDUCE FACULTY FRUSTRATION
• Use clear page navigation.
• Use university credentials for login.
• Offer expandable menus for potentially complex decisions such as access levels.

IMPROVE METADATA QUALITY
• Use tools like ORCID to implement name authority control and disambiguation.
• Autosuggest subject classification terms as keywords are entered, but allow free text terms to fill in database gaps.
• Provide metadata input examples and guidance with information buttons.
• Allow inputters to email inputted information and a problem description to IR staff to resolve input problems.

INCENTIVIZE FACULTY PARTICIPATION
• Map inputted metadata into a format compatible with search engine indexing to increase discoverability.
• Thank inputters and provide an expected timeline for their items to go live.
• Provide tools to faculty allowing the to generate engagement metrics for tenure profiles and other assessments.
• Allow faculty to generate social media announcements linking to their repository items or profiles for self-marketing.
Encouraging Open Access Publishing in Research Institutions
Micaela Carignano

Introduction

The steady increase in open access policies and mandates at research institutions and funding agencies worldwide over the past fifteen years demonstrates a widespread, growing interest in making the products of research accessible to all ("Registry of Open Access Repositories Mandates and Policies," n.d.). As more institutions attempt to promote the accessibility of their own research, it is vital to examine what kinds of policies work and how they can be improved to reach more reticent scholars. To this end, this paper discusses the efficacy of open access mandates and the specific concerns that prevent faculty from adopting OA practices. The results of this analysis are used to identify the most important tactics that institutions can take to increase rates of OA publishing. These include direct interactions with faculty to educate them on open access publishing, to address their concerns, and to help them choose the best OA venues in which to publish their work.

Institutional repositories and IR mandates

A common tactic that many institutions have taken to ensure the accessibility of the research they support is to require authors to self-archive their work using institutional repositories (IRs). These IR mandates have been issued both by universities and by funding agencies, but they may not always be successful in increasing deposit to IRs. For example, Massey University in New Zealand requires all its doctoral students to deposit their theses in an
IR. Yet, of 251 doctoral students surveyed, only about half even knew about the IR, despite promotional campaigns (Stanton & Liew, 2011). In another case, Zhang, Boock, and Wirth (2015) tracked submissions to the Oregon State University IR before and after the passing of an IR mandate. They found that submission rates actually dropped slightly after the mandate took effect. A much more effective tactic turned out to be directly soliciting the authors of newly-published papers to deposit them in the IR, which increased the self-archiving rate from 12% to 45% of published articles. The OSU project is limited in that it relied on Web of Science to identify new papers, likely missing most humanities and social science articles. Yet, this experiment gives an idea of the kinds of efforts that will be necessary in order to increase the rate of OA publication in universities. Direct contact with authors is crucial to persuading them to use more accessible means of publishing their research.

**Author’s attitudes toward open access publishing**

The low rates of deposits in IR may lead some to believe that faculty are resistant to the idea of open access in general. On the contrary, acceptance of and willingness to use OA practices has been increasing since their introduction. Xia’s (2010) analysis of OA studies of the 1990s and early 2000s found a demonstrable increase in the rate of OA publication: the percentage of respondents who reported having published in an OA journal rose from nearly zero in 1995 to between 30% and 40% in 2007. This increase in OA publishing matches a corresponding decrease in lack of awareness of OA, which fell from about 50% in the mid-90s to below 15% in 2007. Other recent studies have measured not just publication rates, but attitudes toward OA more generally. Swan and Brown (2004) separately surveyed 154 authors who had published in OA journals and 157 authors who had not done so. They found that among non-OA (NOA) authors, who would be expected to be most skeptical of OA, 71% would publish in an
OA journal that met their concerns about quality and impact. In other words, as far back as 2004, a majority of authors were in favor of the concept of OA, while they may still have trepidations about the specific OA options available to them. As discussed below, most of the NOA authors’ concerns about OA journals stemmed from a lack of familiarity with the journals.

In more recent studies, authors’ support of OA has remained high. For example, a 2019 survey of 180 educational leadership scholars (Richardson, McLeod, & Hurst, 2019) found that 76% of respondents valued the ability of readers to access their publications free of charge. Similarly, Fenlon, Senseney, Bonn, and Swatscheno (2019) report that 54% of the 250 humanities researchers they surveyed claimed to be enthusiastic about digital publishing while roughly another 30% claimed to be “somewhat enthusiastic”. When the participants were asked about the benefits of digital publishing, the most common response was improved access, and 43% of responses explicitly mentioned OA.

The above two studies are especially significant because they survey scholars in the social sciences and humanities—two groups that are generally thought to be less receptive of new publishing models. Yet, as these findings suggest, the scholarly community is largely in favor of OA publishing.

**Why authors shy away from open access**

Despite overall support for OA, numerous concerns prevent authors from making their own work openly accessible. Importantly, none of the qualities discussed below are inherent to open access publishing. Rather, they reflect the perceptions authors have toward OA publishing—particularly toward OA journals. Furthermore, many of these concerns are not shared by authors who have published OA, and therefore may be fueled by a lack of information.
Lack of familiarity with open access publications

Some studies cite authors’ lack of familiarity with OA journals as a primary reason for continuing to publish in subscription-based journals. Swan and Brown (2004) found that the most prevalent reason that NOA authors gave for not using OA was not knowing enough OA journals in their field. In fact, 56% of authors reported that they did not know of an OA journal in which to publish. Similarly, Xia’s (2010) longitudinal study identified unfamiliarity as the most commonly-cited reason not to publish OA. Tellingly, both of the above studies examine data that is over a decade old, while later studies do not tend to mention this issue at all. This change may mean that OA has become sufficiently commonplace that authors are no longer prevented from participating due to unfamiliarity.

Quality, impact, prestige, and peer review

Many authors are concerned that OA journals do not measure up to traditional publications regarding these four related issues. For example, Richardson et al.’s (2019) survey of educational leadership researchers found that 43% believed OA journals to be of lower quality. Smaller, but still significant percentages expressed doubt about the quality of reviews and articles in OA journals, and 44% thought OA journals tend to have poor reputations. Fenlon et al.’s (2019) survey of humanities scholars detected similar concerns in free-text responses about the quality and perceived lack of prestige of digital publishing. Furthermore, as Xia (2010) discusses, many authors believe that OA journals receive fewer citations and are less likely to use peer review than other journals.

To address these concerns, it is worthwhile to consult the views of authors who have already published in OA journals. In interviews with OA authors, Nariani and Fernandez (2012) asked how authors chose the journals in which they published. While a strong desire to make
their work accessible certainly drove many authors’ decisions, others mention that they simply chose journals that aligned best with their research interests, journals that were recommended by their colleagues, and, importantly, journals with good impact factors and large readerships. In Swan and Brown’s (2004) study, 71% of OA authors thought OA journals have larger readership than traditional journals, while 64% believed OA journals are cited more frequently. Only 7% of these authors reported that the peer review process they experienced with OA journals was worse than for subscription-based journals. Clearly the experiences of OA authors are at odds with the fears of NOA authors.

Crucially, the fact that some OA journals may exhibit poor quality, lax peer review, and resultant low impact and low prestige should not preclude scholars from engaging in OA outright. On the one hand, authors can instead opt to self-archive work in institutional repositories, as discussed below. Beyond this option, however, some data show that scholars understand that OA journals can be of high quality. For example, 81.6% of respondents in the Richardson et al. (2019) study answered that OA publishing “can be as high quality” as subscription-based publishing, while 78% said it “can be as rigorous” (p. 16). These findings indicate that efforts to increase faculty use of OA publishing will have to include assistance in identifying journals that meet their standards for quality and impact.

Tenure and colleague perceptions

Many authors worry that their peers do not view open access publications favorably and, relatedly, that publishing in OA journals could hurt their chances of professional advancement. Fenlon et al. (2019) suggest that fears about colleague perceptions are severely overblown—only 10% of the scholars they surveyed thought their peers were enthusiastic about digital publishing, while 54% claimed to be enthusiastic themselves. Since digital publishing and open access often
go hand-in-hand, this discrepancy shows that some may perceive a lesser acceptance of OA than what really exists.

On the other hand, concerns about tenure should be taken seriously. There are relatively few studies of the intersection of OA publishing and tenure, and when it has been studied, results are mixed. Wical and Kocken (2017) examined the language of evaluation plans from departments at the University of Wisconsin–Eau Claire. While no plans explicitly mentioned open access, a few made a point of including online publications as valid options. Contrasting, others did not clearly define acceptable scholarship and relied on vague terms such as “traditional”, which could be interpreted as excluding online-only publications. The authors note that most of the plans seem fairly flexible, which leaves them up to interpretation by review boards. The stress on assessing the quality of journals may reflect a fear of predatory publishers, which could end up biasing reviewers against legitimate OA publications (Wical & Kocken, 2017).

Since the language of evaluation plans can be so vague, it is useful to ask reviewers how their departments view OA publications in tenure dossiers. Bales et al. (2019) did this by surveying 714 department heads and other administrators from U.S. universities. They found that only 11% of respondents reported the use of journal lists (lists of journals accepted valid for tenure review—a practice that discourages use of OA journals) by their departments. However, when asked whether OA journal publications were given equal weight in tenure considerations, 41% answered “strongly agree” or “agree somewhat”, while 32% answered “strongly disagree” or “disagree somewhat” (Bales et al., 2019, pp. 157–158). In sum, the data show that while many departments look favorably on open access publications as part of promotion and tenure reviews, this is certainly not the case for everybody. Clearly, institutions wishing to support open access
publishing need to make sure OA authors are not punished when they seek advancement. As Wical and Kocken (2017) suggest, one way to do this is to use clear and explicit language in evaluation policies.

**Who is most concerned about open access?**

If institutions want to persuade more authors to embrace open access publishing, it is necessary to know which authors are most in need of persuasion. Zhu’s 2017 study of over 1800 UK researchers is unique because it correlates attitudes toward OA with demographic factors. Zhu (2017) reports that junior scholars, women, and members of humanities and social sciences fields are all less likely to have published in OA journals or self-archived in repositories. Another correlated factor was whether scholars were aware of OA policies set by funding institutions. As Zhu points out, women are more likely to be junior scholars, so the factors of gender and seniority are linked. All of these factors, with the exception of academic discipline, have to do with the amount of experience scholars have had with publishing in general. It seems that with more exposure to publishing practices and more awareness of OA, scholars become more likely to make their own works more accessible. Of course, the reticence of junior scholars to publish in OA journals can also be explained by a fear of harming chances of advancement. Thus, Zhu’s findings highlight the necessity to both educate faculty and to ensure the fairness of tenure processes.

**What institutions can do to encourage open access publishing?**

As indicated by Zhang et al. (2015), direct interaction with faculty and students is crucial to increasing their participation in open access publishing. Scholarly communication librarians are in a unique position to initiate these interactions, but other changes might be driven by university
policies. From the above analysis of the factors that prevent faculty from making their work accessible, four key strategies emerge for increasing OA publishing rates in research institutions:

1. *Education about open access publishing and its various forms:* Librarians can design programming to address all the concerns brought up above, as well as others (e.g., copyright and plagiarism). Programs can be offered to individual departments and tailored to their interests. They can also be incorporated into the requirements of doctoral programs.

2. *Assistance in selecting appropriate OA journals for publishing:* Faculty, especially those who have not yet published in open access venues, should be encouraged to consult with a scholarly communications librarian to help them choose an OA journal for a future article. This service would not only allay fears about OA but could give tenure boards reassurance that the OA publications listed in a dossier have been vetted for quality and legitimacy.

3. *Direct solicitation of manuscripts for the institutional repository:* As at Oregon State University, librarians should contact faculty who have recently published in subscription-based journals to request that they submit the manuscript to the IR (Zhang et al., 2015).

4. *Policies to prevent discrimination against OA publications in promotion considerations:* Faculty should not be afraid that publishing in OA journals will harm their career. University policies can require that evaluation plans explicitly allow OA and online-only publications. Furthermore, educational efforts by librarians and others can help departments develop fair and reasonable ways to assess journal quality.
Conclusion

Academic researchers are by and large in favor of open access publishing, but confusion or worry over particular aspects of the process can prevent scholars from choosing to make their research accessible. Instead of simply mandating open access practices or attempting to persuade faculty of the merits of accessibility in general, universities and other research institutions should address researcher’s concerns. These worries most commonly include doubts as to the quality of OA publications and fears about colleagues’ acceptance of OA articles. By combining policy changes with educational efforts to confront these specific concerns, universities will see an increase in OA publishing rates.

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WHAT PREVENTS AUTHORS FROM CHOOSING OA?

Journal quality and impact

In a survey of 180 educational research scholars:

- 43% believed OA journals are of lower quality
- 44% believed OA journals have poor reputations

(Richardson et al., 2019)

Colleague perceptions

Of 250 humanities scholars:

- Only 10% believed their colleagues are enthusiastic about digital publishing

(Fenlon et al., 2019)

Some may just need a reminder...

At Oregon State University, librarians began directly requesting manuscripts for the institutional repository as soon as authors published a new article.

Before:

12% of articles were deposited in the IR

After:

45% of articles were deposited in the IR

(Zhang et al., 2015)
Two Peas in a POD: Academic Libraries and Misconceptions Regarding Print-on-Demand Publishing
Laura Cernik

Print-on-demand publishing, often abbreviated as POD, is a popular style of publication for many different items, but in particular academic books. Most of the benefits of POD are for the publishers, as it provides ways to cut costs and only publish books as they become requested. POD titles range from self-published books to the products of a university press. Despite this range in publishers using POD, many librarians are suspicious of POD titles and view them as lower in quality than traditionally published titles. This is a result of misinformation among librarians regarding the field of publishing. Librarians must correct this misinformation by contributing to the conversation regarding POD, allowing them to better understand and make use of the continuing innovations in publishing.

POD is a publishing method in which the printing process does not begin until an order is placed for an object, such as a book. This allows a small batch of books to be printed or even an individual copy. POD is different from older methods of publishing where mass quantities of books were published and stored before being shipped to dealers in the hopes that they would sell. POD saves publishers money by not investing in physical book stock and storage, and it eliminates waste in the supply chain, such as in overstocking, retail returns, and mis-deliveries (Wilson-Higgins, 2011). The POD system of publishing can be traced back to post-World War II scholarly preservation in the U.K., where microfilm was used to print items like theses and dissertations (Wilson-Higgins, 2018, p. 5). Digital printing using computers became popular in
the late 1990s as the materials and tools improved and began to surpass the other methods of printing (Wilson-Higgins, 2018, p. 19-27), with the internet of the early 2000s and the demand for books from online retailers sending POD on the rise (Wilson-Higgins, 2018, p. 33).

There are issues surrounding POD, the biggest of which has to do with perception among non-publishers. Many people, professional librarians included, do not understand what POD is. In an informal survey of librarians conducted by the independent academic publisher Litwin Books, of the 312 responses, eighty-seven percent had incorrect ideas about what POD was (Litwin, 2017). One academic outreach librarian in the survey claimed that they thought POD publishing showed “that the publisher has little faith in the item” (Wilson-Higgins, 2018, p. 166-167). Another academic librarian said, “I would assume it was a self-published item,” and yet another claimed a title published via POD would make them “think it may not be a very widely needed/read at this point” (Wilson-Higgins, 2018, p. 170-171).

Despite this lack of knowledge from the librarians surveyed, the majority of them from academic institutions, had an overall negative impression of POD. Subtracting the forty responses where the study leader could not determine the respondent’s opinion on POD, of the 272 responses left, 73% (198 respondents) had a negative view, whereas only 23% (62 respondents) had a neutral view, and a staggering small 4% (12 respondents) had a positive view of POD. Rory Litwin, who conducted this survey, noticed that many of the respondents provided quality as one of the issues they had with POD titles (Litwin, 2017). Words respondents associated with POD include, “unedited,” “poor quality,” “low quality,” “self-published,” “cheap,” “vanity press,” “questionable,” “hassle,” and other negative monikers (Wilson-Higgins, 2018, 144-175). Some respondents claimed they could always identify when a book was
published via POD, but Litwin noted that some of their responses indicated a bias towards self-published books and reprints rather than POD titles (Litwin, 2017).

POD is a subject matter shrouded in misinformation, and one of the biggest issues is the idea of quality, more specifically that POD books are of lesser quality. This conversation has not changed since it began in the early 2000s. Morris Rosenthal wrote on POD in 2004 and noted that there was no guaranteed quality of any given title, as some books published using POD were expertly polished while others were of cheap quality and poor production (Rosenthal, 2004, p. 64-66). As noted above, this is the same issue raised in the 2017 survey, thirteen years after Rosenthal, and yet the response to it has not changed. Rosenthal argues that a POD publication method does not mean lesser quality if the titles are carefully prepared and polished. He also points out that academic publishers serve as large POD publishers, and that their quality is not called into question (Rosenthal, 2004, p. 64-66).

