

Sarah K. Lippincott and Joan K. Lippincott, "Faculty Research and Scholarly Communication" (preprint), *Academic Librarianship Today*, Todd Gilman (editor), Lanham, MD: Rowman & Littlefield, 2017, p. 69-81.

Chapter 5: Faculty Research and Scholarly Communication

PREPRINT

Sarah K. Lippincott

Library Publishing Coalition

Sarah is a librarian with a background in scholarly communications and the humanities. She currently serves as Program Director of the Library Publishing Coalition (LPC), an independent, community-led membership association that supports an evolving, distributed range of library publishing practices. She earned her MSLS from The University of North Carolina at Chapel Hill and her BA in the College of Letters and French Studies from Wesleyan University. Before joining the LPC, she worked as an independent communications consultant for The Association of Research Libraries (ARL), SPARC, and the open access journal *eLife*. Her professional interests include the intersection of scholarly communications and undergraduate teaching and learning, digital scholarship, and how librarians can facilitate new forms of scholarly inquiry.

Joan K. Lippincott

Coalition for Networked Information

Joan serves as Associate Executive Director of the Coalition for Networked Information (CNI), a joint program of the Association of Research Libraries (ARL) and EDUCAUSE. Joan is a widely published author and frequent conference speaker. She is past chair of the Association of College & Research Libraries (ACRL) New Publications Board, serves on the boards of the New Media Consortium, *portal*, *The Reference Librarian*, and the Networked Digital Library of Theses and

Dissertations (NDLTD), and on the advisory board of the *Horizon Report* and the *Journal of Learning Spaces*. Prior to joining CNI, Joan was a librarian at Cornell, Georgetown, and George Washington universities, and SUNY Brockport. Joan received her PhD in higher education from the University of Maryland, an MLS from SUNY Geneseo, and a BA from Vassar College.

Introduction

The production and dissemination of knowledge lie at the heart of the university mission. Scholars in all disciplines conduct and communicate research in order to advance knowledge in their fields, to contribute to solving society's challenges, and to further their own intellectual curiosity and career aspirations. We commonly refer to the set of activities involved in this process of creation, evaluation, and sharing of scholarly research outputs as scholarly communication.¹ Libraries and librarians are integral to this process. They act as curators and stewards of the scholarly record, as advisors to faculty and students on the publishing process, and as advocates for systemic changes that improve access to the products of research.

As information curators and collection developers, librarians must be attuned to publishing trends as well as the research needs of the scholars at their institutions. As scholars produce and publish more and more content through informal and formal channels, librarians play an even greater role in assisting scholars with perceived information overload, helping to identify and make available relevant, high-quality content. Indeed, as the Association of College & Research Libraries (ACRL) notes, "the history of the library and the principles of librarianship is the history of the development of strategies to cope with the economics of and increasing noise in the scholarly communication system, in the interest of ensuring selectivity within, by, and for this system."² The economics of publishing has an equally acute influence on collection

development. Escalating journal prices have far-reaching implications for libraries, many of which cannot afford to purchase or subscribe to all the content their researchers require.

While librarians' roles in scholarly communication may be most prominent in research universities, all higher education institutions have interests in the scholarly communications system. For example, the economics of that system have an impact on what types of readings may be made readily and freely available for courses. In addition, many librarians believe that an understanding of such concepts as the nature of scholarship as a conversation or the ways in which the value of information is construed from various sectors and perspectives should be part of the education of undergraduate and graduate students in all types of institutions; these precepts are reflected in the Association of College & Research Libraries' Framework of Information Literacy.³ Faculty in some four-year institutions and community colleges may not face the same pressure to publish as those in research universities, but expectations may vary greatly among such institutions. In many of the highly selective liberal arts colleges, faculty are expected to have a publications record for tenure review and promotion.

Given the profound technological and economic changes disrupting the publishing system, librarians have become increasingly invested in transforming the scholarly communication system to better serve the needs of researchers and the academy. Librarians working in the field of scholarly communications advise faculty on authors' rights and publishing options, advocate for more open and accessible scholarship, and have even adopted the role of publisher in their own right. Librarians' roles with respect to scholarly communication are consequently manifold, "making sure [scholars] have robust online collections; creating research environments (e.g., collections and tools) that will help faculty and graduate students create the scholarship of the future; finding ways for the institution to take back more control and

lower the cost of scholarship; and developing infrastructure and tools to enable multimedia.”⁴ In addition, many academic librarians conduct research themselves and publish in their field, whether in librarianship or in other disciplines related to their subject expertise.

This chapter will explore in detail how scholarly communication shapes librarians’ roles as collection developers, advisors, and advocates. Specifically, readers will learn about the relationship of scholarly communication to research expectations of faculty in university, college, and community college settings and on library collection development priorities. Readers will also be introduced to the history, purposes, and processes of scholarly publishing and its discontents, with special attention to the current debates in research evaluation, peer review, and authors’ rights.

Scholarly Communication: Origins and Functions

When we talk about scholarly communication, we are fundamentally talking about scholarly *publishing*, the business of making scholarship public.⁵ Scholarly publishing serves a dual function. Firstly, it facilitates the dissemination and advancement of knowledge within a scholarly community and the broader public. Secondly, it serves as a way to evaluate the contributions of individual scholars to their field.

Our modern concept of scholarly communication finds its roots in the seventeenth century, when Francis Bacon envisioned “a single [scientific] project that could be carried out only by a community of observers and experimenters who were conscious of their common goals.”⁶ These scientists developed a network of communication, relaying their individual findings within a network of scholars in order to advance common knowledge of scientific phenomena. Letters written between individual researchers eventually gave way to the first journals, published by early scholarly societies.⁷ In the nineteenth century, the monograph

emerged as a vehicle for publishing long-form scholarship. Though modern scholars benefit from a wide range of formal and informal channels for sharing their work, journals and monographs (i.e., scholarly books covering a small area of a field of learning) remain the primary modes of scholarly communication.

Indeed, while technology has transformed many aspects of modern publishing, the fundamental model of scholarly communication remains largely unchanged from its origins. The network of scholars Bacon envisioned closely resembles our modern concept of the invisible college,

a set of interacting scholars or scientists who share similar research interests concerning a subject specialty, who often produce publications relevant to this subject and who communicate both formally and informally with one another to work towards important goals in the subject, even though they may belong to geographically distant research affiliates.⁸

These informal networks facilitate communication among colleagues in a discipline and contribute to the advancement of knowledge within a specific field. Meanwhile, formal publication in peer-reviewed journals (for the sciences, social sciences, and the humanities) and publication of a monograph from a highly regarded press (for the humanities and some social sciences) remain exceedingly important for advancing scholars' careers and for communicating knowledge to a broader public.

When a scholar is ready to formally share her work, she will submit a manuscript to an appropriate publisher, typically seeking out a prestigious and well-known journal or press.

Publishers fall into two general categories: commercial publishers and non-profit publishers. Large corporations dominate the scholarly publishing marketplace. Some of the most influential, such as Elsevier, Springer, Taylor and Francis, and Wiley-Blackwell, control a large and increasing share of the scholarly publishing market.⁹ Non-profit publishers, often referred to as “mission-driven” publishers, include university presses,¹⁰ scholarly societies,¹¹ and libraries.¹²

Scholarly publishers carry out three primary functions: vetting, improvement, and discovery.¹³ Vetting refers to the process of determining a manuscript’s quality, validity, and impact. Editors serve as the first gatekeepers in this process. Authors submit manuscripts (or proposals for manuscripts) based on a publisher’s prestige and expertise in the author’s subject area or in response to a specific call for papers. Editors may also solicit content directly from authors on specific topics. Editors select content to publish based on its scholarly merit, its relevance to the publisher’s specialization, and its potential market, among other factors. Once an editor determines that a manuscript or proposal has merit, she immediately sends it out for peer review. Peer reviewers, typically other faculty members with expertise in the discipline, ensure that the research methodologies employed are sound and assess the significance of the new research to the field. They may make specific or general recommendations to the author to improve the work. We will discuss the process of peer review in more detail in the following section. After peer review, the author and editor ready the manuscript for publication. Especially in monograph publishing, editors may work with authors before and after peer review to improve structure and language. When the author and editor have finalized the manuscript, it enters the production phase, wherein it is prepared for printing or electronic publication. First, copy-editors ensure that the work contains no errors. Next, the content is typeset, that is, prepared for printing

or for conversion to its final electronic format. Finally, publishers distribute and market the content, ensuring that it reaches its audience.

Formal publication remains imperative to a successful academic career in a research institution, whence the dictum, “publish or perish.” However, scholars also benefit from an increasingly diverse array of channels for making their work public, including blogs, social media (including general-interest microblogging services like Twitter as well as specialized social networks for academics like Academia.edu), preprint repositories, and e-mail lists and forums. In recent years, technology and the scholarly communication system have evolved to the extent that “the boundary between formal and informal communications may be blurring in some areas (for instance, un-refereed authors’ original manuscripts . . . are increasingly cited in formal publications, while journal articles are becoming more informal and blog-like with the addition of reader comment).¹⁴ Librarians have joined faculty and others as advocates for and leaders of changes to scholarly publishing that reflect this evolution. They envision a future for scholarly publishing that effectively leverages the latest technologies, that espouses sustainable economic models, and that creates a more equitable environment for both producers and consumers of scholarship.

Peer Review

Peer review is a cornerstone of scholarly publication.¹⁵ Through a peer review process, a journal or book editor seeks comments on a manuscript, often through a structured form that may solicit evaluations on such criteria as the quality of the literature review, the suitability of the methodology used, the quality of the writing, and the importance of the research to the field. Journal editors and monograph publishers usually maintain a list of potential reviewers who are

qualified to evaluate manuscripts on specific topics. In the traditional scholarly publication review process, the author of the manuscript will receive the reviewers' comments but the reviewers will remain anonymous to the author. In many cases, the reviewers will not know the identity of the author whose manuscript they are evaluating either; this type of double blind peer review is intended to protect authors from preconceptions by the reviewers. However, in some fields, there are such a small number of specialists, each of whom may have a signature viewpoint, that an author may be able to guess the identity of a reviewer of her or his manuscript. In a single blind form of peer review, the reviewers know the identity of the author whose manuscript they are reviewing but the author will not be provided with the identities of the reviewers. At times, an author may believe that a reviewer's critique is biased and unfair, and the author will usually have an opportunity to respond to the critique and an editor will make a final decision on acceptance of the manuscript. In the case of monographs, both the author and editor may know each other's identities. Studies have demonstrated that when reviews are not "blind," and a reviewer's name is given with her or his review, it does not dilute the quality of the reviews. Some see that "un-blinding" the review process may lead to increased accountability, fairness, and transparency.¹⁶