Some of the academic publishers that use POD for books include Oxford University Press (Oxford University Press, 2019), and Cambridge University Press (Cambridge University Press, 2019). Northwestern University Press uses POD for the open access archive, Northwest Open, which provides access to out of print titles from past publications (Northwestern University Press, 2019). Taylor & Francis became one of the first publishers to use POD to publish some of their journal titles in 2009 (Howell, 2009), which they continue to do by relying on the commercial publisher The Sheridan Group for all of their journals in the U.S. (The Sheridan Group, 2018). Taylor & Francis publish their U.S. book titles by POD or a system called micro-inventory, where a small inventory is printed and stored, a system they describe as a more sustainable business practice (Taylor & Francis, n.d.). Wiley offers POD printing for some of their journals (Wiley, 2017) and some of their paperback and hardback books (Wiley, 2016).
It is relatively easy to find that these publishers use POD, as many of them admit to it on their websites. The publisher Elsevier is less open about their use of POD, but on the contact page for the branch of Elsevier Health in the U.K., they do mention they have POD titles (Elsvier, n.d.), and on their Board of Directors is YoungSuk “YS” Chi, a businessman who founded Lighting Source, one of the first POD distributors and e-book providers (The Elsevier Foundation, n.d.).

The aforementioned companies are not small self-published authors, but powerhouses of academic publishing that would be familiar to any academic librarian. Yet the terms that the surveyed librarians used would not be applied to scholarly monographs from these publishers. So where does this miscommunication come from? The answer is the fact that, in addition to works from academic publishers, there is a proliferation of self-published works that are made using POD. Not all self-published works are of poor quality. For instance, the *American Journal of Public Health* publishes their own journal, which is a well regarded in the health fields (Selzer, 2015). That being said, self-published books topped over one million titles in 2017 alone (Milliot, 2018) and jumped again in 2018 to over one and a half million (Milliot, 2019), a number that is projected to rise. While it is outside the scope of this paper to go into the nuances of the plethora of self-published POD books on Amazon and other online retailers, it is safe to say that the culture of self-published books, sometimes called indie books, has damaged the perception of POD.

This damaged image is a problem for the future of academic books. The number of academic books created is increasing while sales are decreasing (Jubb, 2017, p. 11-12), and most publishers believe that the market for academic books will not grow (Jubb, 2017, p. 40). Niche topic books may very well see themselves defaulted to digital format with POD serving as a paper alternative (Jubb, 2017, p. 105). This will be especially important as studies have shown
that many people prefer print books to digital, but that publishers do not want to risk spending money on books that will not sell (Wilson-Higgins, 2018).

POD is shrouded in misinformation about quality and it has been shown that librarians do not have a firm grasp on the concept. Why is this? The main reason for this lack of knowledge is that librarians, academic or otherwise, are not part of the surrounding conversation. Scholarship, from the beginnings of POD technology to the present day, is not written by librarians but rather by publishers. The author of this paper could not find a single source on POD that was written by current librarians. The closest were the 2017 survey run by Roy Litwin, a former librarian turned publisher, and an article on POD from William C. Dougherty, who was a “Managing Technology” columnist for *The Journal of Academic Librarianship*, but does not have a degree connected to the library field. The dialogue of POD publishing has been dominated by publishers and non-librarians, who discuss topics ranging from using POD instead of Inter Library Loan to acquire texts (Dougherty, 2009; Wilson-Higgins, 2011; Kochan and Duncan, 2016) to libraries themselves developing POD machines to print books in-house (Chamberlain, 2012), to using POD for publishing conference materials (Gallagher, 2014). These diverse topics show that others are thinking of creative ways to use POD publishing where libraries are falling behind from a lack of knowledge about this topic.

POD clearly is not leaving anytime soon, and it would be beneficial for librarians to become knowledgeable on this topic as the misinformation around POD is embarrassing considering how many academic librarians have probably purchased a POD title or journal from an academic publisher without realizing it. Their perceptions of POD titles are rooted in the idea of Amazon-based, cheap, self-published authors rather than the reality of innovation that has happened in the publishing industry. The only way for librarians to understand POD and apply it
in the innovative ways that publishers have been thinking about is to get into the conversation. Librarians, especially academic librarians, must start contributing to the discussions around POD because it will affect the publication of manuscripts that pass through their doors, whether they are aware of it or not.

References


Open Access Publishing and the Tenure Process

Anita Duka

Open access (OA) publishing is not recognized in the system of tenure. Despite this, views on OA publishing and whether or not faculty members publish in OA journals varies. While some non-tenured faculty fear that open access publishing will hinder their chances of tenure, others believe that due to increased popularity of open access publishing, it could be viewed favorably by tenure committees. Tenured faculty are also divided on whether they would publish in open access journals. There needs to be more analysis of tenure or promotion documents that address open access publishing and its legitimacy in the tenure system as well as pressure from scholars to push tenure boards to recognize OA publishing.

In a study conducted by Bales et al (2019), researchers identified 115 doctoral granting colleges and universities in the United States that are classified by the Carnegie Classification of Institutions of Higher Education as “Highest Research Activity”. Surveys were sent to administrators, department heads, deans, and other high ranking faculty members. Regarding the importance of peer-reviewed open access journal publishing for determining promotion and tenure at their institution, 32% of the respondents either strongly agreed or agreed somewhat. Despite this, 41% of respondents indicated that open access peer-reviewed journals are given equal weight to peer-reviewed journals that are not open access. These statistics seem to conflict with one another. This is due to the fact that universities are not clear on whether or not publishing in OA peer reviewed journals holds the same amount of prestige as publishing in a standard peer reviewed journal.
Coonin and Younce (2010) found that whether or not an individual is tenured was relevant when it pertained to their views on the acceptability of open access publication in the tenure and promotion process. Authors of OA journals were surveyed and the results found that the majority of tenured faculty (54.7%) found e-journals “acceptable” and less than 1% found them “unacceptable.” Also, 21.9% of the tenured faculty found e-journals “less desirable than print,” and the remainder (22.7%) stating that the format is not an issue, and that other “other factors” such as prestige, are more important. The findings for tenure track faculty were similar, with 46.7% finding e-journals acceptable, and none finding them “unacceptable”. Also, 28% said they were “less desirable than print,” and 25.3% indicated that this was not an issue. Tenured faculty separately revealed that 48% did not perceive OA journals as less prestigious but that 29% thought they were. Prestige is a major element when it comes to the future of OA publishing becoming widely accepted in the tenure process. Further research needs to be done on if OA publishing recognition varies based on disciplines and if publishing in certain OA journals is more accepted than others.

In an article by Heaton, Burns, and Thoms (2019), factors contributed to whether or not authors decided to publish in OA journals were their ability to pay publishing charges, their disciplinary colleagues’ views on OA publishing, and their own personal desire to share their work with a larger audience. The article states that in some fields of study, disciplinary attitudes toward OA seem to influence the perceptions of authors. Despite widely held beliefs that researchers in the sciences are typically more accepting of OA, it is indicated that the health sciences faculty at one institution supported the non-OA status quo in scholarly publishing. Another study showed that OA authors’ perceptions can differ from those of their colleagues, even in the same discipline. These differing opinions and views on OA publishing demonstrate
exactly why it is so important for tenure boards and universities to address OA publishing and its acceptability in their tenure process.

In a study conducted through semi structured interviews and/or online surveys with faculty authors who have published in peer-reviewed OA journals, participants were asked if publishing in OA journals could be detrimental to tenure and promotion chances. Responses showed that publishing in OA journals would not be considered in a negative light by tenure and promotion committees. The majority of the respondents in this study stated that tenure and promotion criteria are specific to each department and that their departments did not consider publishing in OA journals to be harmful to their careers. (Nariani and Fernandez, 2012).

Norwick (2008) conducted a study of academic ranks of authors who published in three pairs of OA journals. For each journal, 100 random articles were selected. The majority of authors that were studied were from universities with research institutions. Much like the study by Nariani and Fernandez (2012), this study found nothing that indicated pre-tenured faculty avoided publishing in OA journals. Instead, there was a tendency for them to publish in OA journals.

However, in a web survey conducted by Peekhaus and Proferes (2015), they found that “untenured LIS faculty (37%) are more likely than tenured faculty (12%) to agree to some extent that publishing their work in open-access journals may adversely affect their careers.” According to this study, large portions of LIS faculty believe that tenure and promotion committees are dubious about the quality of open-access journals. This study also states that it is possible that faculty are more willing to publish in OA journals until after achieving tenure. The conflicting results of this study versus the study conducted by Nariani and Fernandez (2012) and Norwick (2008), again shows that tenure boards are unclear about how they regard OA publishing and its
legitimacy in the tenure process. There needs to be explicit documentation to clarify their stance on OA publishing.

According to Park (2009), a scholar’s belief on whether or not OA publishing benefits their career or not varies depending on their scholar academic position. It seems that publishing in OA journals has more career benefits for tenured than for non-tenured faculty. It was apparent that tenured respondents were more likely to view OA publishing favorably for its capacity to disseminate knowledge on a much wider scale. It also seems likely that tenured respondents may have more intrinsic than extrinsic motivations, as they already have achieved their tenured status. A non-tenured scholar will perceive publishing in an OA journal only if it more prestigious as it would be more beneficial to their career. However, in order for OA publishing to become more widely accepted by tenure boards, more tenure track faculty must be willing to publish in OA journals.

This point is further demonstrated in a study conducted by Peekhaus and Proferes (2016). A web survey was sent out to all LIS faculty members in North America (excluding Puerto Rico). While many of them believe tenure and promotion committees are doubtful about the legitimacy of OA publishing, a few of the respondents expressed that younger scholars are more willing to utilize OA resources, which could bring about change into the system as these scholars advance and become tenured faculty themselves. Untenured LIS faculty (37%) are more likely than tenured faculty (12%) to agree to some extent that publishing their work in open-access journals may negatively affect their careers. Only 34% of respondents think that a tenure and promotion committee would consider OA publications as being of a quality comparable to publications in a traditional journal, while 44% believe that open-access publications would be evaluated less favorably. Only slightly more than 1% of respondents believe that their faculty
colleagues would evaluate open-access publications more favorably than traditional publications for tenure and promotion decisions, while approximately 18% remain uncertain.

According to an article by Galvin and Latchaw (2010), peer-reviewed, open-access journal articles are increasingly becoming considered equal with peer-reviewed print articles. However, tenure and promotion committees have long traditions and many are unwilling to change the criteria. When enough open-access journals appear, tenure and promotion committees can develop ways to assign value to research that faculty will deem acceptable. To do this, faculty need to buy into the system. Scholars should put pressure on tenure and promotion committees in order for them to change their criteria for advancement.

In order to better understand OA publishing’s legitimacy in the tenure process, more research and analysis is needed of tenure documents and requirements. This is stated in an article by Wical and Kocken (2017). Policy documents pertaining to promotion and tenure, have to be signed by high-level administrators, so reviewing these documents is a good way to see how the tenure committee views OA publishing. These researchers requested access to departmental or program evaluation plans at the University of Wisconsin-Eau Claire and examined these plans for language pertaining to OA publishing. They found that none of the plans specifically mentioned OA publishing.

All of these articles and studies demonstrate how much scholars’ views vary when it comes to the legitimacy and acceptance of OA publishing in the tenure process. OA publishing is becoming increasingly popular. However, many tenure track faculty believe that if they publish in an OA journal it would hurt their chances of achieving tenure. This comes from a preconceived notion that OA publishing is not as prestigious as traditional peer reviewed journals. Also, tenure boards do not have clear guidelines or documentation explaining how they
weigh OA publications. Scholars, both tenured and non-tenured, need to publish in OA journals more. This will pressure tenure boards to address this issue and take a stance on OA publishing. The more scholars publish in OA journals, the quicker tenure boards will come to accept its legitimacy in the tenure process.

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doi:10.1016/j.acalib.2019.02.005


doi:10.5860/crl.80.4.485


1. Untenured LIS faculty (37%) are more likely than tenured faculty (12%) to agree to some extent that publishing their work in open access journals may adversely affect their careers.

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...while 18% remain uncertain

Source: Peekhaus & Proferes, 2016
It’s the Right Call: Tenure for All

Alijah Fox

Academic librarians are faced with many challenges throughout their career: aiding at the reference desk, completing research, fighting with institutions to prove their merit, and perhaps most of all, working towards a faculty status or tenure. It is imperative that academic librarians are continuously and generously offered tenure in order to perpetuate a system of hard-working, efficient librarianship.

To begin, we must first understand what tenure itself is, for it is an immensely controversial topic within the library and information science (LIS) community. According to the ACRL’s website, “Tenure, or continuous appointment, is defined as an institutional commitment to permanent employment to be terminated only for adequate cause (for example, incompetence, malfeasance, mental or physical disability, bona fide financial exigency) and only after due process.” The ACRL also makes sure to mention that “Tenure (continuous appointment) shall be available to librarians in accordance with provisions for all faculty of the institution” (2010, emphasis by me). Essentially, tenure guarantees employment to librarians throughout budget cuts, downsizing, and anything else the library itself may go through.

Shaffer (2011) outlines a list of specific tasks librarians are expected to complete throughout their lifetimes. He writes,

Foremost is their job performance: providing proper service at the reference desk, interacting with faculty… providing bibliographic instruction, as needed…

Academic librarians must perform a research role as well, which includes writing scholarly works that detail innovations within the field, insights into proper
collection development, and best practice within the field… poster session
presentations, roundtable discussions, and other professional conference-related
activities. Rounding out the demands… is the service component of the tenure
and promotion model. Service includes activities relating to the university,
activities within professional organizations… and service within the surrounding
community… (p. 3)

Librarians deserve tenure just for that exhaustive list of duties expected of them at any
given moment throughout their careers. This is not light work, either. A lot of this takes
immense time and energy to put together. Tenure is a given right for librarians to help
them feel as though their work, time, and effort is actually worth something. Completing
all of these tasks without tenure or faculty status leads librarians to believe that their
institutions are just taking advantage of them instead of rewarding them for their hard
work.

The fight for academic tenure has not been a short one. A resolution was passed by the
ACRL membership in 1969 which described the appropriate practice for hiring academic
librarians. In this resolution, there is a statement that reads:

Whereas academic librarians must have: 1. Rank equivalent to other members of
the teaching faculty; 2. Salary equal to that of other members of the teaching
faculty; 3. Sabbatical and other leaves; 4. Tenure… (Josey, 2014, p.1; emphasis
by me).

This guideline clearly states that academic librarians are deserving of both faculty status and
tenure. Essentially, the argument ends here. If the ACRL decides that something must be done, it
logically should be done. Academic librarians deserve tenure in any and all situations.
However, this is very often not the case. Walters wrote that “52% of United States research universities grant nominal faculty status to librarians” (2016). That means that 48% of research universities do not grant faculty status to their librarians. One must also consider the percentage of librarians within those 52% of universities that gain faculty status, which Walters did not delve into. We can probably assume that not every single librarian gets faculty status, so that creates a much larger portion of the population that does not get faculty status at research universities. Lee (2008) found that only 44% of academic librarians in the ARL have both faculty status and tenure. Freedman had similar results in 2014. He found that “45 percent of the institutions of higher education in the New England area offer academic librarians professional identity with faculty status only, faculty status and tenure, or tenure status” (p. 549). These statistics are simply abysmal, especially considering the ACRL standards set in 1969 which declare that both tenure and faculty status should be a given to every academic librarian in the country.

Tenure very plainly affects librarians’ capabilities to publish in academic journals. It has been proven that librarians with tenure and faculty status publish the most in influential journals. After that group, librarians with only tenure publish highest, and then only faculty status, and finally, librarians with neither publish the least (Galbraith, et. al., 2014). It is also proven that the pressure to “publish or perish,” as some librarians put it, can have an increasingly negative impact on the quality and quantity of published works. Essentially, one can assume that this means librarians with tenure are much more likely to feel secure in their positions at their jobs and can safely take the time out to conduct research and publish based on that research. Without tenure and/or faculty status, librarians publishing is a much rarer occurrence. Tenure is proven to lead to a better quality and higher quantity of publishing.
Tenure also has an impact on job confidence and security. Silva, et al. (2017) conducted research to view the correlation between academic librarians and their relationship to tenure. For each question, it was discovered that librarians who had achieved faculty status or tenure had vastly different answers than their counterparts without them. Most librarians who had achieved tenure did not think about it as much as the librarians without it. This makes sense because with tenure, the librarians were freer to explore other parts of their jobs. They felt secure within their positions and were able to focus on different aspects of librarianship rather than simply concentrating on working hard and long enough to achieve tenure. Tenure absolutely correlates with an increase in job security.

With a lack of tenure, the role of a librarian becomes much less defined and much more muddled. Sesser’s research showed that 74.4% of academic librarians agreed that tenure is “beneficial” to them. The majority agreed that faculty status and tenure is “an important part of retaining employees” and 76.7% agreed that the status helped keep employees at their institutions. Finally, an “overwhelming majority of respondents… think that having that status [faculty status or tenure] also allows them to better serve their patrons. Most also believe that tenure provides a benefit to the librarians” (2018, p. 9). Without tenure and/or faculty status, it is much more difficult to know how well a librarian is fulfilling a specific role with their institution.

Following along this path, Horenstein (1993) found that:

Academic librarians with faculty status and rank are more satisfied than other librarians… They have higher levels of overall satisfaction and are more satisfied with many of the aspects of their positions… Librarians who feel more involved, consulted, informed, and more in control, are more satisfied (p. 264).
These two researchers show that librarians who feel appreciated for their work gain more out of it. A higher ranking in their position proves beneficial to their overall job satisfaction. Tenure leads to a more satisfied and fulfilled librarian that can ultimately aid their patrons and complete tasks more effectively and efficiently.

The final reason librarians deserve tenure is because it causes immense pressure and possible mental health concerns. Miller and Benefiel (1998) discovered that the best way for librarians and other teaching professionals to combat the pressure of achieving tenure was to create a support group within their institutions. They write, “The atmosphere of caring and sharing that results from a support group can remove one or more hurdle in the tenure process and increase the productivity and success of each member” (p. 262). Essentially, attempting to obtain tenure is such a stressful and pressure-filled task that the members of the institution have found it most helpful to create support groups. This is quite surprising because a lot of people don’t think of tenure as being as stressful as it truly is. Creating a support group should not be mandatory or even necessary for librarians because tenure should just be a given right.

Tenure is a necessity because it prevents librarians from completing their (quite stressful) jobs to their fullest potential. Tenure is a given right according to the ACRL standards created by the ALA. It helps encourage librarians to produce more published work because they are able to focus better, it guarantees job security, and it helps define the specific role of a librarian. Having tenure guaranteed also eliminates the need for a support group and therefore eliminates a great amount of pressure for librarians. I am not yet in the role of librarian, but I know that when the time comes, I would feel much better about my job if I knew I couldn’t be fired at the most random moment. Tenure is the right call for librarians in the world today.
References


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Why Librarians Deserve Tenure

Publishing

"PUBLISH OR PERISH"

It is proven that academic librarians with tenure and faculty status publish the highest amount of research out of any other category of academic librarian.

Job Security

CORRELATES WITH PERFORMANCE

Academic librarians with tenure are more likely to complete their assigned jobs with a higher quality and quantity than librarians without it.

ACRL Standards

TENURE IS A RIGHT

In 1969, the ACRL declared that tenure is a given right to academic librarians, as well as faculty status and pay.

Job Confusion

UNSURE ABOUT ROLE IN THE LIBRARY

Without tenure, librarians can be confused about what role exactly they play in the library. Are they reference helpers? Researchers? Teachers? Tenure can clear up the muddy waters.
Rethinking the Languages of International Scholarly Publication

David S. Gerstle

English is unquestionably the dominant language of international scholarly publication. Yet, researchers and critics dispute what, exactly, this dominance means for the production and dissemination of scholarly knowledge, worldwide. To some, English should be understood as a ‘lingua franca’, creating opportunities for widespread publication and readership that would otherwise have been impossible. To others, however, the hegemonic role of English is akin a kind of imperialism, marked by “excessive standardization of academic discourses and eradication of local rhetorical traditions” (Kuteeva and McGrath, 2014, 366). Inquiries into this matter are numerous, but very little agreement is found in either methodology for studying the trend or conclusions about its consequences (Curry and Lillis, 2019). Considering these challenges, I suggest that investigators too frequently focus on the abstract, ‘intellectual’ impacts of language standardization, rather than the material realities of non-Anglophone scholars. For example, critics such as Altbach worry that the threat of standardization is “homogenizing knowledge worldwide” (2007, p. 3610). But, is the threat really posed to ‘knowledge’ (abstractly defined) or the scholar who produces it? Such abstractions sidestep the hazards faced by those individuals who struggle to publish, and so face the pressure to communicate outside their native languages. To this end, I propose that a better way to understand the subject positions of non-Anglophone scholars is to recognize them as active agents, moving within contexts of unequally distributed linguistic and socio-economic resources.
As Ferguson (2007) comprehensively details, the languages of scholarly communication appear as a landscape of shifting power differentials. The scholarly world entered the 20th century with German as the primary language of international academic discourse, but this dominance was interrupted by two world wars and the rising economic and technological power of the United States. By the 21st century, the U.S. had become responsible for half the world’s research and development spending, hosting over 50% of the world’s population of international faculty and students. Now, 87% of international journals in the natural sciences and 83% of those in the social sciences are produced solely in English. American universities in other nations conduct their courses in English, and American and British scholars who participate in international business and medicine conduct their work in English. In all, a great majority of the global population participating in scholarly communication are English speakers: the authors of scholarly knowledge, the reviewers/editors who evaluate it, the publishers who disseminate it, and the audiences who use it.

Of course, the hegemonic nature of English in international scholarship has not gone unnoticed. Kuteeva and McGrath (2014) describe a series of publications in the 1990s cautioning scholars of the intellectual and professional dangers of academic language standardization. Among the most notable of these are Phillipson’s *Linguistic imperialism* (1992), Pennycook’s *The cultural politics of English as an international language* (1994), and Swales’ widely referenced article “English as *Tyrannosaurus rex*”, where the author colorfully criticizes English as “a powerful carnivore gobbling up the other denizens of the academic linguistic grazing grounds” (1997, p. 374). Since the appearance of these critical assessments, researchers have grappled with the impacts of language in global academic discourse, weighing its effects through bibliometric analyses, attitudinal surveys, and institutional ethnographies.
These inquiries are necessary to ensure the democratic spread of scholarly knowledge. Yet, too much criticism has concentrated on the abstract, intellectual consequences – i.e. the homogenization of knowledge or the ‘gobbling up’ of languages – rather than the cost to individual careers and livelihoods. The human costs of language standardization are real. For example, as López-Navarro et al. (2015) report, institutions globally are demanding that their scholars publish in English in order to receive consideration for promotion and tenure. Considering whether or not to publish outside their native language, the authors explain, “the globalization not only of research communication, but of research assessment as well, can be considered a strong determinant of researchers’ motivations” (p. 963). Further, in their bibliometric examination of citation practices, Lillis et al. (2010) show that the dominance of English is impacting not only the linguistic medium of publication, but which works are considered citable. They explain: “English cannot be viewed as a transparent medium, simply ‘translating’ knowledge from one language to another; its status within the global evaluation system is actually shaping what gets counted as knowledge” (p. 131). The material cost of such an evaluation system is the potential disenfranchisement of scholars who do not publish in English, with the knowledge they produce neither helping them professionally nor entering the global ‘cache’ of scholarship.

These questions of the subjective experiences of scholars have often been obscured by concerns of ‘domain loss’: the devaluing or disappearance of national languages and cultures, while a dominant language becomes the global standard. In his 1997 critique, Swales cautions that the rampant use of English in scholarly communication could lead to the extinction of local “academic registers”, which institutions and nations should fight to preserve (p. 379). Critics of scholarly communication such as Swales see English as an existential threat to local languages,
relegating them to a lesser role in an incipient global diglossia where indigenous national languages are left… as languages of informal, less prestigious domains, with English in control of high prestige domains of higher education, scientific communication and transnational business. (Ferguson, 2007, p. 15)

This relegation, it is argued, would thus spread from simply devaluing local languages to undercutting local history or health concerns, which would be of little interest on the international stage (Altbach, 2010). Concerns about domain loss reached the governmental level in 2007 in Scandinavia with the passage of the Declaration on a Nordic Language Policy, stipulating that national languages should be consistently used alongside English, and that institutions should reward scholars who incorporate them into their professional instruction and communication (Olsson and Sheridan, 2012).

Of course, the languages of scholarship should be considered with an eye toward fairness and the broadest possible access to knowledge. But, I argue, these concerns of domain loss obsess over the price paid by languages and cultures – not people – with the globalization of a single language. Scholars should be recognized as agentive users of language, and thus the stakeholders in its standardization, whether they benefit from it or not. For example, in House’s (2003) investigation of multilingual scholars at German universities, the researcher finds a consistent, pragmatic use of languages to fit the context. Scholars understood the ‘domains’ of their languages and used English as “a supranational auxiliary means of communication” (p. 571). Similarly, Kuteeva and McGrath (2014) find that Swedish scholars in their surveys are actively aware of the specific needs for multilingualism in different realms of scholarly life. In short, as House contends, non-Anglophone scholars should not be thought of “as ‘pawns’ in an imperialistic game, where formerly militaristic and colonial inroads are now linguistically
replayed” (2003, p. 560). To this end, considerations of domain loss have taken languages – abstractly conceived – as the entities at stake, rather than the people who communicate through them.

Assessments of non-Anglophone scholars’ subject positions have been conducted primarily through attitudinal surveys. The majority of these inquiries show that scholars publishing in English are largely ambivalent toward the standardization of language, turning to English out of pragmatic need. Ferguson et al. (2011) find that most respondents in their survey of Spanish academics held little opinion whether the dominance of English confers an unfair advantage to native speakers. The researchers explain that these attitudes may not so much indicate an active preference for English as pragmatic resignation to the fact that English, as dominant lingua franca, facilitates international co-operation, enables scholars to more easily keep abreast of developments in their discipline and generates a wider potential readership for their published outputs. (p. 52)

Similar ambivalence is apparent in Hyland’s (2016) review, reporting that scholars writing outside their native languages find English laborious, but do not feel disadvantaged in comparison to native speakers. Swedish scholars surveyed by Kuteeva and McGrath (2014) general accept that an international language for scholarly communication is needed, and that English is essentially the only choice for one wishing to publish internationally.

Two points about these attitudinal surveys should be made: First, as Curry and Lillis (2019) stress, little methodology is shared between any two research programs, and so deriving any strong conclusion about patterns of attitudes is difficult. A vast number of disciplines study this problem (sociology, communication studies, information science, among many others). There is a notable lack of methodological similarity between inquiries and few subsequent
efforts to expand research into multi-sited investigations. Second, more surprisingly, it would seem that attitudinal interviews are conducted solely with scholars whose English proficiency is strong enough to consider publishing in international journals, while those without such resources are strangely forgotten. That is, the scholars with the most to lose through the standardization of academic publication are largely absent from the discussion. Arguably, omitting them from this discourse has the effect of reifying their absence from international publication: they are neither allowed to participate nor asked how they feel about their disenfranchisement.

While the primary response to the dominance of English may be ambivalent resignation, the material conditions of non-Anglophone authors may cause complexities not experienced by those native speakers writing from the institutions of affluent nations. It is true that language is a pragmatically harnessed tool, but – like other tools – access can be limited. Investigations into less affluent, Central American, South American, and African universities report that scholars face significant institutional boundaries: improperly equipped research spaces, poor access to scientific literature, little research funding, limited office and classroom resources, and obsolete communication technology (Canagarajah, 2003). Living outside of contexts where English is a daily part of scholarly communication, authors may struggle to get necessary feedback to frame their ideas in the accepted discursive conventions (Flowerdew, 2007). Further, those with limited English in institutions with scarce resources struggle to find translation and editing personnel (sometimes called ‘language brokers’), and this can be stressful in itself, as these services are rarely familiar with the scholar’s discipline or methodology (Curry and Lillis, 2019).

These problems are profound, but some resolutions have been suggested. Flowerdew (2007) details three approaches that might balance the power structure of language in global
scholarship: In his ‘pragmatic approach,’ Flowerdew argues that journal editors should champion institutional resources that could bring non-Anglophone scholars closer to the rhetorical conventions of native speakers. Conversely, a ‘critical approach’ would alert scholars of the challenges they face, advocate for multilingual conventions in international publication, and hold editors closely accountable for any bias. Finally, a ‘critical pragmatic’ compromise would promote international publication in English, with secondary publishing for local audiences in national languages. This would, of course, create the broadest possible audience for scholarship. But, such progressive ideas still do not attend to the extra labor placed upon the non-Anglophone scholar, or specify how to balance socio-economic inequalities in international scholarship.

Ultimately, the problem of language in international publication is tightly linked to the material conditions of a scholar’s institutional context: the human and technological resources that support her in successfully communicating the knowledge she has produced. It may even be, as Hyland suggests, that “the disadvantages of physical, scholarly, and financial isolation may be greater than those of language” (2016, p. 64). Certainly, this isolation is part of the subject position of some scholars contending with publishing internationally, but who lack the economic, social, and linguistic resources to do so. Yet, language is perhaps the most central resource in determining either isolation or inclusion in a cross-cultural discourse. As Ferguson comments, languages, like some other collective goods, do not diminish in utility with use: on the contrary, the more speakers a language gains, the greater the potential number of interlocutors, the greater the production of texts, and the greater the utility of the language to all those already proficient in it. (2007, p. 13).
If language – and knowledge, broadly – are considered as resources produced and used by agentive individuals, rooted in real contexts, then researchers of the problem of English in scholarly communication may better understand their lived realities.

References


Rethinking the Languages of International Scholarly Publication:

English is unquestionably the dominant language of scholarly publication.

English medium journals, globally:
Natural science 87%
Social science 83%
(Ferguson, 2007)

What does this mean? Is English a global lingua franca or is this ‘linguistic imperialism’?

Is English “a powerful carnivore gobbling up the other denizens of the academic linguistic grazing grounds”? (Swales, 1997, p. 374)

No, the stakeholders in scholarly communication are not the languages that are spoken, but rather the people who speak and write them.

Scholars wanting to publish internationally must write in English in order to: Reach a broad audience, be cited, achieve impact factors, receive promotion/tenure. (Lillis et al, 2010; Curry & Lillis, 2019)

Scholars wanting to be cited in international journals must write in English.

Citations of English vs non-English articles in international journals:
English medium 95.3%
Other languages 4.7%
(Lillis et al, 2010)

“Languages, like some other collective goods, do not diminish in utility with use: on the contrary, the more speakers a language gains, the greater the potential number of interlocutors, the greater the production of texts, and the greater the utility of the language to all those already proficient in it” (Ferguson, 2007, p. 13)
Collaboration and Communication and Digital Repositories in the Humanities

Matthew O’Neill

Digital repositories have the potential to redefine how scholars study the humanities. They can allow scholars to view old documents without concern for damaging them. In some cases they are able to be viewed remotely, without having to undergo extensive travel. Despite these benefits, there are still some roadblocks to taking advantage of digital repositories while studying the humanities. Issues such as access to new search technologies, search strategies and archival strategies can hinder scholars’ attempts to conduct research. Librarians are trained in using such technologies and strategies and can be a vital resource for scholars, provided they collaborate with each other in research projects. In order to best use digital repositories, and create digital humanities projects scholars must take advantage of the training and expertise of librarians as well as technicians to best navigate digital environments. Communication and collaboration, although challenging, can help develop work in the digital humanities.

Of the many examples of digital repositories in the humanities, scholars in Australia have created the NEER (Network for Early European Research) project. This project was developed to help scholars in medieval European studies better communicate and share research. This project is intended to be a national and interdisciplinary repository. Toby Burrows has studied the issues arising from this ambitious project and finds that one issue is the different technologies being used. Some are more well known and others are newer, that could benefit from the experience of trained information professionals. One issue arose with interoperability in communicating with other digital repositories. For digital documents to be preserved for future scholars, technicians
need to best preserve the documents metadata. Good metadata will allow the document to be able to be read and studied through its migrations to new digital formats.

Other issues arise from doing digital history (DH) in libraries and repositories comes from the question as to what is the core role of the library. Challenges come from issues with questions on how to handle new technology, such as lack of training, infrastructure, time constraints and just this thing being so new in general. According to Miriam Posner, “this problem is acute. Clearly expertise in the digital humanities requires new skill sets.” (Posner, 46) While training in new technologies and systems such as digital humanities are necessary for projects in this field to be successful, it is unreasonable to expect librarians to have what would amount to a bachelor’s degree in history to assist in DH projects. Lacking this, time and communication between disciplines are needed for humanities work in digital libraries or repositories to flourish.

Librarians are not the only group in need of professional development in order to bring them up to inform them on new technologies. Before searching digital archives or repositories for sources, historians used some common strategies to search for information. One strategy is simple browsing, by looking through stacks for books on certain topics. Another strategy is chaining. This involves looking at the footnotes of sources and working backward from there. The digital age has introduced scholars to new opportunities and challenges to finding information in digital repositories.

The capability to conduct a full-text searching is replacing the browsing strategy, but allowing historians to search entire documents for keywords. This strategy, while beneficial can yield many false positives. Because the technology can scan entire documents, it may give returns that do not fit the search parameters because the search terms can have different
Hieke Huistra and Bram Mellink discuss the research of Charles Upchurch who conducted a study on the representation of sex between men in British newspapers between 1820 and 1870. When searching for sources that fit this search criteria he discovered that articles would have headings with terms such as “indecent conduct” or “abominable crime”. However, he later discovered that the term “abominable crime” was also used to describe murder, so this search returned many sources not applicable to his work.

Search techniques referred to as related searching, involve building digital sets of related terms. This technique “makes the scholar less dependent on exact word usage than simple keyword search.” (Huistra and Mellink p. 225) Another strategy is weighted searching where keywords are weighted. They higher the rating, the more relevant the keyword. What this strategy does is “free scholars from the obligation to provide words that either should or should not appear” (Huistra and Mellink p. 226) The complexity of new search techniques, combined with the vast environment of digital repositories, should give the humanities scholar pause, and not try to undertake the massive task of navigating the digital realm alone.

Where does the librarian or archivist fit into this new digital environment? There already exists models and frameworks for developing a working relationship between humanities scholars and information professionals. Arjun Sabharwal suggests a framework called the conjunct model, where “traditional barriers between the two communities of practice transcend traditional boundaries” (Sabharwal p. 247). This model is quite aggressive in its expectations of each profession. It demands a truly collaborative approach from librarians, archivists and information professionals, and academics, scholars and historians. He cites several DH projects that demonstrate collaboration between curators and humanists. The Perseus Projects beginning at Tufts University which covers Greco-Roman history and literature, the Valley of the Shadow
project at the University of Virginia which deals with the Civil War era. Both projects are a great example of collaboration between disciplines. Historians and librarians, as well as technicians worked to produce the DH projects. These projects are a small example of the possibilities of what can be accomplished when scholars and professionals are encouraged to cross disciplines and collaborate.