While the peer review process seeks to ensure the quality and validity of published literature in academic fields, it does not always meet the expectations of the scholarly community. In recent years, there have been a number of retractions of articles or statements in articles that have resulted from investigations into scientific fraud; in these cases the deception was not caught through the initial peer review process, prior to the publication of the articles.¹⁷

Another concern with the traditional peer review process is that it can significantly delay the publication of articles and books. Writing reviews can be a time-consuming process,

involving reading the manuscript, possibly checking related work, reviewing methodologies and conclusions, and then writing a clear critique. The system relies on researcher volunteers for the reviews (usually multiple reviews for each article or monograph), and it can be difficult to enforce deadlines for submission of reviews. Some researchers such as Paul Ginsparg of Cornell University and a founder of the arXiv preprint repository, a highly regarded site where scientists post papers for comment by their peers prior to submitting them to a journal for formal peer review, suggest that a two-tier peer review model, in which the initial stage would quickly weed out low-quality papers, leaving a smaller number for full peer review, would make the process more efficient.¹⁸

In today's digital environment, a number of scholars and scholarly societies have called for rethinking the nature and the role of peer review. One proposed innovation is crowd-sourced peer review, by which authors would post papers for anyone to comment on and some indication of quality would then be available to readers prior to a full peer review process. Stevan Harnad, a well-known writer on digital publishing, notes that for the premise of crowd-sourced peer review to work authors would have to be willing to post their articles openly, there would need to be sufficient response from knowledgeable reviewers, and the resulting efforts would need to be sustainable and navigable to be of use to the community of scholars. In his view, "crowdsourcing will provide an excellent supplement to classical peer review but not a substitute for it."¹⁹

Expectations of Research

In research universities, selective liberal arts colleges, and medium-sized universities aspiring to higher ratings in various ranking systems, the output of faculty research, specifically in peer-reviewed publications, is the coin of the realm, particularly when it comes to promotion

and tenure. However, specific research and publication needs and practices vary significantly across disciplines.²⁰

Faculty, especially those in the sciences, are expected to both bring in grant funds and publish, ideally in prestigious journals. Humanities faculty rely on a small number of public agencies such as the National Endowment for the Humanities (NEH), the National Historical Publications and Records Commission (NHPRC), and Institute for Museum and Library Services (IMLS), and private funders such as the Andrew W. Mellon Foundation, to assist with their research costs, such as trips abroad to consult primary sources, interview individuals, or visit historic sites. While research and development expenditures on academic humanities research increased a remarkable 75% between 2005 and 2014, the total amount spent was only a paltry .06% of the research and development expenditures for the sciences.²¹ While humanities faculty may publish in journals, many of their disciplines still view monograph publication as the desirable goal for faculty. In the social sciences, both article and monograph publication are standard. Social scientists utilize a variety of funding sources, from local government to private agencies to international organizations. However, U.S. federal funding has not been centralized in a small number of agencies as it has been for the sciences and humanities. Libraries often offer workshops or personalized consultations to assist faculty in identifying sources of funding in their disciplines.

In community college settings, publishing is typically not as important for faculty to achieve promotion and tenure. The rationale generally seems to be that these faculty specialize in teaching and have higher teaching loads than their four-year college and university counterparts. However, many faculty may be conducting applied research in their field and some may perform research based on interest rather than requirement. An example of applied research could be an

English faculty member who studies various pedagogical methods for enhancing student achievement in a composition course as compared to an English faculty member in a research university who would typically conduct highly specialized studies in literary history, literary theory, or a particular era (e.g., the Renaissance or Modernism) or genre of literature (e.g., poetry, drama, or fiction).

Expectations for publishing vary among small and liberal arts colleges. Some of the highly selective liberal arts colleges have similar publication expectations of their faculty as research universities. Others may be more similar to community colleges in their emphasis on demonstrated effectiveness in teaching and learning as carrying more weight in promotion and tenure decisions than publication records.

The expectations of how much to publish and in what types of publications are set by both the institution with which the faculty member is affiliated and the norms of the academic discipline. Many scientific and social science fields require their scholars to publish a number of journal articles in the years prior to tenure review. In the humanities, it is widely perceived that a junior faculty member on the tenure track must publish a monograph by a reputable press in order to achieve tenure, and this is also the case in some social science fields.

In addition to the number of publications by an author, many promotion and tenure committees, particularly in the sciences, use other metrics to evaluate the significance of the contribution of authors to the literature. For example, the number of times an article has been cited by others can serve as a measure of the article's influence in the discipline, and a journal whose articles are cited more than others can be viewed as having more influence or prestige than others in the field. The journal impact factor, developed by the Institute for Scientific Information (ISI), now Thomson Reuters, constitutes "a measure of the frequency with which the

‘average’ article of a journal has been cited in a particular year or period.’²² When faculty members submit a portfolio of information for tenure or promotion review, they will often cite the journal impact factor of the journals in which they have published to demonstrate the importance of their contributions.

At least two other systems of measuring impact have gained traction in the scholarly community. One is the h index, developed by J. E. Hirsch, which provides a formula for calculating citations of articles by an author over time, yielding an index number.²³ The Eigenfactor constitutes another measure, using an algorithm to rank journals within an academic network of citations.²⁴

The emerging field of altmetrics has also garnered attention among librarians and researchers. Proponents of altmetrics – new forms of measuring the impact of scholarly output – contend that these measures allow one to gauge more quickly the influence of a publication, take into account citation of publications in a wide variety of digital contexts, legitimize all types of scholarly output, and encourage a focus on public engagement.²⁵

As librarians encourage faculty to publish their articles under the open access model, they may wish to guide faculty on that path by pointing to studies such as one demonstrating that open access articles have higher citation numbers than non-open access articles published in the same journal.²⁶ However, a subset of open access journals do not have much stature in their fields,²⁷ and librarians can advise junior faculty on legitimate places to publish their work.

Co-authorship can also affect how review committees evaluate a publication. When we look at issues related to co-authorship, we see striking disciplinary differences. Much of the scientific journal literature is co-authored. In some fields, this has gone to an extreme: the 2016 article announcing confirmation of a prediction regarding gravitational waves in Einstein’s

theory of relativity listed more than 1000 co-authors.²⁸ Individuals in the library and publishing fields are working on a taxonomy for identifying the specific role an author played in such a massively multi-authored article.²⁹ In the social sciences, co-authorship on a much smaller scale is common; however, a recent study by a Harvard graduate student found that when a woman co-authors an article in economics the benefit to her career prospects will be less than half that accorded to men.³⁰ Single authorship is still considered standard in the humanities and may be one of the problems in the acceptance of new forms of digital scholarship in those fields. Since teams develop almost all digital projects, works produced in digital humanities generally have multiple authors.

A variety of new forms of scholarly outputs take advantage of the affordances of new technologies. For example, researchers in the fields of art history, history, and archaeology now create digital representations of a variety of buildings and excavation sites, sometimes in 3-D.³¹ In the sciences, the human genome project³² and the Sloan Sky Survey,³³ whose underlying data can be used to create 3-D maps of the universe, exemplify large data collections to which many scientists have contributed. Researchers who develop these data representations as well as others can employ the data to examine new sorts of research questions. Faculty working on digital projects have expressed concern that promotion and tenure committees will not give their outputs due consideration compared to outputs in traditional forms. Some scholarly societies have taken up this issue, and the Modern Language Association (MLA), the highly regarded membership society for scholars in language and literature disciplines, has published guidelines for the evaluation of digital projects.³⁴ The question of earning credit for new forms of scholarship manifests itself in the sciences in relationship to products such as data sets, tools, or software, which may not be given the same weight as journal articles.

Implications for Libraries

In connection with their research, faculty may have contact with academic librarians with a variety of specialties, including subject liaisons, special collections, data and GIS services, reference, and access services. Many academic research libraries and those in highly selective liberal arts colleges now employ one or more scholarly communications librarians who offer consultations on intellectual property, repositories, and a variety of issues related to publication in the print and digital environments.³⁵

Use of publications owned and licensed by the library continues to be a central concern of libraries in support of the research activities of faculty. The nature of publications most used in different disciplines impacts the types and quantity of purchases of and licenses for materials. Most academic research libraries spend the majority of their acquisitions budget on licenses for or subscriptions to journals, primarily e-journals. As journal prices rise and acquisitions budgets remain relatively flat, the proportion of the budget spent on monographs, particularly in the humanities, diminishes. The Association of Research Libraries (ARL) reported that for its members, while monograph expenditures increased 71% during the period 1986-2011, serials expenditures increased 402%.³⁶ At this point there seems to be general acceptance of digital versions of materials for journal content; faculty in the sciences, who rely most heavily on the journal literature, often access this content remotely and seldom enter the physical facility of the library. Many research universities have closed their branch science libraries in response, integrating collections into the main library. Faculty in the sciences also rate preprint versions of articles that will appear in peer-reviewed journals to be crucial to their research; preprints allow them early access to the latest findings.³⁷ In the humanities, faculty may express a strong preference for print monographs over e-book versions of the same titles, but not necessarily, as

demonstrated in a study at Florida State University: when asked their preference, many replied, “it depends.”³⁸ A recent Ithaka S+R faculty survey also demonstrated that 70% of faculty consult e-books often or occasionally and believe that e-books play an important role in their research and teaching.³⁹ Also, in the same study, many faculty noted their heavy use of images, audiovisual materials, and artifacts. In the social sciences, in addition to books and journals, many faculty need access to standard data sets such as those supplied through the U.S. government or institutions like the Inter-university Consortium for Political and Social Research (ICPSR), Professional programs like business and engineering may require specialized databases; for example, for industry trends or patents.