Other examples of DH projects that blend history and literature are digital cartography projects. This type of project works to link history and literature by using maps curated in a digital environment to supplement literary texts. This type of collaboration is between librarians, historians, technicians and literary scholars, to provide a thematic map collection to provide context to scholars studying literature. Here again, we see the importance of collaboration to successfully produce DH projects. This undertaking would need collaboration between historians and literary scholars, but in order to ensure the project’s success, technicians, librarians and archivists need to make sure the document, and maps are readable in a digital environment.

It is necessary for each of the major in digital humanities collaborating with the other in order to successfully complete DH projects. Librarians, archivists and curators must appraise and select sources for inclusion into the library, repository or archive. Historians, in conducting research in must consult librarians in the newest search techniques and technologies to best navigate the digital landscape. While collaboration between technicians and historians is the least common of overlap in digital humanities work, it is where the conversation can happen as to what to include in digital repositories.

Since keeping digital versions of documents and other born-digital materials does not take up as much space as traditional analog materials, more documents can be stored. This raises the question of what should be kept. Toby Burrows at the University of Western Australia poses
the question, “Should everything be kept?” One of the issues in trying to preserve all digital documents is the massive volume of data involved, and “the cost and complexities of the technical solutions required.” (Burrows, 147) While technicians are not involved in research or archiving, if there is to be a discussion concerning technical complexities, they need to be involved. Other questions about trying to preserve a vast amount of data is also a philosophical one. Burrows asks if this practice would paralyze social and cultural sensibilities by creating information overload. This question concerns both historians and librarians.

It would be easy to say that all DH projects needs is collaboration and it will be a guaranteed success. Collaboration with groups of people come with inherent challenges, and especially in the digital humanities when much of the work done by historians, librarians and technicians is often done in solitude and not in large groups. Alex Poole of Drexel University published a case study in which interviewed 45 people involved with Office of Digital Humanities Start Up Grant projects. During the interviews, the subject, which included faculty members in departments such as computer science, English, Archaeology, art history, classical studies and theology, interviewees commented on collaboration and communication while working in the digital humanities.

According to Poole’s subjects, working in the humanities is usually done alone, so working collaboratively was challenging. “It depends on achieving common understanding of language, terminology, outputs and values.” (Poole, 1776) Other issues concerning collaboration had to do with the interdisciplinary nature of the work. One participant suggested that there was “a lot of skill involved in negotiating with personnel from different academic units.” (Poole, 1776) It seems the solutions to working with digital humanities and digital repositories are creating as many questions as they are answering.
Digital humanities projects, and research being done within digital repositories in the field of the humanities is still a relatively new endeavor. Because of the complex nature inherent in humanities scholars, conduct research in new types of libraries, using new digital tools, it is unlikely that this work can be optimized by using traditional methods. This work emphasizes using a collaborative approach between scholars, technicians, and information professionals.

References


Collaboration in the digital humanities

Librarians
- Archivists, curators.
- Appraisal and selection of sources

Digital Humanities Projects
- New search strategies; full text search and weighted search
- Authenticate metadata
- Digital curation
- Render sources in digital environment
- Continued conversation about what to include in digital repositories

Historians
- Scholars, academics; conduct historical research

Technicians

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Open Peer Review: Features, Benefits and Considerations for Scholarly Communication

Nina Rabkina

Introduction

Open Peer Review is an emerging phenomenon that is evolving with the general move towards transparency and openness in scholarly publishing. New models of peer review are implemented differently in different fields (Walker & Rocha Da Silva, 2015), which results in a wide variability in its definitions. In his systematic review, Ross-Hellauer (2017) demonstrated the ambiguity of the term by distilling twenty two configurations of seven traits of open peer review.

This paper aims to present main features of open peer review and discuss implementation examples, as well as considerations for this emerging concept. While not yet mainstream, open peer review is on the rise (Ross-Hellauer, Deppe, & Schmidt, 2017) and variability in applications is likely to continue in the future (Ford, 2013; Fresco-Santalla & Hernández-Pérez, 2014; Walker & Rocha Da Silva, 2015). Library professionals need to understand existing models of open peer review and follow its evolution in order to advise participants of scholarly communication on the features and opportunities of this emerging phenomenon.

What is Open Peer Review?

“Open Peer Review is an umbrella term for a number of overlapping ways that peer review models can be adapted in line with the aims of open science” (Ross-Hellauer, 2017, p. 3).

The author proposes the following “schema of seven traits of open peer review:

- **Open identities**: authors and reviewers are aware of each other’s identity;
• **Open reports**: review reports are published alongside the relevant articles;

• **Open participation**: the wider community are able to contribute to the review process;

• **Open interaction**: direct reciprocal discussion between author(s) and reviewers, and/or between reviewers is allowed and encouraged;

• **Open pre-review manuscripts**: manuscripts are made immediately available (e.g., via pre-print servers like arXiv) in advance of any formal peer review procedures;

• **Open final version commenting**: review or commenting on final “version of record” publications;

• **Open platforms** (“decoupled review”): review is facilitated by a different organization entity than the venue of publication” (Ross-Hellauer, 2017, p. 7).

Out of the proposed seven traits, three are identified as core, since they are included in 99.1% of the definitions. The three feature are: open identities, open reports and open participation.

Specifically, open identities is present in 90.1% of definitions, open reports in 59%, open participation in a third of definitions and open interactions in 20.5% (Ross-Hellauer, 2017).

**Implementation Examples**

In this section four publishing venues are analyzed with the goal of identifying specific open peer review features implemented and observing effects of their implementation on the scholarly publishing process.

**eLife** is an open access journal in the field of life sciences and biomedicine that practices direct communication between the editor and the reviewers. Fresco-Santalla and Hernández-Pérez (2014) explain that “reviewers and publishers act cooperatively from the moment they are assigned to the review of a manuscript” and it is up to the author to publish the review report (p. 383). According to the journal web site, however, “an online consultation session is open with
reviewer(s) once all the reviews have been received” and in case of “substantive revision requests” the requests and the author responses “will be published under the terms of the Creative Attribution License” (eLife, 2019). The aim of such process is collaboration (Fresco-Santalla & Hernández-Pérez, 2014) and “clear and decisive instructions to authors, so that they know what they need to do to get the article published.” (eLife, 2019). The minor discrepancies in the information from the two sources are noted here to illustrate the evolving nature of the open peer review process and underscore the importance of checking the terms of each publication directly in order to understand “choices and obligations under each system” (Schmidt, Ross-Hellauer, van Edig, & Moylan, 2018, p. 3). As to the traits of open peer review, eLife implements open interaction and open reports. The aim and the result of such process is cooperative work of reviewers and editors, transparency of the peer review process and clear communication between the editors/reviewers and the authors.

PLOS ONE is an international publication of the Public Library of Science. PLOS ONE publishes research “in over two hundred subject areas across science, engineering, medicine, and the related social sciences and humanities” (PLOS ONE, 2019). The publisher practices editor mediated review that dissociates the two functions of peer review, by assessing scientific quality of the articles only and not the impact of the research (Ford, 2015; Fresco-Santalla & Hernández-Pérez, 2014). Walker and Rocha Da Silva (2015) refer to these functions as “review” and “evaluation” where review “is a formal process aimed to guarantee that articles meet strong standards for scientific quality” and evaluation determines the importance of “particular results, interpretations and hypotheses” (Walker & Rocha Da Silva, 2015, p. 9). The research impact is measured through comments, downloads, views, and tweets that are captured and linked to the articles (Ford, 2015; Fresco-Santalla & Hernández-Pérez, 2014). According to Ford (2015),
PLOS ONE does not publish reviewer comments and signing reviews is optional. According to the journal website, publication of the reviewer comments too is optional, as authors are offered the opportunity “to publish the peer review history of their manuscript alongside the final article” (PLOS ONE, 2019). This analysis shows that PLOS ONE practices open final version commenting and encourages open reports and open identities. The result of such innovations is increased acceptance rate, which is, according to Walker and Rocha Da Silva (2015) at 69% and was the intention of the publisher in choosing this format in order to “remove restriction on the number of articles published” (p. 9). Additionally, PLOS ONE is able to capture article level impact metrics (Fresco-Santalla & Hernández-Pérez, 2014).

**Frontiers** is an open access publisher with journals in 600 disciplines (Frontiers, 2019). Like PLOS ONE, Frontiers practices “objective review” where reviewer reports are (Walker & Rocha Da Silva, 2015, p. 9). Similarly to eLife, there is an interactive collaborative stage during peer review, however, at Frontiers authors are included in this collaborative discussion and the names of the reviewers are revealed after the paper is accepted (Fresco-Santalla & Hernández-Pérez, 2014). According to the publisher website, a reviewer’s name is not disclosed if a referee withdraws or an article is rejected (Frontiers, 2019). Community comments after the publication are accepted and peer reviewed and the editorial team retains full control of the comment publication, with the right to edit or remove comments that are “perceived to be derogatory and/or do not contribute to a scholarly debate on the topic” (Frontiers, 2019). Frontiers implements open interaction, open identities and open final version commenting. The result of such application of open peer review is collaboration, transparency of the peer review process, higher acceptance rate and shorter publication cycle. According to Walker and Rocha Da Silva (2015), the acceptance rate at Frontiers is 80% and according to the publisher website, the
average time to publication is 90 days (Frontiers, 2019). By supporting open final version commenting, Frontiers enables wider quality control by the scientific community and supports continued edits and corrections of published work.

**F1000Research** is an open access journal in the field of life sciences that offers immediate publication and post-publication peer review (Walker & Rocha Da Silva, 2015). The articles are published “within one week of submission… after the initial editorial review for content, quality, tone and format” (Ford, 2015, p. 5). The reviews are conducted by invited referees, approval status of the article (Approved, Approved with Reservations or Rejected) is clearly marked, the reviews and author responses are posted next to the article, are attributed and can be cited; the members of the scientific community can also comment on the published work (Ford, 2015). All articles are immediately indexed in Google Scholar and once they pass peer review by receiving at least two ‘Approved’ or one ‘Approved’ and two ‘Approved with Reservations’, “the article is indexed in: PubMed, PubMed Central, MEDLINE, Europe PMC, Scopus, Chemical Abstract Service, British Library, CrossRef, DOAJ and Embase” (F1000Research, 2019). F1000Research practices open identities, open interaction, open reports and open final version commenting. The effects of implementing these features of open peer review include rapid publication, transparency of the peer review process, recognition of the reviewers, and what Schmidt et al. (2018) refer to as “broadening the perspective of the research” (p. 4).

**Perceptions of Open Peer Review**

Open Peer Review is a new concept and the attitudes of researchers and editors reflect the existing ambiguity of the term. A recent large survey by Ross-Hellauer et al. (2017) exploring
the attitudes of researchers and editors to this phenomenon found that, although the general attitudes to open peer review are positive, there is a significant variability in attitudes to its different attributes. While open interaction was supported by 68% of respondents, 51% believe that open identities “would make peer review worse” and 74% believe that reviewers should be “allowed to choose whether or not to make their identities open” (Ross-Hellauer et al., 2017, p. 22). This is a considerable observation, since open identities is often considered the defining trait of open peer review. Additionally, respondents were very favorable to open reports: with “three in five believing it will improve peer review” and 55% were strongly in favor of the final version commenting, although only 29% consider this attribute to be a formal part of peer review (Ross-Hellauer et al., 2017, p. 21). An interesting finding of the survey is that 44% of respondents agree that open identities would be fairer to the authors and would increase review quality, however 65% believe that open identities would lead to less strong criticism. It can be hypothesized that negative attitudes to the open identities feature can influence attitudes to open peer review in general, since open identities is the trait most often attributed in open peer review definitions.

A much smaller study of early career researchers by Rodríguez-Bravo et al. (2017) found that, while early career researchers would like changes in the certain aspects of the traditional peer review process, they “shun open peer review and consider it risky and dangerous” (p. 274). Although the two surveys differ in size, body of respondents and identify different factors influencing negative perception of the open identities feature of the open peer review, their results are noteworthy. These findings underscore the importance of clarifying the schema of the open peer review traits for early career researchers, as well as other participants of scholarly communication in order to leverage the benefits of different features of the open peer review.
Why Open Peer Review?

Open peer review is an emerging concept with a proposed “schema of seven traits” with twenty two configurations observed within currently existing definitions (Ross-Hellauer, 2017). Open identities is currently the trait most commonly associated with open peer review, since it is present in 90.1% of the analyzed definitions. (Ross-Hellauer, 2017, p. 7) It is also a trait that is negatively perceived by the majority of the participants of scholarly publishing and early career researchers (Rodríguez-Bravo et al., 2017; Ross-Hellauer et al., 2017).

This report described implementation of several open peer review traits at four publication venues. Only two of the venues: Frontiers and F1000Research practice open identities, and only F1000Research discloses the names of the reviewers even if the reviews are negative. However, all four publications achieve improvements in the publishing process and thus demonstrate that there are benefits in implementing different traits of open peer review, even if open identities are not required. Implementation of open reports, open interaction and open final version commenting has a positive effect on the overall communication between the authors, reviewers and editors, creates transparency in the editorial process, shortens publication time and increases article submission rate, as well as opens up published work to community evaluation and quality control. These factors “strengthen entire community of practice” (Ford, 2013 page 318), “broaden the perspective of the research presented” and offer “learning opportunities and facilitate training” (Schmidt et al., 2018, p. 4). The benefits of rapid and fast publication manifested themselves in the process of researching sources for this paper. Having access to the latest research on a fast evolving concept was crucial in understanding existing models of application and current opinions. Open reports, enabled with some of the sources,
provided examples of constructive criticism and iterative nature of scholarly writing, demonstrating in practice the teaching benefit of open peer review.

**Conclusion**

Open peer review is in its formative stage, emerging in different formats within the new scholarly publishing landscape, enabled by the technological advances and philosophical shifts. Clarity in understanding this concept is crucial for effective communication (Ford, 2013). Being a result of deeper shifts in technology and society, open peer review is the way of the future. Variability of this concept reflects the need for changes in the traditional process and demonstrates adaptability and consequently viability of the emerging phenomenon. While it cannot be predicted, what models of open peer review will be established, the consensus is that there will be many models (Ford, 2013; Fresco-Santalla & Hernández-Pérez, 2014; Walker & Rocha Da Silva, 2015). It is thus crucial for librarians to understand open peer review and to monitor its evolvement across disciplines in order to provide guidance to all participants of scholarly communication: researchers, administrators and editors, should libraries become publishers. Though open peer review has not yet been adopted widely enough to become part of academic promotion and tenure (Ford, 2013), eventually it will become mainstream. In their roles as information mediators, librarians can promote the open peer review concept and advance its adoption for the benefit of the scientific community and the scholarly discourse.
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doi:10.12688/f1000research.6005.2


doi:10.1371/journal.pone.0189311

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Impact of Open Access on the Scholarly Communication Landscape
Anthony Reda

The rise of open access in scholarly communication is the result of various issues, including the exploitative environment created by commercial publishers, but also a desire to create an atmosphere of shared scholarly knowledge for all to see. The following literature will demonstrate why open access is having a profound effect on scholarly communication and where and why its adoption is stalling or stagnant. Open access will be abbreviated as (OA) in this paper. In scholarly communication, there is a multitude of occurrences that are expanding OA as well as stalling its progress due to resistance, ignorance, and oversights. This research draws from scholarly sources and will flesh out the current scope of OA, and its effects on the scholarly world. It will elaborate on the types of resistance met from scholars and publishers, and where the OA movement could be heading. The research will give a global perspective on open access without the limitation of domestic views but instead worldly perception and experiences.

OA has a promising future based on the current trends that researchers have noted, including Bawack and Nkolo’s 2018 piece discussing OA's reception and acceptance by academic libraries in developing countries. OA initiatives are forming all over the globe and are transforming research, publishing, and dissemination processes. Not all OA's function equally, and there are different stripes of it, and for some countries based on their resources, there may only be a sliver of OA present. Patron needs are vastly different today than in the past due to increased research knowledge at the user level. This makes the user’s needs more detailed, perhaps in the format of the material, they are requesting. In response to this, academic libraries
need to have all resources on hand and readily accessible to assist the user in their quest. OA is filling this gap to the extent of reducing the need for many subscriptions to high priced journals that academic libraries traditionally have had to subscribe to (Bawack & Nkolo, 2018). OA supplements libraries by decreasing their scholarly subscriptions and increasing their financial savings, OA collections are looked upon to boost those losses in collections and aid in a library's shrinking budget.