Interlibrary loan and consortial access to materials not owned by the institution’s library remain key services for faculty: 80% of respondents in the Ithaka faculty survey noted that they had used interlibrary loan or document delivery services often or occasionally.⁴⁰

The increasing variety of formats of the outputs of scholarship has been the focus of a team of OCLC researchers. They suggest that we should understand the impact of the digital environment on the “evolving scholarly record.” They state that “while in the past we might have thought of the scholarly record as consisting primarily of text-based materials like journals and monographs, today the cohort of materials over which the scholarly record can potentially extend has expanded dramatically, to include research data sets, computer models, interactive programs, complex visualizations, lab notebooks, and a host of other materials.”⁴¹ Also, these records of research then can become the data for future research by the authors or by other scholars. The research library community now grapples with its perceived responsibility to collect and curate this record, but clear processes and norms continue to develop. In addition, the costs of collection and curation of a broad array of complex digital content remain unknown.

The research interests of faculty can also lead to the development of various types of library services targeted to faculty. Librarians show increasing interest in partnering with faculty on new types of digital scholarship that will result in new forms of scholarly communication. While much of this activity has focused on the Digital Humanities (DH), a number of libraries have mounted efforts, often described through services offered by means of a digital scholarship center, that also encompass the social sciences and sciences.⁴² Librarians may advise researchers on how to access existing large data sets, work with them to use tools to analyze data, and assist them with developing graphic representations of their data (data visualizations) which can often assist audiences in understanding findings in a deeper way than is possible using only text. Data visualization representations may assist in understanding cancer trends, analyzing growth patterns in a city, or exploring biodiversity in a region, for example. Librarians may also work with researchers creating data sets as products of their research, advising them on metadata issues (defining fields for tagging records) and development of data plans to address future access and preservation needs. Equally important, they may play a key role in working with faculty to ensure compliance with federal agency guidelines for openness of both publications and data, if federal funding has supported the research.⁴³ We should note that a minority of faculty in all disciplines currently find it crucial to participate in activities associated with digital scholarship such as using models, simulations, or GIS tools, developing software, or engaging in text mining.⁴⁴ However, it seems likely that the number of researchers using new methodologies and tools will increase in coming years. In fact, many researchers indicated that they would be interested in learning more about digital research activities and methodologies if they had more technical support, time to learn about new methodologies, and assistance in understanding how to integrate those methodologies into their research.⁴⁵ Libraries now train existing staff to be able

to provide this type of support to faculty and hire individuals with strong digital research skills to develop programs that allow libraries to both partner with and support new types of faculty research interests. Using these new tools for research enables researchers to ask new kinds of questions that were not possible in earlier eras, often because techniques were not available to analyze the vast amounts of data that are available in some fields, such as astronomy, and also provides opportunities to combine disparate sets of data in new ways to find new patterns, such as combining health data with environmental data.

Finally, many libraries offer services that advise their faculty about publication and intellectual property issues. They may offer workshops to junior scholars and graduate students that walk them through the publishing process. They may also advise faculty about their rights as authors. When a work is accepted for publication, the publisher typically requires the author to sign a publication agreement that transfers some or all of the copyright to the publisher. This transfer of rights has many implications for scholars. They may be prohibited from including the work in course packs, posting it to their personal website, or depositing it in their institutional repository. Scholarly communication librarians help scholars negotiate the retention of some of their rights and also advocate on a national scale for less restrictive publishing contracts.

Scholarly Publishing and its Discontents: Crises and Responses

The scholarly publishing system faces major disruptions due to changing economic realities and the increasing move to digital publication. These changes have implications for libraries, continuously tasked with maintaining robust collections in the face of shrinking budgets and rising costs. These changes also affect publishers, especially university presses, who must endeavor to survive and flourish in a new economic and technological environment. The gravity of these disruptions has led to a discourse of so-called crisis in the scholarly publishing

world. This section provides an overview of the scholarly publishing crises as well as contemporary debates that preoccupy scholars, publishers, and librarians.

The serials crisis, a term that refers to skyrocketing cost of many commercially published academic journals, particularly in the sciences, over the last several decades, has caused many libraries to cut journal subscriptions and even call for boycotts of publishers of the most expensive journals.⁴⁶ Consolidation within the publishing sector has compounded the problem resulting in decreasing diversity and competition among large commercial publishers.