For introductory purposes, Bawack and Nkolo’s definition of open access should be shown as it details what OA is and how it serves the user. OA "allows it's users to read, download, copy, print, search, distribute, or link to the full text of works, permitting the use for any legitimate purpose, as long as access to the material is possible through the internet." Open access has a base camp when it comes to academic libraries. Academic libraries form, grow, and allow OA to flourish in ways that would not have been possible at private for-profit organizations. According to Bawack and Nkolo, academic libraries can create their own digital copies of theses and scholarly monographs, thus creating their own institutional repository. This allows the libraries to provide OA to its users and ensures the preservation of the scholarly materials themselves. Several initiatives in the early 2000’s solidified OA’s rise and defined its various forms. The Budapest Open Access Initiative in 2002 defined two forms of OA. One form was named Green Open Access, and the other, Gold Open Access. Both of these forms are significant steps in the right direction for any institution to undertake. However, Gold is obviously the prime form of open access. Gold ensures that the material from the author is readily available without any fees. Any fees for the publisher will be paid by either the author or the own author's institution.
Green open access usually refers to when the author publishes his or her work and then deposits a copy of their work into their own institution's repository. From there, the work is available to anyone who has access to that repository and is free as well. Bawack’s article shows that OA can be an excellent tool for supporting teaching, scholarly constructions, and learning new methodologies.

Due to the role many academic libraries are playing in OA around the world, it is not surprising that perspectives on academic libraries are changing. Users are able to access scholarly resources without the fear of hitting a paywall. The libraries involved in OA are stressing less on constricting budgets and rising costs of science journal packages when their OA content is increasing. OA is creating a winning formula for all involved and, in turn, shining bright lights on academic libraries. Bawack notes that faculty are the primary contributors to scholarly journals and are most in need of accessing these journals as well. Due to this fact, open access has actually strengthened a bridge between the world of scholarly communication and academic libraries. These bridges are not only being created in developed countries such as America and European nations but also nations such as Cameroon and other African countries, according to Bawack. Academic libraries in these developing countries are modeling their international counterparts and proving that advocating for OA is improving the lives of students, faculty, patrons, and scholars in these areas. Increased faculty output, increased consumption of digital repository resources, and decreased spending on electronic resources and subscriptions are benefitting all.

Sadly, there have been legislation measures proposed against OA and its advancement in scholarly communication. The Stop Online Piracy Act (SOPA) of 2011 and Protect IP Act (PIPA) 2011 were measures aimed at limiting the growth of OA by criminalizing acts such as
publishing scholarly work online and numerous other OA steps. Legislators were attempting to create a tighter grip on copyrighted material on the internet. It is ironic that both individual legislators wanted this and a titan publishing company such as the infamous Elsevier. Legislation makes strange bedfellows indeed. Ultimately, concerned parties such as scholars fought these legislations back for OA and concerned tax-paying citizens whose taxes had funded much of the research attempting to be blocked by these laws. This did not stop the next attempted assault with the proposal of the Research Works Act (HR 3699, 2011), which came months after SOPA and PIPA. Unsurprisingly, this act aimed to restrict open access from federally funded research (Chadwick, 2012). Chadwick also points out that the motivations of some of these blockers of OA believe that open access is a threat to commercial publishers. They also believe that the rise of OA can lead to an increase in substandard and untrustworthy journals.

All of these beliefs and efforts are trying to block the success OA is having on scholarly communication. OA offers increased accessibility to research that otherwise would be unattainable to the average consumer due to financial burdens. Chadwick argues that tax-funded research should be guarded against excessive fees charged to tax already paying citizens. A petition was created in protest to HR 3699, and eventually, over 9,200 people signed it. The petition represented citizens from various fields and backgrounds, including publishing, editors, and referees from peer-reviewing. Within the petition, there was an additional option to refrain from editing, publishing, or refereeing scholarly works. Obviously, this would have had a detrimental impact on the world of scholarly publishing and directly impact large publishers such as Elsevier, who rely on all of these groups. Elsevier withdrew their support for HR 3699, and soon after, the bill died in the House of Representatives that same year.
These anti OA bills were aimed at disrupting the progressive impact OA was making at the time and currently is making in the world. Open access is a positive movement that can impact all parts of society and is not limited to the academic publishing community (Chadwick, 2012). It is crucial that the online landscape remains more open and freer of unscrupulous pricing labeled as copyright. If taxpaying citizens remain vigilant and responsive of new proposals for blocking, restricting, or detracting OA, then legislations such as SOPA, PIPA, HR 3699, and others can be stopped in their early stages. A constant need for advocating for free access to taxpaying research should always be a priority for citizens. Increasing access to research that was funded by citizens' hard-earned money should always be worth fighting for.

“Access to information is a fundamental right of a democratic citizenry. For democracy to thrive, all citizens must have equal access to information” (Khan & Ahmad, 2014). Open access offers a variety of knowledge and benefits to citizens, and legal knowledge is just one of the many crucial skills it can offer. Bopape’s 2016 article discusses that open access for legal information is a human right and thus ensures that citizens will have the chance to defend themselves and promote other's rights as well. In some cases, it is highly essential that a citizen, such as a public defender, has access to pertinent information in order to defend his or her client adequately. Bopape argues that material published by lawyers, judges, legal scholars, and others should always be made available for concerned parties to view and disseminate. Although there is a plethora of open access material on court cases and laws passed, there is an inadequate amount of material available on legal scholarly literature (Bopape, 2016).

According to Khan and Ahmad’s 2014 research, open access publishing of journals in the field of law is fledgling. This is mystifying because legal scholarly publishing generates stronger advocacy for open access than other OA subjects do. In South Africa, OA law material was
primarily accessed via paid commercial law database journals such as Lexis-Nexis or Juta. However, the Southern African Legal Information Institute (SAFLII) offers open access to legal resources. Unfortunately, due to the output levels in South Africa, SAFLII does not contain the vast amount of material that Juta or Lexis-Nexis would have. The outlook on open access contributions in South Africa has been a slower adoption than compared to the Americas and European nations. Boapape recommends that South African law librarians should start advocating for OA diffusion and acceptance. Bopape applies the Diffusion of Innovations (DOI) theory to his research in explaining the adoption rates of OA legal scholarly material in South Africa.

Law schools in South Africa have taken progressive steps forward to increasing OA by self-archiving their research and depositing those theses and dissertations into that institution's own repository. These theses are not legal journals but do advance the movement forward in the right direction. Legal journals contain scholarships that discuss and analyze the law and point to specific authorities for researchers to seek out when researching questions. Bopape draws on Carrol’s (2006) reasons for making legal scholarship open access. Open access materials are cited more often and making legal scholarship open access can ensure that those materials would have a higher citation rate and thus become more visible and recognized. Possibly the most important and humane reason for advocacy of OA would be the serving of underserved populations. Many in this region of the world and many others do not possess the means to research, educate, and then legally defend their rights. Internationally in the last decade, open access is being recognized by legal scholars as a new platform for legal dissemination and an increase in knowledge. Improving legal dialogue can create a bridge for scholars in other fields to converse appropriately in legal terms.
Another flavor of OA is the advocacy for open peer review (OPR) and creating an open ethos. Creating a more equitable, open, and engaging environment will fundamentally change peer-reviewing. Emily Ford, in her 2017 article, argues that OPR allows transparent scholarly discussions, advances and enriches collaboration and research, and exposes and alleviates problems endemic with scholarly research outputs (Ford, 2017). Ford is correct in her belief that OPR can improve many of the current issues in the peer review system. It is inherent that biases and ego will come into play when a colleague or another scholarly is reviewing your submitted work. It is human nature for this to occur; however, if brought out into the open and made less controlled and private, the dynamics could change significantly. Reducing the amount of inherent bias is one crucial aspect of advancing OPR. While peer review's objective is to ensure above-board practices and sufficient quality of research, it is has failed in making the playing field equal for all who submit. Also, delayed too long approval times can stymy motivation to conduct and submit research.

Ford states that OPR will strengthen efforts to increase diversity in scholarly communication by changing the culture of publishing and submission. Ford mentions implicit exclusion when it comes to the system of journal rankings and high impact levels. This system is based on a numbers game that translates to a level of prestige that in itself can be seen as elitist. It is assumed that the higher the journal level than the higher quality of the publishing it contains, and that in itself should not be a definite measure. This only heightens an environment of bias and possibly excludes valid and worthy research or researchers. According to Ford, scholarly publishing is dominated by older white males, and OPR provides the tool to eliminate that status quo with the inclusive and open dialog. Diversifying the authors is essential; reviewers can and will provide equality in scholarly publishing by ensuring new voices can be heard and
highlighted. In doing this, OPR also has the potential to improve the quality of research when more community stakeholders can participate in evaluating submissions. OPR can position academic libraries as innovators of scholarly publishing (Ford, 2017). Academic libraries can take this challenge on as they have with many others by accentuating what makes them the foundation of a higher education institution. Committing themselves to a society centered issue such as a form of OA like OPR can elevate that library’s prestige. Teamwork and public engagement among librarians, staff, and faculty and scholars can create a new landscape of peer reviewers and commentators whose entrance into the field can topple the elitist hierarchy that is currently in place.

Building on the belief that open access and various forms of OA can be transmitted and hosted by academic libraries is the basis for Fruin and Sutton’s 2016 article on strategies for open access policies at colleges in North America. The research was extensive and was comprised of a survey of 51 institutions in America and Canada. Commonalities among many of the institutions showed that partnerships among library and faculty were a critical factor in executing and caring for OA policies. OA allows the author to retain more rights to their extensive work while addressing the subscription crisis for library budgets (Fruin & Sutton, 2016). Faculty also were promoting OA at their faculty senate meetings, which allowed newer faculty and adjuncts to find out about their institution’s OA policy, academic library's features, and general benefits of OA. Fruin and Sutton’s research show how institutions research missions are achieved by OA repositories and increasing faculty output. Academic libraries can and mostly are the curators and protectors of these repositories, and that alone makes their role in the campus community extremely vital.
All of this could not be possible without funds set aside by the libraries in order to effectively manage these repositories and engage in other OA elements. Crystal Hampson discusses OA publishing funds in her 2014 article. OA funds are money set aside at an institution to fund open access publishing (Hampson, 2014). When libraries are able to set these monies aside, they enable the open and immediate online dissemination of scholarly research, hence OA. This is a vital progressive initiative that must be adopted at all academic libraries. OA funds sometimes cover publishing fees that can inhibit an author's desire or ability to publish their work. OA funds can also help curate an ever-growing collection of digital scholarly publications. Addressing technology updates, filing, retrieving, and preserving all cost money, and this burden can be lifted from the author and not eliminate the need to enrich a commercial publisher further. The concept of OA funds could spread to more institutions around North America, and beyond once, the benefits of it are realized from all stakeholders (Hampson, 2014).

As stated earlier, open access comes in a variety of flavors, and all of these flavors have incredibly beneficial effects for the users. Open educational resources (OER) are course materials that students and faculty can access for free. These materials can be various forms such as a class textbook, syllabus, and other types of media. This OER movement is combatting the textbook publishers’ stranglehold on academic institutions and students' pockets. Hess, Nann, and Riddle’s 2016 article discusses OER and the libraries' role in bringing it to the college campus. OER is the ability to pick and choose the pieces of each resource you want to use and allowed instructors to choose relevant material and tailor it to their respective audiences (Hess, Nann &, Riddle, 2016). Much like OA in scholarly publishing, input, and revision from faculty from all over can significantly benefit the quality level of material due to the engagement levels.
Again, having readily accessible and open to all vital information is why OA is a pinnacle of a free society’s ideals.

Hess, Nann, and Riddle mention that OER can bridge a gap between socially excluded groups and higher education institutions. OER's provides access to educational material that would typically have been guarded by student registration fees, tuition, and other financial barriers. Academic libraries are individual institutions that are taking charge of this type of OA by awarding stipends to faculty who submitted their course materials to a web page hosted by the library. Much like a digital repository, the library maintains the curation of the submitted course materials. Academic librarians can provide copyright and licensing clarifications and details on this endeavor (Hess, Nann & Riddle, 2016). OER interest and its positive impacts i.e., OA has garnered enough support that state and private incentives for colleges and schools who implement OER’s. The realization of OA’s positive impact on education is happening, and as it expands, the ignorance on the subject will dissipate. OER’s are another example of a powerful tool to combat preconceived notions of OA and also combat the textbook publisher's price grip. OER’s are also aiding at-risk college students through relieving financial burdens, improving teacher’s curriculums, and creating a more open and collaborative environment for learning.

As discussed earlier in this literature in regard to South Africa’s OA movement, OA is not equal around the world due to reasons. Whether it is the resources available in that country, apprehension to adopt by scholars in that country, and bias of others not of that country to read scholarly output from there. Rath’s 2015 article describes the open access movement (OAM) in India and focuses on Social Sciences journals there from 2009-2014 and the quality and quantity differences in that time period. Rath concluded that OA journals are expected to increase the visibility of research published by Indian scholars, but this may not prevent a stigma of bias from
outside country scholars viewing this output. Indian publications often get unnoticed at the international level based on the high percentage of Indian contributions in Economics & Business, yet the impact levels of these entries remained low as compared to more developed countries whose output level was similar, but their impact level was higher (Rath, 2015). This showcases a struggle OA is having in many underdeveloped countries throughout the world. Occasionally there is an inherent bias on the part of the Americas and European nations when it comes to OA output outside of their two worlds.

This is where OA can excel in changing perceptions, much like scholars had to do when integrating it into the social fabric of scholarly communication. Scholars can stress how OA can actually improve the quality of works by buy-in from various parties involved in accessing the material. Rath argues this as well in order to improve India's low acceptance rate of academic output by the rest of the world. Creating a central advisory and quality control cell should be created; this would measure the quality of the document as well as the OA journal it is being submitted into (Rath, 2015). There are several other points Rath argues that should be adopted, which are common among many other LIS literature arguments on OA adoption. Anything publicly funded should never have financial barriers attached to it. In addition, institutions should create their own repositories that house all forms of scholarly work. Lastly, implementing a mandatory policy that authors papers from the institution have to deposit a post-print copy of their research if that research was publicly funded. Rath’s work shows that the adoption rate in the studied time period (2009-2014) in India fluctuated and was not indicating that the OAM was going in a continued upward trend, it did possible layout strategies to change that trend and increase hope that the OAM would thrive in India.
By now, it should be clear that this author is a strong proponent of all flavors OA, yet it is still essential to show difficulties the OAM faces and possible inherent issues that may be stalling its 100% adoption, everywhere. Race MoChridhe’s 2019 article provides a new argument about the advancement of OA and why it is possibly not expanding as fast, internationally. He focuses on a barrier not often discussed as much as the paywalls, and that is lingua franca. For the scholarly world, English is the common commodity expected in scholarly articles, and this inhibits many international non-native English speakers who desire to publish and read scholarly works. It seems the status quo in language for scholarly communication is English. This fact alone is leaving out many potential international scholars. It is almost assumed that as scholars and anyone living in the western hemisphere of the world, English is and should be the common currency everyone practices in. This mantra is antiquated and is indirectly blocking many potential researchers just as paywalls did and are doing. It is ironic that the OAM formed out of researchers' frustrations of not being able to access other research without considerable contributions to a publisher or institution. However, now those same researchers are unknowingly blocking out other researchers by publishing in English their research, conference notes, proposals, and all other forms of academic output.

MoChridhe shows that foreign scholars admitted wanting to read many high impact articles but couldn't because either they were competent enough in English to decipher the research and its arguments or in other cases, did not know any English, so the entire article was useless for them. This can inhibit these researchers if they are trying to draw on previously published research to aid them in theirs. Academic libraries can take the mantle here to address this misstep and create a more equitable field for all researchers and truly make open access, open. Libraries can take the reins in aiding this gap by encouraging the use of languages such as
Esperanto or Interlingua in scholarly writing (MoChridhe, 2019). Using these languages may connect scholarly authors from around the world if many are using a common writing language. This strategy could connect scholars from around the world and communicate in a collaborative environment that creates a synergy for the OAM.

Another topic on why resistance to OA is still stalling in certain parts of the world comes from a stubborn preconception of lack of quality. As many authors have shown, the concerns can be valid, but the very process of OA, if appropriately used and ideally, will increase the quality of the work. Sadly, there are instances of predatory and fraudulent journals that do slip through the cracks, but they should not be representative as to what OA is. McNaught’s 2015 article on inherent uses and issues in open access points out legitimate concerns and instances in regard to open access publishing and the rise of predatory or fraudulent journals, and articles. The scope of his research focuses on Australia's higher education system and the challenges of discerning low quality or unscrupulous publishing whilst dealing with the pressure of "publish or perish.” Poignant statements are made on journal prestige, such as "impact factor is influencing how society defines the prestige of information” (McNaught, 2015). There are systematic flaws when rating OA journals and journal quality because, much like the peer review process, bias can and does rear its ugly head. Bias can stigmatize a journal's score, a papers impact factor, or even the author's impact factor. In this system, sometimes bias can sometimes root out a fraudulent paper or inadvertently miss its existence. McNaught presents an optimistic yet cautionary tale of open accesses and its impacts on scholarly communication.