Meanwhile, library budgets have not kept pace with rapidly rising prices. Libraries at institutions of all sizes have faced flat or falling collections budgets over the last decade due to a variety of factors including the global financial crisis. Libraries therefore spend more than ever to acquire less content. Despite having larger overall budgets, research-intensive universities, especially those that focus on science, technology, engineering, and mathematics (the so-called STEM fields) are often hard-hit by this crisis since their faculty require subscriptions to many of the costliest journals. Libraries must often make difficult compromises, such as cutting important journals they can no longer afford and diverting money from their monograph collections budget to journal subscriptions.⁴⁷

This state of affairs has generated no small amount of consternation and protest from librarians. Along with scholars, librarians have questioned not only the high prices of journals, but the premise of a scholarly publishing system in which “the faculty gives its research to the publishers for free; [and] the publishers sell it back to the university library at high prices.”⁴⁸ The extent to which commercial publishers have driven up the cost of their products has even led some to suggest that the academy “reclaim” the scholarly publishing system from profit-driven commercial publishers.⁴⁹ The monograph publishing system, especially for the humanities, can

also be said to be in a state of crisis, given the financial and existential pressures on university presses.⁵⁰ University presses, which have historically operated with subsidies, face decreasing investment from their parent institutions.⁵¹ These presses thus find themselves caught between a mandate to publish niche scholarship with little market potential while producing enough revenue to remain financially viable.⁵² Many have noted the urgency of sustaining humanities monograph publishing given the centrality of these publications to the careers of junior scholars.⁵³

New economic models, facilitated by new technologies and new types of content, now challenge conventional assumptions about publishing and address concerns about sustainability and fairness in pricing.⁵⁴ Open access, so-called freemium models, and other alternative approaches to funding will make more sense than subscription-based models for some types of publications. New projects like Knowledge Unlatched⁵⁵ and the Open Library of the Humanities,⁵⁶ for example, are flipping the payment system. They coordinate libraries and other funders to invest in the publication of books and journals up front (before publication), rather than through purchasing them. Upon publication, these works become open access.

Libraries and university presses are also heeding the call to create a more equitable and effective publishing system by actively experimenting with new publishing models. Collaboration between libraries and university presses has become increasingly common,⁵⁷ especially as university administrative structures change. As of 2013, 20 members of the Association of American University Presses (AAUP) had an administrative relationship with their university library.⁵⁸ Collaborations often leverage the prestige, disciplinary expertise, and editorial acumen of the press and the libraries' strengths in digital technologies, metadata, and organization of information to create innovative, technology-enhanced publications. Libraries are

also independently taking on the role of publisher, primarily publishing open access journals.⁵⁹ Some university presses are part of the library system.

Conclusion

For almost all sectors of higher education (with the possible exception of community and some small colleges) faculty continue to be judged on their publication record during promotion and tenure review. Librarians should not underestimate the centrality of a faculty member's research to her or his career. Librarians who demonstrate knowledge of the scholarly communications environment of the disciplines of faculty with whom they work will have more credibility with those faculty. Being able to advise junior faculty on such issues as selection of publications to which to submit manuscripts, journal impact factors, intellectual property issues, and data curation requirements related to federal or other grants can lead to relationships in which faculty begin to understand the depth of librarians' knowledge and skill set. The traditions of scholarly communication are inherent to the culture of each discipline and to higher education as a whole. Changing those traditions and the perspectives faculty bring to them, as a result of the opportunities and challenges of the digital environment, continues and will take place at a different pace for each discipline.

Academic libraries of all types face the challenge of meeting faculty expectations, which often prioritize maintaining traditional collections and services, while simultaneously developing new infrastructure and support services for digital scholarship. Since few academic libraries have the financial resources to expand their staff, this means examining priorities for the work of librarians, participating in training for new skills, and reconfiguring positions for new types of responsibilities when filling vacancies. Librarians may find that contrary to expectations, senior

faculty are most likely to create new forms of digital scholarship since junior faculty tend to create traditional works and publish in standard venues as a result of promotion and tenure pressures.⁶⁰ The new roles of librarians include librarians as publishers, working with faculty to address the need to provide both more affordable and accessible venues for publishing and an infrastructure for the publication of new forms of scholarship.

Discussion Questions

1. Are the current methods of evaluating faculty research output fair? What are the promises (and potential pitfalls) of alternatives, such as altmetrics?
2. Should data sets, digital humanities projects, and other new forms of scholarship count in faculty tenure and promotion decisions? Why or why not?
3. Many have questioned the efficacy and value of current methods of peer review. What do you see as the strengths and weaknesses of blind peer review? What about open or so-called crowd-sourced peer review?
4. Libraries are increasingly adopting the role of publisher. Why do libraries choose this role? What skills might librarians bring to publishing and what skills might they lack?

Assignment

You are a librarian at a large research institution and a junior faculty member approaches you for advice on where to publish an article. What factors do you suggest to her/him to examine in the selection of a target journal? Identify and expand upon at least three factors he or she should consider.