The following entry was created in an effort to show how open access is adopting and why it can be stalling in some corners of the globe and for what reasons. It also shows that OA is not yet created equal in certain countries, and this may be preventing more scholars from
adopting this excellent tool that increases knowledge and equity. Open access comes in many forms, whether its traditional main form OA, or open educational resources (OER), or even open peer review (OPR). The main points of open access from this author are the highly progressive goals it aspires to and the society we wish to see in scholarly communication and beyond. Enhancing higher education, K-12 education, science fields, legal fields, citizens' rights, and a plethora more is an altruistic goal that can be achieved. Information as a free commodity can enrich minds, lives, and careers. Information can save lives, defend citizen's legal rights, breakdown barriers of ignorance, and create a more inclusive and equitable world for all to adequately engage in. Open access should not be viewed as an idealistic fantasy of progressives but a significant leap forward for humanity to advance our shared knowledge and understanding of life and the world that we inherited.

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https://doi.org/10.1080/0361526X.2012.722907


The Open Access Movement

- 6% improvement in the success rate (defined as reduced drops, withdraws, and final grade of C or better) in both face-to-face and online sections employing OER.
- Efficient access to significant content to support professional development, instruction, and research.
- Increasing diversity in publishing by adopting Open Access Peer Reviewing (OPR).
- 32% of researchers think that peer reviews currently practiced is the best system that can be achieved.
- Open Access Repositories increase output which shapes institutions standing to a global audience.
- Bettering lives through information sharing.
- A survey of scholars in Kenya showed 66.9% believed that principle of free access for all readers was an important reason for them to publish in OA.
- Granting Information Equality.
- Removing Barriers to Knowledge.


Open Data: Motivations and Reservations, Policies and Possibilities
Sally A. Schaefer

Introduction

Open data is an information philosophy that argues that research data should be freely accessible for members of the public to inspect, use, and republish as they see fit, and without restrictions from copyright, patent, and other legal or economic barriers. Data can take many forms, both physical and digital, human readable and machine readable, and gathered via scientific instruments in a lab or via human observation in the field (Borgman, 2012). In kind, the sharing of that data can be multifaceted; it may include publishing datasets along with journal articles, uploading datasets to digital repositories, posting data on personal and/or institution websites, and sending datasets directly to other researchers and/or institutions (Wallis, Rolando, & Borgman, 2013).

Despite differences in data types and data sharing techniques, researchers, funders, and journals representing a variety of disciplines, from social sciences to life sciences to information sciences, are largely in favor of the open data movement (Borgman, 2012; Wallis et al., 2013). However, despite support for the movement, studies conducted within the past ten years conclude that data sharing among academic researchers is still very limited (Borgman, 2012; Castro, Crosas, Garnett, Sheridan, & Altman, 2017; Leonelli, Smirnoff, Moore, Cook, & Bastow, 2013; Wallis et al., 2013). These studies suggest that more direct incentives for researchers and clearer data sharing policies from journals, funders, and institutions are needed to encourage data sharing (Borgman, 2012; Castro et al., 2017; Leonelli et al., 2013; Wallis et al., 2013).
Researcher Motivations and Reservations

Common government, institution, and journal policy arguments for sharing data include providing public access to publicly funded research, supporting reproducibility and verification of past research results, allowing researchers to create new studies with extant data, higher citation rates for papers with available associated data, and generally advancing research and innovation (Wallis et al., 2013). However, according to Wallis et al. (2013), these policy arguments do not entirely overlap with researchers’ own motivations for sharing their data. A study on researchers from an array of disciplines working at the National Science Foundations’ Center for Embedded Network Sensing (CENS) found that researcher motivations for sharing data included demonstrating the value of their own accomplishments, supporting comparisons between research methods and research sites, promoting their technology as a basis for others’ research, as well as facilitating other researchers’ ability to pursue further research with the same data (Wallis et al., 2013).

Wallis et al. concluded that in reviewing previous studies, “much more [was] known about why researchers do not share data than about why they do share” (Wallis et al., 2013, p. 2). Researchers and/or their research teams often lack the skills, technology, and/or time necessary to preserve and manage data in ways that would be understandable and useful to others (Bezuidenhout, Leonelli, Kelly, & Rappert, 2017; Wallis et al., 2013). Underlining a lack of infrastructure and resources, many researchers additionally feel there is no incentive to expend the time, money, and effort necessary to organize data for sharing purposes, as essentially all institutional tenure and promotion systems value publishing articles over publishing research data (Bezuidenhout et al., 2017; Wallis et al, 2013).
Observations of researchers’ data sharing behavior also reveal the “gift culture” of scholarship, which involves the exchange of “valuable intellectual goods” (i.e. research methods, techniques, data, insights, etc.) between trusted colleagues (Wallis et al., 2013, p. 14). If researchers allow free, public access to their data, they will no longer be able to use it as an intellectual good to bargain for similar items from researchers who keep their own data private (Wallis et al., 2013). In the current research climate, researchers may be hesitant to openly share data due to a perceived scenario in which they would then be excluded from gift culture, since they no longer have private intellectual goods with which to barter. The scholarly community would need to shift uniformly toward requiring open data sharing, thereby effectively eliminating gift culture.

Above all, researchers express concern about sharing research data too early in the research process; they fear losing the right to publish their results first. (Bezuidenhout et al., 2017; Wallis et al, 2013). In kind, researchers’ potential willingness to share research data was predicated on two central conditions: (1) that they retain first rights to publish their own research results and (2) that government and journal policies require subsequent studies to properly attribute original data sources (Wallis et al., 2013).

**Journal and Funder Policies**

Studies conducted between 2008 and 2016 found that only a small number of commercial journals in the biomedical, environmental, and social sciences (specifically, political science and economics) required data sharing as a matter of journal policy (Piwowar & Chapman, 2008; Stodden, Guo, & Ma, 2012; Vasilevsky, Minnier, Haendel, & Champieux, 2016; Vlaeminck, 2013). The studies also concluded that the overwhelming majority of journals failed to provide
specific guidance on how, when, and where to make data available (Stodden, Guo, & Ma, 2012; Weber, Piwowar, & Vision, 2010; Gerghina & Katsanidou, 2013). Some of the same studies indicated that even open access journals, which only accounted for a small percentage of journals analyzed, were not more likely to require data sharing than commercial journals, and that most data-sharing policies lacked any specific guidance on how to make data available and reusable (Piwowar & Chapman, 2008; Vlaeminck, 2013).

Castro et al. (2017) manually reviewed websites of fifty English-language, “discipline-agnostic” open access (OA) journals for information related to open data policies and data submission guidelines. Of the OA journals analyzed, the vast majority (74%) did not have any data policy (not even an implied policy), and only 6% of those that did have a data policy required data sharing (p. 72). Data citation was discussed by only 4% of the journals analyzed and was never explicitly required (Castro et al., 2017, p. 73). Journals that did have data-sharing policies rarely included requirements more specific than a statement from the author merely declaring the availability of data (Castro et al., 2017, p. 73). The most common specific policy details were examples of data citation (14%) and specification of the place of data deposit (8%) (Castro et al., 2017, p. 73).

The study concluded that OA journals, at least the fifty analyzed in this study, were less likely to have a data sharing policy than commercial journals, and of those OA journals that did have a policy, OA journals were likely to have weaker policies than commercial journals reviewed in the aforementioned studies (Castro et al., 2017). Perhaps even more disappointing is that a follow-up analysis (conducted two years after the initial study) showed that of the OA journals sampled, data sharing policies had not improved over time (Castro et al., 2017).
In contrast, Castro et al. (2017) found that at least a few major journals (both commercial and open access), scholarly societies, and research grant funders have instituted exemplary data policies in the past few years. Of OA publishers specifically, PLOS, BioMed Central, GigaScience, F1000Research have strong data-sharing policies, ranging from PLOS’s requirement that authors provide a data availability statement with an accepted article to F1000Research’s stricter requirement that data be made freely available, a policy which is given along with detailed guidelines for data set submission (Castro et al. 2017). Similarly, some notable public and private research grant funders have adopted strong data sharing policies for projects they fund, while others have emphasized awarding grant to projects that are committed to open access and open data (Castro et al., 2017). Notable examples of funders with strong data sharing policies are the National Institutes of Health, the Laura and John Arnold Foundation, and the Bill and Melinda Gates Foundation (Castro et al. 2017).

Discussion and Conclusions

The apparent lack of data-sharing policies in scholarly journals, especially open access journals, is somewhat disheartening; however, it does allow plenty of opportunity for journals to make great improvements in this area. If and when an increasing number of journals adopt strong data-sharing policies, more researchers may be willing, or even specifically required, to openly share datasets related to accepted scholarly papers. If and when sharing datasets along with published research becomes part of standard journal policy, many of the concerns researchers currently have regarding sharing their own data may diminish.

Scholarly journals are highly influential in the academic world; therefore, a major shift in journal policy could affect governmental and academic institution policy as well. Open access
journals, which are already leading the way with respect to the open movement by providing open access to scholarly articles, could simultaneously endeavor to support open data by adopting strict data-sharing policies that require published open access papers to be accompanied by openly accessible datasets. Journals would need to outline requirements regarding (1) how to organize data so that it would be useful to others, (2) when in the peer-review/publishing process to upload the data, and (3) where to upload the data (whether through a journal-specific platform or a larger hosting platform that would be linked to the associated paper). Not only journal publications, but all professional publications should follow a standard for properly attributing the original source for datasets used in secondary research. Then, the same methods that are used to capture bibliometrics and altmetrics data could be used to track dataset citations. By requiring proper attribution and tracking bibliometrics for published datasets in the same way as published articles, researchers may feel more confident that they will be recognized for their original work. In time, academic institutions may also view published datasets as benchmarks necessary for academic tenure and promotion, providing even further incentive for researchers to spend the time, money, and effort necessary to organize, preserve, and maintain datasets for free access by the public.

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Data-Sharing Policy
For Open Access Journals

Requirements
- Require accepted journal articles to be accompanied by publicly accessible datasets.
- Include guidelines for:
  - HOW to organize the data
  - WHEN to submit the data
  - WHERE to upload the data

Attribution
- Outline a standard method authors should follow for citing original datasets.
- Require authors to use that citation method in order for papers to be accepted.
- Encourage other journals to adopt a similar citation method for datasets.

Bibliometrics
- Assign standard identifiers to online datasets.
- Use bibliometrics and altmetrics tools to track dataset citations and mentions.
- Report citations and mentions on journal site.
- Offer service linking bibliometrics and altmetrics statistics to individual author pages.

Promotion
- Actively use published datasets as a measure for professional assignment/promotion within the journal's staff and editorial board. Inform academic institutions of these assignments.
- Encourage researchers' use of grant funding that specifically supports open data.
- Reward commitment to open data!

SOURCES
Borgman, 2012; Castro et al., 2017; Wallis et al., 2013
In recent years, the open access movement has gained a great deal of support among librarians and scholars. This movement challenges the existing system, and aims to make new information available to readers of all backgrounds, regardless of their wealth, or connections to universities fortunate enough to maintain adequate journal subscriptions. The benefits of the open access movement (OA) are clear, but the methods for implementing this movement in a sustainable and fiscally responsible way remain mysterious. Many researchers have turned to their focus toward institutional repositories (IR), and the projected benefits of implementing OA publishing practices through IRs are alluring, but as support for IRs grows, opposition also flourishes. Those who oppose IRs as OA publishers have pointed out a number of problems that IRs may face, but many of these proposed problems have simple, and realistic solutions. The purpose of the following analysis is to dispel misconceptions regarding the viability of IRs as OA hubs, and to present solutions to the perceived problems.

Academic libraries have become increasingly involved in the promotion of OA, and in providing OA materials, but many scholars still question the long-term viability of OA. Those who remain skeptical of the OA movement frequently cite financial difficulties, with questions regarding staff member salaries, publishing costs, storage and server space, training, marketing, and additional expenses (Davis et al., 2016). Before delving into the financial sustainability of IRs as OA publishers, it is important to investigate the financial dealings of traditional
publishers. Scholars who oppose the OA movement claim that this method of publishing would not generate enough income to support itself, but the traditional model of publishing also involves some troubling financial maneuvers. Traditional journals, and specifically those regarded as “mega-journals”, are known to exploit the existing model in which authors pay to submit their works for review. These mega-journals assess exorbitant article processing charges, raking in as much funding as possible from individual authors; one might think that this high volume finding is necessary to sustain the traditional publishing model, but on the contrary, these large publishers more frequently reduce their peer-review process, lowering the cost of manuscript handling and instead turning author-sourced funds into direct profit (Ellers et al., 2017).

These practices are also interesting when viewed in conjunction with another frequently cited argument against OA: the compromised integrity of submissions that do not undergo the rigorous peer review associated with high impact journals. This argument, at the very least, shows concern for the validity of the information that is being published, but it is also almost comical that so many scholars seem convinced of the integrity of articles produced through traditional publishing practices, when evidence suggests that many of these journals purposefully limit their peer-review process in order to cut manuscript handling costs (Ellers et al., 2017). Alas, with a baseline for comparison, one may return to the examination the financial fate of IRs.

Many are concerned for the financial fate of IRs, as these repositories do not typically assess article processing charges; this lack of processing charge saves authors and institutions a great deal of money, but also eliminates a common source of revenue that traditional journals capitalize on in an extreme fashion (Dubinsky, 2019; Ellers et al., 2017). The inevitable costs of publishing combined with the shortage of revenue-generating charges does present fiscal hurdles
for IRs, but many critics of the OA movement fail to recognize that publishers and institutions who do embark on the journey to become fully OA will no longer expend financial resources on pricey journal subscriptions. While access purchase fees for traditional journals vary widely, statistics compiled in 2017 indicate that even at a rather small fee of $10 per commercially published article, institutions spend close to $2 million on subscriptions and access fees annually (Dubinsky, 2019). Opting instead to publish and house OA publications not only saves institutions a great deal of money, but also prevents those funds from entering the scholarly publishing ecosystem, a system which many consider to be out-of-date and predatory (Dubinsky, 2019; Ellers et al., 2017; Krier et al., 2019). In most cases, financial returns do not only affect individual institutions, but rather are shared across institutions and individual scholars (Dubinsky, 2019). Some may balk at the idea that their particular university may not directly reap the vast potential savings, but one must consider the effect of such a large financial benefit for global audiences, and the scholarly community as a whole.

The above statistics illustrate the financial benefits of OA publishing, and specifically the benefits for IRs, but the conversation doesn’t end there. Some skeptics remain concerned that institutions will not receive adequate returns on their investment in OA publishing, but there are a number of beneficial returns that do not involve finances. Institutions who engage in OA publishing put themselves in a position to disseminate knowledge without the restrictions of paywalls, and improve access to information for otherwise underserved populations. These benefits are certainly not negligible, but they are also applicable to all OA publishers aside from those based out of IRs. IRs and universities specifically reap the non-monetary benefits of OA in the form of increased social and cultural impact. IRs using the OA model contribute to the professional development of their students by making it easier for students to publish their work.
These IRs also frequently experience higher download counts, citations, and more frequent adoption of new works into course curriculum, as articles in OA repositories are more readily accessible by a vast margin (Dubinsky, 2019). Institutions creating OA repositories also have the ability to create wider networks for their students and faculty, contribute to global knowledge, and perhaps even earn notoriety among their fellow OA pioneers. But of course, some financial challenges may still remain.

An additional proposed solution for any remaining financial hardships institutional repositories may face also finds its roots in the values many academics and librarians hold dear: community and collaboration. A number of newly-born IRs have attempted to operate almost entirely independently, but recent insights suggest that IRs may benefit in a number of ways through unification and collaboration with one another (Grant, 2018; Wilbanks, 2017). Academic libraries and institutional repositories could benefit greatly from something called the “network effect”, a notion that suggests that products gain value more quickly when more users are engaging with them (Grant, 2018). This “network effect” would assist in the development and growth of IRs, and would also offer solutions to some of the problems that continue to hinder the adoption of IRs. It is common for academic libraries, especially those which hold IRs, to prioritize maintaining local control over their individual repository, but in the instance of IRs, singularity does not actually promote sustainable growth. Wide numbers of IRs all operating independently are likely to experience problems including repetitive efforts, increased strain on already scarce resources, and variations in the application of metadata standards (Grant, 2018). These smaller independent IRs also run the risk of underserving their users, as their localized efforts may have little support, high costs of operation, and poor usability (Grant, 2018). If IRs were to collaborate, even on a regional level, the pooling of financial resources, staff labor, and
interface design would increase cost-effectiveness, eliminate redundant editing efforts, and increase the diversity of selected articles (Grant, 2018). This collaboration would provide solutions for concerns of financing, and also assure that the work being conducted by editors and staff members was not being duplicated elsewhere.

In regards to editors and staff members, opponents of the OA movement continue to cite the potential for unethical practices as reason to uphold the traditional publishing system. Many believe that open access publishers, in order to manage publishing and staffing costs, must assess massive submission fees for prospective authors. Contributors to The Chronicle go so far as to say that open access publishers are likely to descend into a system similar to the payolas that exhibit unfair influence in the music industry (Suarez & McGlynn, 2017). This notion, among other things, assumes the worst of the individuals promoting the OA movement, and the OA movement as a whole. The OA movement was born of widespread discontent with the predatory practices and inflated prices of publishing giants like Elsevier, and the assumption that OA is doomed to repeat the financial abuses of other publishers reflects a fundamental misunderstanding of the movement in its entirety (Lawlor, 2017). In addition, the notion that OA publishers must exploit someone if they are to succeed simply lacks imagination. In an industry that is driven by a widespread desire to uncover and share new information, is an institution using its funding to disseminate knowledge Furthermore, these payola practices are already being employed by a number of traditional publishers, many of which charge exorbitant article processing charges, but do not use these funds to finance extensive peer review (Ellers et al., 2017). The traditional model of publishing has been in practice for upwards of 200 years, and this longevity has led some scholars to believe that this model is the only option, but authors and subscribers no longer need to submit to outrageous fees to gain access to academic circles.
IRs and universities present a unique environment in which reasonable funding, scholars of diverse backgrounds, budding authors, and capable information professionals already coexist.