Further Reading

Journals

- *Journal of Librarianship and Scholarly Communications* (<http://jlscc-pub.org/>)
- *Journal of Electronic Publishing* (<http://www.journalofelectronicpublishing.org/>)
- *Learned Publishing* (<http://www.alpsp.org/Learned-Publishing>)

Monographs and Reports

- *Planned Obsolescence*, Kathleen Fitzpatrick
- *Scholarly Communication for Librarians*, Heather Morrison
- *Common Ground at the Nexus of Information Literacy and Scholarly Communication*, Stephanie Davis-Kahl and Merinda Kaye Hensley
- *Getting the Word Out: Academic Libraries as Scholarly Publishers*, edited by Maria Bonn and Mike Furlough
- *Library Scholarly Communication Programs: Legal and Ethical Considerations*, Isaac Gilman
- Ithaka S+R US Faculty Survey 2012 (or may be able to add 2014 by time of publication)
- John J. Regazzi, *Scholarly Communications: A History from Content as King to Content as Kingmaker*

Blogs and Websites

- *The Scholarly Kitchen* (<http://scholarlykitchen.sspnet.org/>)
- *Scholarly Communications @ Duke* (<http://blogs.library.duke.edu/scholcomm/>)
- *Scholarly Communication Lab at Dartmouth* (<http://sites.dartmouth.edu/scholarly-communication-lab/>)
- *Digital Scholarship* (<http://www.digital-scholarship.org/>)

- SPARC (<http://sparcopen.org/>)
- ACRL Scholarly Communication Toolkit (<http://acrl.ala.org/scholcomm/>)

Notes

¹ <http://www.ala.org/acrl/publications/whitepapers/principlesstrategies>.

² <http://crl.acrl.org/content/50/3/277.full.pdf> (p. 286).

³ Association of College & Research Libraries. *Framework for Information Literacy for Higher*

² <http://crl.acrl.org/content/50/3/277.full.pdf> (p. 286).

³ Association of College & Research Libraries. *Framework for Information Literacy for Higher Education*. 2015. <http://www.ala.org/acrl/standards/ilframework>

⁴ <http://www.sr.ithaka.org/wp-content/uploads/2015/08/4.13.1.pdf> (p. 15).

⁵ <http://paulcourant.net/2007/11/23/why-i-hate-the-phrase-scholarly-communication/>.

⁶ <https://net.educause.edu/ir/library/pdf/ERM001B.pdf>.

⁷ Charles B. Osburn, “The Structuring of the Scholarly Communication System,” *College & Research Libraries* 50, no. 3 (1989): 277-86, <http://crl.acrl.org/content/50/3/277.full.pdf>.

⁸ A. Zuccala, “Modeling the Invisible College,” *Journal of the American Society for Information Science and Technology* 57, no. 2 (2006): 152–168, doi:10.1002/asi.20256.

⁹ <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0127502#pone-0127502-g001>.

¹⁰ <http://www.aaupnet.org/about-aaup/about-university-presses>.

¹¹ <http://scholarlykitchen.sspnet.org/2014/09/24/the-role-of-scholarly-societies/>.

¹² <http://www.librarypublishing.org/resources/directory/lpd2016>.

¹³ Kent Anderson describes nearly 100 specific activities that publishers undertake in Kent Anderson, “96 Things Publishers Do,” *The Scholarly Kitchen* (blog), Feb. 1, 2016, <http://scholarlykitchen.sspnet.org/2016/02/01/guest-post-kent-anderson-updated-96-things-publishers-do-2016-edition/>.

¹⁴ http://www.stm-assoc.org/2015_02_20_STM_Report_2015.pdf.

¹⁵ A useful overview of the history of peer review can be found in Ann C. Weller, *Editorial Peer Review: Its Strengths and Weaknesses*, ASIST Monograph Series (Medford, NJ: Information Today, 2001).

¹⁶ Susan van Rooyen, Fiona Godlee, Stephen Evans, Nick Black, and Richard Smith, “Effect of Open Peer Review on Quality of Reviews and on Reviewers’ Recommendations: A Randomised Trial,” *BMJ* 318 (January 2, 1999): 26, doi:<http://dx.doi.org/10.1136/bmj.318.7175.23>.

¹⁷ Retraction Watch, “The Top Ten Retractions of 2015,” *The Scientist*, December 23, 2015, <http://www.the-scientist.com/?articles.view/articleNo/44895/title/The-Top-10-Retractions-of-2015/>.

¹⁸ Paul Ginsparg, “Can Peer Review Be Better Focused?” Cornell University Department of Computer Science, March 13, 2003, <http://www.cs.cornell.edu/~ginsparg/physics/blurb/pg02pr.html>.

¹⁹ S. Harnad, “Crowd-sourced Peer Review: Substitute or Supplement for the Current Outdated System?” *LSE Impact Blog* (blog), August 21, 2014, <http://openaccess.eprints.org/index.php?/archives/1121-Crowd-Sourced-Peer-Review-Substitute-or-Supplement.html>.

²⁰ For an in-depth examination of differences and commonalities of research across disciplines, see Diane Harley et al., *Assessing the Future Landscape of Scholarly Communication: An*

Exploration of Faculty Values and Needs in Seven Disciplines - Executive Summary (UC Berkeley: Center for Studies in Higher Education, 2010),
<http://escholarship.org/uc/item/0kr8s78v>.

²¹ American Academy of Arts & Sciences, Humanities Indicators. Research and Development Expenditures at Colleges and Universities, last updated January, 2016,
<http://humanitiesindicators.org/content/indicatordoc.aspx?i=86>.

²² “The Thomson Reuters Impact Factor,” originally published in the Current Contents print edition, June 20, 1994, <http://wokinfo.com/essays/impact-factor/>.