IRs present an environment in which the intellectual and financial resources necessary to create a well-rounded and fairly financed journal are readily available. A great deal of the resistance to implementing IRs as OA publishers rises from concerns that are legitimate enough, but the fact remains that the academic community is at a crossroads, and there exists a choice to continue investing in publishing giants who time and time again prioritize their own profit margins over intellectual growth, or to take a leap and find ways to make existing institutions even more beneficial to the scholarly community. Perhaps Fitzpatrick said it best: “Rather than giving our work away to corporate entities that will profit at our expense, might we instead find a way to make a virtue of our market failures?” (Fitzpatrick, 2012). IRs present an opportunity to turn away from predatory corporations, and instead to utilize resources within the community to better the community.

References


Dollars and Sense
Dispelling Myths Regarding Open Access & Institutional Repositories
Amanda Schelemanow

Myth: Institutional Repositories don’t have the funds to publish OA journals.
Facts:
- IRs are able to use institution funding to assist in with staffing and publication costs.
- IRs who provide and publish OA journals stand to save a great deal on outside journal subscriptions. Statistics indicate that the academic libraries spend upwards of $2 million on traditional journal subscriptions annually. OA eliminates the need for this expense.
- OA publishing presents the opportunity for institutions to pool resources, saving on costs and staff labor.

Myth: Open Access poses a threat to the integrity of peer-review.
Facts:
- Traditional publishers and “mega-journals” pose a larger threat to research integrity. Inflated prices and reduced peer-review prioritize profitable articles over those that are accurate.
- IRs have access to professionals in a wide range of fields, as well as a diverse pool of up-and-coming authors. These professionals are vital in the production and review of new and legitimate research, and all coexist and the umbrella of the institution.

Myth: IRs are not worth the investment necessary to begin publishing.
Facts:
- IRs create opportunities for massive savings.
- Engaging in OA publishing creates non-financial benefits for institutions. IRs using the OA model contribute to the professional development of their students, and frequently experience higher download counts, citations, and more frequent adoption of new works into course curriculum.
- The OA mission is one that benefits scholars from all over the world. IRs that engage in OA publishing are doing their part to improve access to information for underserved individuals.
While research has always been a central part of academia, in recent decades there has been a steadily increasing value placed on publishing in particular (Landes et al., 2012). This can be seen especially within universities, where the increased focus on publishing has led to increased expectations within tenure and promotion applications. In almost all universities, part of the tenure and promotional application processes is based around scrutinizing the faculty member’s published works, but with increasing focus has come repercussions.

A large number of those who decide to work as faculty at a university will start out as assistant professors, with many setting their sights on eventually obtaining tenure. Tenure ensures job security, enabling one to focus less on research and more on leisure and one’s personal life (Link et al., 2008). Gaining tenure also enables faculty to publish works that focus more on personal interests, opening the door for them to focus on controversial or disregarded topics that, previous to gaining tenure, they were too afraid to for fear of negatively impacting their tenure application (Chakrabarty, 2012). Generally, assistant professors are only allowed to apply for tenure once, and failure to obtain it within the expected time frame carries the risk of being fired (Gardner and Blackstone, 2013; Gold, 2017). This pushes non-tenured faculty to put more time and effort into doing research, with them spending around an additional four hours per week on research than tenured faculty, all in hopes of publishing enough to gain tenure and thus
a secure position (Link et al., 2008). To take too long to apply is to risk losing one’s assistant professor position, but applying before one has accrued enough publications is also a risk.

However, the requirements for tenure are rarely explicit, meaning that assistant professors are often applying essentially blind. The number of publications an assistant professor is expected to have in order to gain tenure is unlikely to be stated by the university, with rumors and gossip between faculty often the only source of estimates (Gardner and Blackstone, 2013). For an associate professor looking to be promoted to a full professor, the process can be even more concealed. While there is an estimated amount of time that passes before an assistant professor gains tenure, with around six to seven years being the average, those who wish to gain promotion from associate to full have no such estimate to go off of (Gardner and Blackstone, 2013). So while an assistant professor knows that they have around six years to publish as much as they can before they are expected to apply for tenure, associate professors that wish to gain promotion have no such luxury. They may apply for promotion year after year and be rejected each time for “not being ready yet”. During this time they are expected to continue publishing work after work, and any slowing down will reflect poorly on their next promotion application. Some will even refuse to apply for a full professorship until they have been an associate professor for far longer than average, as they are afraid of applying for promotion “too early” and with not enough experience or publications under their belt. Much like assistant professors looking to gain tenure, associate professors who wish to be promoted to full professors feel the need to publish as much as they can in order to meet an unknown expected amount.

In the end, faculty at all levels find that they must “publish or perish”, constantly having to research and publish their findings for fear of falling behind both their competitors (Davies and Felappi, 2017). In the case of gaining tenure or promotion to full professor, an academics’
competitors tend to be their coworkers, against whom they are compared by the administration (Landes et al., 2012). In the end, faculty “are trapped in an unhealthy form of competition whose essential problem is an overemphasis on publications as the main criterion” (Landes et al., 2012, p. 75). This focus on publishing means that, despite being located within a university, the amount and quality of one’s actual teaching is often of little concern (Gardner and Blackstone, 2013). Instead of being treated as teachers or researchers for knowledge’s sake, professors in modern universities are seen as article machines who churn out publications for the university to show off.

Despite the commonality of this focus on publishing, the way these expectations act out differ between universities. Amongst some universities, it is the overall quantity of publications that matters, while in others it is the “quality” (Gardner and Blackstone, 2013; Lutter and Schröder, 2016). “Quality” in publications is something that differs between universities and even individuals. For some universities, only SSCI-rated journals are considered when looking at an assistant professor up for tenure or an associate professor up for promotion (Lutter and Schröder, 2016). For others, it is the overall influence of journals are considered (Heckman and Moktan, 2019). These two sets of expectations have in turn led to the proliferation of two different types of publication problems.

For faculty who work in universities where the quantity of publications has greater weight than the quality of the journals they publish in, the need to publish in as many journals as possible pushes them to apply to any journal that will accept them (Lutter & Schröder, 2016). This lack of care in looking into the journals in which one is publishing has led to the growth of “predatory publishers”. Predatory publishers are publishers that, as long as the applicant pays the required fees, will publish anything in their journals (Dadkhah et al., 2016). This lack of quality
control means that these predatory journals are filled with “sub-par” works; those which either failed to get accepted into respected journals, or those which the authors did not consider good enough to even bother applying. Western Kentucky University professor Timothy Rich, in an attempt to test how easy it was to be published in a predatory journal, decided to test a journal who he suspected was predatory in nature (Rich, 2016). He sent to the publisher an article whose text was made up of the lyrics to Justin Timberlake’s “Sexy Back” copied and pasted multiple times until the average length of an academic article was reached. Soon after applying, he received a return email informing him of both his article’s acceptance and a surprise $200 fee. In this, the lack of care predatory publishers put into controlling what is published in their journals is shown. While predatory publishers often advertise themselves as respectable, with the journal Rich applied to describing themselves as “peer reviewed”, in reality they are little more than pay-to-publish machines.

For some professors, they may apply to these predatory journals with the expectations that they, while not well-known, are still fully-functional. The pressure to publish in as many journals as possible pushes them to ignore any red-flags that may signal a journal’s predatory nature. And there are generally signs that those careful enough would notice, such as spelling mistakes on homepages, unverified editors, and unusually low publication fees (Shamseer et al., 2017). Predatory journals often focus on emailing potential authors, boasting of being peer reviewed or rapid response times. Unknowing academics are wooed by promises of fast and easy applications, often in comparison to the costly, lengthy application processes of regular journals.

While some universities care mainly about the number of publications under their faculties’ belts, others will only take into consideration articles that have been published through respected journals. In these universities, publishing in well-known journals can act as
springboards to a tenured or higher position. In a 2018 study, it was found that publishing in a “Top 5” journal caused the greatest increase in one’s probability of receiving tenure; higher than publishing in non-T5 journals, having a high teaching performance, securing grants, AND publishing books (Heckman and Moktan, 2019). This has enabled journals that are well regarded in their fields to become picky who they publish, as there are many academics who wish to publish in them for clout, yet not enough spots for them all. This has resulted in publishers adding on large fees and longer response times, hoping to curb the number of “frivolous submissions” (Cotton, 2013). This is based upon the assumption that those who could not afford to either pay the fees or wait a long time to be accepted are more likely to submit “subpar” articles.

When deciding how to curb submission numbers, a journal might decide to focus on one aspect. For example, in 2005 the journal “Journal of Financial Economics” had a submission fee of $500 and a mean response time of 43 days (Cotton, 2013). Meanwhile, the journal “Econometrica” had no submission fee, yet an average response time of 122 days. While each journal chooses whether to charge high fees or not, the most common choice differs between fields. For example, high fees and short response times are common amongst finance and accounting journals, while low fees and high response times are common amongst economics journals. In general, long response times are a common occurrence in journals that have little to no submission fees, while “top-tier” journals tend to charge high fees in exchange for faster response times.

Those who work in universities that only consider “top tier” journals when looking at promotions or tenure applications are will only bother applying to these exclusive journals, as regular journals will not be worth the effort. As academics are pushed more and more to publish
as much as they can, the number of applications to these top journals increases. But the space available within these journals tends to remain constant, meaning that acceptance rates have dropped drastically (Heckman and Moktan, 2019). This means that academics within “quality-focused” universities are likely going to find themselves having to pay high submission fees to a multitude of journals that they are unlikely to be accepted to.

Whether university faculty publish with quantity or quality in mind ultimately does not matter, as the fact remains that both are the result of an increased focus on publishing within academia and both have resulted in an increased number of overall academic publications. In the end, “the more academics are pressured to publish, the more they tend to publish everything” (Landes et al., 2012). Some argue that this focus on publishing has ironically led to the decrease in quality of academic publishing itself (Lutter & Schröder, 2016). Previously, academics would only publish when they had found something of note. To publish something was to announce to the academic world that you had discovered something worthy of attention. But as the academic community and universities began to push for higher publication numbers, the importance of those publications decreased. Professors now are publishing just for the sake of publishing, rather than to actually inform others of a new discovery or idea.

So be it through the decreased importance of academic publications, the increased cost and response times of reputable journals, or the advent and proliferation of predatory journals, the modern obsession with publishing within academia has done much to harm and little of worth.

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Much to Harm and Little of Worth
The Overemphasis of Publishing in Universities and Its Repercussions

The pressure to publish in as many journals as possible in order to obtain tenure or promotion within universities has led to a multitude of negative effects, such as...

The existence of predatory publishers, who will publish anything as long as the fees are paid.

Dadkhah et al., 2016; Rich, 2016

Higher fees and wait times amongst reputable journals due to high demand.

Cotton, 2013

A decrease in the quality and importance of academic publications

Landes et al., 2012; Lutter and Schröder, 2016
Institutional Repositories as a Viable Open Access Platform

Samuel Titus

While no information that a library provides is free of cost to everyone involved in making it accessible, unnecessary barriers to information access are antithetical to librarianship as a discipline. Chadwell and Sutton (2014) find that “removing barriers to the free exchange of information” is the fundamental goal of librarians (p. 225). Klain-Gabby and Shoham (2016) find that “one important demand from the modern library is to provide maximal accessibility to online materials” (p. 170). Saini (2018) likewise testifies that “libraries have a long tradition of delivering information to all who need it” (p. 11). These conceptions of the field of library and information science (LIS) align with the principle of open access (OA), which in this paper will be construed as a condition wherein an individual is able to use scholarly communication that they have solicited from an information retrieval system, especially a library. Scholarly communication (SC) includes both formally published research (formal SC) and informally disseminated scholarly communication (informal SC). LIS-based OA initiatives will only receive as much support as libraries receive, but insofar as they have institutional support, LIS professionals can leverage institutional repositories (IRs) as publication platforms in financially sustainable ways to remove barriers to OA.

To begin, this paper will review the financial barriers to OA in formal SC and the concept of an IR. Then, it will describe the potential of IRs to facilitate OA to informal SC and formal SC. Next, it will present cost and authority as two expressions of stakeholder reluctance to implement IRs as a viable alternative to formal SC practices. Finally, it will address these
stakeholder concerns and posit that IRs are viable solutions to current barriers to OA in formal SC to the degree that IR stakeholders believe these barriers are in need of removal.

Many LIS professionals share the view that traditional models of formal SC are financially unsustainable, reduce the impact and utility of research, and instantiate unnecessary barriers to information access. Klain-Gabby and Shoham (2016) claim that “the high cost of digital information items prevents academic libraries from achieving their main goal, to supply access to a wide range of knowledge” (p. 172). Researchers frequently meet with paywalls barring access to research that has already been produced and funded. This frustrates both authors and potential readers: authors cannot reach as broad a readership as they would like, and readers cannot access information that they solicit from the libraries they patronize. Skyrocketing journal subscription costs lead libraries to cancel subscriptions to journals, exacerbating obstacles to information access (Panitch & Michalak (2005), p. 3). Panitch and Michalak (2005) still speak for many LIS professionals in saying that “the [scholarly publication] system as we know it is broken to the point that we can no longer carry out the daily business of the university” (p. 7).

Lynch (2003) marks the major advent of LIS awareness of IRs and explores the possibilities of IRs in the LIS field, including OA applications. Lynch (2003) maintains that “it dramatically underestimates the importance of institutional repositories to characterize them as instruments for restructuring the current economics of scholarly publishing rather than as vehicles to advance, support, and legitimize a much broader spectrum of new scholarly communications” (p. 5). It might be said that Lynch (2003) promotes the use of IRs for informal SC, but not for more formal SC. However, Lynch (2003) does not address the compatibility between scholarly publishing in IRs with the purpose for IRs advanced in the article. By virtue of
this omission, Lynch (2003) leaves a potential avenue for OA scholarly publishing undeveloped for others to build upon. IRs can both facilitate informal SC and OA alternatives for formal SC.

In continuity with Lynch (2003), Royster (2014) argues for the potential of librarians to open access to informal SC. Royster (2014) claims that “the ‘space’ where scholarly communications happens is increasingly digital and informal ...This ur-activity is more likely to be preserved, disseminated, and utilized through library publishing” than through traditional formal SC (p. 4). LIS professionals can and ought to make use of IRs to preserve and disseminate the “ur-activity” of scholars, which is of little commercial interest to anyone. For Nemati-Anaraki and Tavassoli-Farahi (2018), this digital ur-activity is simply too valuable to lose, and the increasing importance of facilitating the open sharing and management of such knowledge means “the creation of digital IRs is becoming a necessity” (p. 14).

The potential for IRs to be OA platforms does not end with informal SC. Park and Jiyoungh (2011) argue that informal channels of SC, like the IR, take on at least some of the functions of formal channels. Tracing publishing services provided by eight academic libraries that facilitate the registration, archiving, certification, and awareness functions of SC, Park & Jiyoungh (2011) argue that IR services “support digital content preservation activities,” including preservation of scholarly content. (p. 83). A preservation function implies access: if an information item cannot be accessed, it cannot be said to have been preserved, so by virtue of being venues for scholarly preservation, IRs by extension must become venues for scholarly access.

will instantiate this future. Myers (2016) interprets Lynch (2003) to say that the aim of an IR is "to create a collaborative partnership between faculty who create the scholarship and librarians, who act as stewards, curators, and disseminators of that scholarship to a world-wide audience" (p. 15). This all but implies that librarians take on traditional publisher roles in their management of IRs, positioning IRs as a platform for library publication services.

**Stakeholder Barriers to Adopting IRs for OA**

Although IRs can facilitate OA, Marsh (2015) observes that “the overall impact of institutional repositories is mixed” (p. 189). The primary barriers to adopting IRs arise from stakeholder concerns related to cost, and the perception that IRs do not meet faculty needs in the realm of formal SC.

Marsh (2015) does not see a way forward for IRs if they are not meeting their stakeholder needs. According to Marsh (2015), “issues in understanding the benefits from the end-user perspective” constitute the greatest barrier on the faculty-stakeholder side to adopting IRs (p. 167). Essentially, if faculty or other users do not see IRs as meeting their publication needs, then they will not consider them viable publication platforms. As lack of use would defeat the purpose of an IR to begin with, it would seem that the most pernicious barriers to the adoption of IRs in Marsh’s (2015) account seem to relate to faculty’s concerns about the professional consequences of choosing to publish in an IR.

Neville and Crampsie (2019) illustrate the disparity between what faculty-stakeholders want and what IRs often represent to them perhaps the most strikingly. Although academic librarians have paid a lot of lip service to the idea of OA publishing, Neville and Crampsie’s (2019) survey responses of 215 academic librarians in North America reveal that even for
academic librarians “the top criteria for journal selection were the fit or scope of the topic and whether a journal is peer-reviewed. Once those conditions are met, librarians begin to consider secondary features, such as publisher reputation and open access options” (Neville & Crampsie (2019), p. 603). Surely non-librarian faculty cannot be expected to prioritize OA over other dissemination concerns when academic librarians themselves—whose professional purpose it is to remove unnecessary barriers to information—by a wide margin do not. In fact, only 6% of participants conveyed that free OA publishing was their top concern when choosing a journal (Neville & Crampsie (2019), p. 598).

Although considered of secondary importance among Neville and Crampsie’s (2019) study participants, Mrva-Montoya (2017) finds that platform reputation is critical for motivating academics to publish with it. Like Marsh (2015), Mrva-Montoya (2017) insists on the importance of meeting stakeholder needs, the most important of whom in the context of a university press are “academic authors” (p. 225). For Mrva-Montoya (2017), IRs can function as university presses, and stakeholders want to know that a university press (or an IR operating as a university press) enjoys reputation, prestige, and reach (pp. 232, 235).

An IR is only as good as its institutional support, and a faculty-stakeholder perception that the IR does not enjoy the support of its institution will undermine the IR’s reputation, prestige, and reach. Cost represents a significant stakeholder barrier from the university side. Because IRs are by definition vehicles for long-term preservation, commitment to establishing an IR “should not be made lightly” (Lynch (2003), p. 6). Any wavering in funding or other support for an IR subsequent to its establishment may endanger many years of faculty and student work, as well as the university’s image and legacy.
Marsh (2015), Neville and Crampsie (2019), and Mrva-Montoya (2017) jointly demonstrate that to become a viable OA platform, the professional value of publishing in an IR must be apparent to faculty stakeholders. Furthermore, the perception among faculty stakeholders that an OA IR lacks scholarly authority relative to other venues seems to beleaguer the adoption of IRs for formal SC more than anything else. At the very least, Lynch (2003) points out that institutions must be financially committed to supporting their IRs.

**Overcoming the Obstacles to Adopting IR**

While Marsh (2015) contends that IRs may not be meeting stakeholder’s publication needs, Royster (2014) claims that traditional avenues of formal SC may not be meeting these needs either. Royster (2014) says, “Publishers are not currently serving the communications needs of the faculty, library, and university; they are serving their own needs — for survival, for profit, and for future security” (p. 2). At the same time, Saini (2018) observes that while challenges for IRs are varied, they have evolved a high quality of service (p. 10-11). Chadwell and Sutton (2014) argue that IRs have the potential to not only carry out the archival function of formal SC, which Park and Jiyoung (2011) realize, but to carry out other formal SC functions as well: “[IRs] can be both academically rigorous (peer-reviewed) and economically attractive at little or no cost to the author” (p. 226). This broader vision for an IR is possible because an IR represents more than technological innovation; an IR can not only open previously unthought-of modes of (informal) SC, but has the potential to take on traditional functions of formal SC.

Chadwell and Sutton (2014) observe that one repository—ArXiv—already provides sole access to high-impact papers (p. 228). While Chadwell and Sutton (2014) do not believe that IRs will entirely supplant traditional publishers, ArXiv testifies to their ability to facilitate OA while
reducing article processing charges sometimes levied on authors for publishing OA. The authors suspect increasing recognition that journals gain prestige chiefly from their most-cited articles will incentivize authors seeking to reach a larger audience to publish in IRs (p. 231).

Countering concerns over inconsistent peer review in IRs, Myers (2016) states that some IRs focus on formal faculty scholarship (p. 16). This demonstrates along with Chadwell and Sutton (2014) that properly managed IRs are capable vehicles for formal scholarship. Given Chadwell and Sutton’s (2014) research, it seems that a repository modeled after ArXiv can meet the stakeholder needs identified above. Like ArXiv, such a repository could be hosted or sponsored by a federation of universities in subjects besides physics and mathematics. Indeed, Lynch (2003) suggests that “federating” in any number of ways may be a fruitful turn in the development of IRs (p. 7). Chadwell and Sutton (2014) observe that “ArXiv offers an extremely important economic model through its underlying partnership of sponsors” (p. 229). A collection of disciplinary repositories underwritten by a federation of universities may help divide the overall cost of IRs and increase faculty buy-in by eclipsing a home university’s stamp with an inter-university disciplinary focus.

While the costs of establishing and maintaining an IR are not uniform, it may also be possible for universities to reduce IR operating costs by focusing on material created in-house using hybrid models of for IR publishing services. In addition, there may be long-term financial benefits to institutions that invest prudently in IRs. Chadwell and Sutton (2014) argue for the financial soundness of added IR duties on the grounds that other duties, as well as acquisitions expenses, can be dropped in the process of transition (p. 233).

Royster (2014) says that “in 2012, Reed Elsevier had revenues of $8.3 billion...and they turned a nearly 40% profit on that figure” (p. 1-2). In principle, producing formal SC in-house
could be around 60% of the costs of subscriptions to commercial publishers like Elsevier. There is also a certain intuitive sense to what Chadwell and Sutton (2014) call “a DIY environment where libraries...can create publishing platforms that take back some control of their intellectual capital on favorable economic terms” (p. 230). After all, as Panitch and Michalak (2005) note, “universities find themselves in the position of paying more than once for the same scholarly output ...Nor do these expenditures always guarantee the long-term archiving and accessibility of electronic journals should a publisher choose no longer to offer some or all of its content” (p. 4). Not only do universities end up paying twice for research by the time it’s accessible in their libraries, but oftentimes universities are not even paying twice to own this scholarly content, but merely to lease it. To engage in in-house publishing could mean not only decreasing the total cost of scholarship to the library and its users, but also taking economic control of scholarship.

However, universities do not always pursue the most fiscally sound options. Saini (2018) notes that sometimes “it is up to the librarians how they generate funds for implementing the IRs” (p. 5). Enterprising librarians in a tight situation might consider Mrva-Montoya’s (2017) hybrid model. Mrva-Montoya (2017) advocates OA university publishing that hedges against the exigencies of uncertain revenue sources; such a model recognizes “that having a publishing program that is simultaneously cheap, fast, and high quality is logistically impossible” and seeks flexibility in negotiating the best balance between these ideals (p. 238). On a case-by-case basis, fledgling IRs can negotiate what funding model makes the most sense to meet author needs and OA goals, sometimes splitting the costs across several parties or employing cost-saving measures such as indifference to “‘camera-ready’ manuscripts” (p. 235-236).

To the extent that the economy of formal SC precipitates limited access inimical to the mission and goals of LIS, the LIS profession ethically binds its practitioners to pursue means to
secure OA for the populations they serve. An SC platform that meets stakeholder needs will economically incentivize OA publishing. This paper has endeavored to show that LIS professionals and research stakeholders have a very real opportunity to leverage IRs for just such a platform. Whether or not IRs in particular will prove to be the key to formal, OA SC, OA solutions are only as real as initiatives to address the problems we recognize.

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http://dx.doi.org/10.1016/j.lisr.2016.04.004


Serials Cost Relative to Consumer Price Index (1983-2003) ¹

For outpacing inflation, journal prices reflect astronomical profit margins more than they reflect the cost of publishing scholarship.

Platforms addressing unsustainable publishing models exist, but these solutions are only as real as our initiatives to fix the problems we recognize.

But even librarians—who champion a change to this system—arent swayed by open access (OA) alone...

Do Librarians Publish OA? ³

1 Source: Pountek & Michalak (2005), p. 1
2 Source: Rovira (2014), pp. 1-2
3 Source: Naf is & Crammple (2019), p. 598

Infographic made using Piktochart
The Necessity of Sci-Hub and Guerilla Open Access Initiatives
Anne Windholz

Leveraging pirated libraries like Sci-Hub are necessary acts of civil disobedience, and will continue to be so until the publishing industry is radically reformed. This paper will introduce readers to Sci-Hub with issues pertaining to the legality and illegality of Sci-Hub, and why it is necessary regardless. Finally, this paper will tackle conversations about what the future of academic scholarship looks like and how the publishing industry needs to change before sites like Sci-Hub would ever become unnecessary.

Sci-Hub is the “largest and best known” of pirated academic paper sites, though downloading of its articles is potentially illegal (Hoy, 2017). Containing millions of free pirated scholarly papers, Sci-Hub is used by scholars and everyday people alike who are unable to access academic papers due to the high subscription costs set by the publishing industry. Libraries and universities need to be aware that patrons are using Sci-Hub to get free resources, and they must consider what this means in relation to continuing expensive subscription services. Sci-Hub is not a “discovery tool,” and users who access it must know how to identify exactly what they are looking for by title or DOI (Hoy, 2017). Sci-Hub works by gaining login credentials to academic publication websites so that they can be downloaded and shared freely on Sci-Hub (Ojala, 2016).

Sci-Hub was created by computer programmer Alexandra Elbakyan in her home state of Kazakhstan. Sci-Hub is the outward facing part of the pirate library, while the partner Russian based organization Library Genesis (LibGen) stores the internal copies of the academic papers to
be freely distributed by Sci-Hub. If Library Genesis does not hold a copy of the work, Sci-Hub goes through its list of credentials to subscription sites (donated or also pirated), to attempt to find a copy of the work, and then store it in Library Genesis. Library Genesis routinely makes copies of its database, so that if it is shut down, it can easily repopulate the material on a new website (Hoy, 2017).

**Legality**

The legality of Sci-Hub depends on jurisdiction, but “many Sci-Hub users are violating copyright law,” (Hoy, 2017). In October 2015 Sci-Hub was sued by commercial publisher Elsevier. The founder of Sci-Hub, Elbakyan, established strong opposition to the charges, and gained international attention (Elsevier Inc. et al v. Sci-Hub et al Case No. 1:15-cv-04282-RWS). Elbakyan’s arguments centered around the ideas that “scientific knowledge should be freely accessible to everyone,” (Bodo, 2017). Elbakyan also laid out that the current for profit business models of journal publishers is “not only unethical, but it is also highly damaging to science and society,” (Bodo, 2017). Elbakyan seeks to remedy the unethical practices of journal publishers by providing “blatantly illegal services,” as a form of civil disobedience (Bodo, 2017).

The New York judge ended up ruling in favor of Elsevier, stating that “Sci-Hub infringes on the publisher's legal rights as the copyright holder of its journal content, and ordered that the website desist,” (Bohannon, 2016). Sci-Hub’s domain name was seized soon after that, however, Sci-Hub quickly created a new domain name and the ruling had little impact on usage of the website that year (Bohannon, 2016).

While there is clear overlap with the Open Access (OA) movement in initiatives such as Sci-Hub, the thing that differentiates Sci-Hub from other OA initiatives is legality. Where the
OA movement is seeking alternatives to the traditional publishing industry in the long run, Guerilla Open Access (GOA) seeks to replace the traditional publishing industry immediately. The terminology of GOA was established by internet activist (“hacktivist”) and co-founder of Reddit, Aaron Swartz. As Bodo (2017) notes, initiatives such as Sci-Hub fit under the category of GOA and involve “shadow librarians” which intentionally engage in breaking copyright law. Shadow librarians and activists such as Elbakyan face “immense personal, legal, financial risks” and are thus “highly protective of themselves, their communities, their individual identities,” (Bodo, 2017). Elbakyan herself has been charged by Elsevier with “copyright infringement and illegal hacking under the U.S. Computer Fraud and Abuse Act,” (Bohannon, 2016).

It is not just activists and shadow librarians who are at risk legally, but also academics who merely support their initiatives in theory. In 2016, the Association of American Publishers (AAP) effectively “censured” an academic librarian for his comments about Sci-Hub at an American Library Association (ALA) conference in 2016 (Peet, 2016).

This paper seeks to counter fears about legality with another ethical direction: Hoy (2017) states that “if Sci-Hub can improve medical care or save lives, is there a moral obligation to make that information available? Do doctors have a moral obligation to use that information, even if it is obtained via copyright infringement?”

**Necessity**

The creator of Sci-Hub, Alexandra Elbakyan wrote a personal blog entry (2017) seeking to clear up misconceptions about her project, and explain a little more about her philosophy. She notes that “the system has to be changed so that websites like Sci-Hub can work without running into problems. Sci-Hub is a goal, changing the system is one of the methods to achieve it.”
In 2016 Elbakyan responded to nearly every question asked by journalist John Bohannon about Sci-Hub, excluding her current location due to privacy and legal concerns. During their conversations Elbakyan reported Sci-Hub received more than 200,000 requests per day between a sample time period of September 2015-February 2016 (Bohannon, 2016; Peet, 2016). As for users of Sci-Hub, the majority during this time period came from “developing countries outside the United States and the EU,” (Peet, 2016). However, some of the most intense use of Sci-Hub came from US and European universities that have traditionally paid the subscription costs for the publications. While “more than 50 percent of respondents reported using [Sci-Hub] because of lack of access to journal content... approximately 17 percent said they did so out of convenience, and another 23 percent said they used Sci-Hub on principle--mostly to protest publishers' profits from research users believe should be accessible to all,” (Peet, 2016).

The research paper by Mejia et al. (2017) is an incredibly useful in its study of “use, knowledge, and perception of the scientific contribution of Sci-Hub in medical students from Latin America.” The study finds that only 19.2% of the students who participated in the study knew what Sci-Hub was, and they used it about twice a month on average (Mejia et al., 2017).

Bohannon (2016) notes three motivations for use of Sci-Hub: access, ease of access and “text mining.” The first motivation, access, highlights the issue that academic papers are expensive and unreachable without connection to a university, or lots of money from one’s own pocket. To founder Alexandra Elbakyan, it’s more than just economic injustice, and is in fact about human rights of freedom to information and scientific advancement (Ojala, 2016). Elbakyan believes the mission of Sci-Hub transcends the publishing industry, and that because publishers don’t pay authors, author’s works should be available to the public for free (Ojala, 2016; Himmelstein, 2018).
The second motivation, ease of access, is utilized by scholars even if they already have access to subscription publications via their universities (Bohannon, 2016). For example, immediate links to PDFs of articles are provided on Sci-Hub, whereas scholarly subscription journals accessed through university libraries require a few more hoops and sometimes subscriptions may be expired.

The third motivation for Sci-Hub use is “text-mining,” which is the “use of computer programs to analyze large collections of documents to generate data,” (Bohannon, 2016). This means that scholars who are text-mining are downloading massive amounts of papers which can most easily and cheaply be accomplished with a vehicle such as Sci-Hub. However, Sci-Hub is not a perfect vehicle for this process and the unstructured PDF formats of the pirated papers are not ideal for programs to text-mine with. However, Sci-Hub provides a testing ground for researchers to try out different hypotheses very quickly, without having to spend money or navigate university libraries subscription publications. Bohannon (2016) notes that the larger issue from text-mining through Sci-Hub is that “the data source is illegal.” Insights gained from text-mining on Sci-Hub can then be applied legally to research via subscription publications.

**Future of the Publishing Industry**

While some scholars worry Sci-Hub will “make subscription costs get higher, as publishers lose money with its existence,” (Ojala, 2016) it’s important to realize that there is also a push toward open access publishing, where reader authentication and subscriptions become unnecessary. Cabanac (2016) introduces the term "bibliogift" which is an academic paper shared freely through a text distributing platform like Sci-Hub. Some scholars believe the real value of
platforms such as Sci-Hub is using the site “as a case study for asking our faculty and students larger questions about responsibility and sustainable change,” (Crissinger, 2017).

It seems that academic pirate libraries are not going anywhere anytime soon, as Bodo (2017) notes: “As long as this equality is not offered, either voluntarily by authors and publishers, or through statutory means by governments, shadow libraries will play a role in the domain of scholarly communication”. As noted by Sci-Hub founder Elbakyan, even if domain names are shut down, sites will easily repopulate under new domain names. In 2016 Elbakyan noted that the entire 50 million papers available on Sci-Hub had been copied many times by many people and the papers would not need to be downloaded again from subscription sites, (Bohannon, 2016). It is likely that movements like GOA and OA will continue to build momentum in the coming years, with academic sites like Sci-Hub helping to lead the charge.

Since Sci-Hub is a relatively recent phenomenon, and since it takes a few years for papers to start getting cited, it seems evident that more research will be available in years to come. Effort was made to include a few other pieces in this paper, but access was denied due to paywalls. Thankfully there were many open access publications on this topic, however paywall issues further underscore the need for sites like Sci-Hub in academic circles, and the general public. This paper emphasizes Sci-Hub’s place in society concerning its legality, necessity, and what it means for the future of scholarly communication. Leveraging pirated libraries like Sci-Hub are necessary acts of civil disobedience, and will continue to be so until the publishing industry is radically reformed.

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SCI-HUB
LEVERAGING PIRATED ACADEMIC LIBRARIES

WHAT IS SCI-HUB?
Sci-Hub is the largest and best-known of pirated academic paper sites with millions of free scholarly papers. Sci-Hub was created by Russian computer programmer Alexandra Elbakyan.

TWO SIDES OF THE SAME COIN

LEALITY
Open Access
- Legitimately follows copyright law
- Fair use
- Ethical: A way to work within the established and legal system to make information available

Guerrilla Open Access
- Ignores and breaks copyright law
- Crews: Sci-Hubs
- Ethical: Deeds of disobedience in an attempt to make all information available now

WHAT IS SCI-HUB USED FOR TODAY?

SOURCE