²³ J. E. Hirsch, “An Index to Quantify an Individual’s Scientific Research Output,” *Proceedings of the National Academy of Science USA* 102, no. 46 (November 15, 2005): 16569-16572,
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1283832/>.

²⁴ Carl T. Bergstrom, Jevin D. West, and Marc A. Wiseman, “The Eigenfactor™ Metrics,” *Journal of Neuroscience* 28, no. 45 (November 5, 2008):11433-11434,
<http://www.jneurosci.org/content/28/45/11433.short>.

²⁵ Heather Piwowar and Jason Priem, “Altmetrics: What, Why, and Where?” *Bulletin of the Association for Information Science and Technology*, Special Section, 39, no. 4 (April/May, 2013): 8-9, <http://www.arl.org/focus-areas/scholarly-communication/scholarly-impact#.VsYvLykZ1w4>. Note: this special section contains a number of useful articles on the topic of altmetrics.

²⁶ Gunther Eysenbach, “Citation Advantage of Open Access Articles,” *PLoS Biol* 4, no. 5 (2006): e157, doi:10.1371/journal.pbio.0040157.

²⁷ Jeffrey Beall publishes a list of “potential, possible, or probable scholarly open-access publishers” on his website Scholarly Open Access, last updated April 16, 2016,

<https://scholarlyoa.com/publishers/>; his list has sparked some controversy but raises legitimate issues about predatory publishers.

²⁸ B. P. Abbott et al., “Observation of Gravitational Waves from a Binary Black Hole Merger,” *Physical Review Letters* 116, no. 061102 (February 12, 2016), doi:10.1103/PhysRevLett.116.061102.

²⁹ Amy Brand, Liz Allen, Micah Altman, Marjorie Hlava, and Jo Scott, “Beyond Authorship: Attribution, Contribution, Collaboration, and Credit,” *Learned Publishing* 28 (April 2015): 151–155, doi:10.1087/20150211.

³⁰ Heather Sarsons, “[Gender Differences in Recognition for Group Work](#)” (working paper, Harvard University, Cambridge, December 3, 2015), <http://scholar.harvard.edu/sarsons/publications>.

³¹ For example, see Columbia University Real? Virtual: Representing Architectural Time and Space, <http://www.learn.columbia.edu/ha/html/medieval.html>.

³² U.S. National Institutes of Health, All About the Human Genome Project (HGP), last updated October 1, 2015, <https://www.genome.gov/10001772>.

³³ The Sloan Digital Sky Survey: Mapping the Universe, accessed February 23, 2016, <http://www.sdss.org/>.

³⁴ Committee on Information Technology, “Guidelines for Evaluating Work in Digital Humanities and Digital Media,” Modern Language Association, revised January, 2012, <https://www.mla.org/About-Us/Governance/Committees/Committee-Listings/Professional-Issues/Committee-on-Information-Technology/Guidelines-for-Evaluating-Work-in-Digital-Humanities-and-Digital-Media>.

³⁵ Scholarly communications librarians typically have an MLIS with coursework and field experience that focuses on copyright, intellectual property, institutional repositories, and open access, among other areas. Some scholarly communications librarians have a JD instead of or in addition to their MLIS, reflecting deeper expertise in copyright and intellectual property.

³⁶ Martha Kyrrilidou et al., “Monograph & Serial Costs in ARL Libraries, 1986-2011,” *ARL Statistics 2010-11* (Washington, DC: Association of Research Libraries, 2012), <http://www.arl.org/focus-areas/statistics-assessment/statistical-trends#.Vt2bfykZ1w4>.

³⁷ Ross Housewright, Roger C. Schonfeld, and Kate Wulfson, *Ithaka S+R US Faculty Survey 2012*, April, 2013, <http://www.sr.ithaka.org/publications/us-faculty-survey-2012/>.

³⁸ Sarah Buck Kachaluba, Jessica Evans Brady, and Jessica Critten, “Developing Humanities Collections in the Digital Age: Exploring Humanities Faculty Engagement with Electronic and Print Resources,” *College & Research Libraries* 75, no. 1 (January, 2014): 91-108.

³⁹ Housewright et al., *Faculty Survey 2012*, 31. The survey also provides insight into the particular ways that faculty use e-books and their preferences for one format over another based on the intended use.

⁴⁰ Housewright et al., *Faculty Survey 2012*, 36.

⁴¹ Brian Lavoie, Eric Childress, Ricky Erway, Ixchel Faniel, Constance Malpas, Jennifer Schaffner, and Titia van der Werf, *The Evolving Scholarly Record* (Dublin, OH: OCLC Research, 2014).

<http://www.oclc.org/content/dam/research/publications/library/2014/oclcresearch-evolving-scholarly-record-2014.pdf>. An earlier work, focusing on the sciences, also discussed some of these issues, including the notion that the scholarly record itself could become a source of computation; see Clifford A. Lynch, “Jim Gray’s Fourth Paradigm and the Construction of the

Scientific Record,” in *The Fourth Paradigm: Data-Intensive Scientific Discovery*, edited by Tony Hey, Stewart Tansley, and Kristin Tolle, 177-183 (Redmond, WA: Microsoft Research, 2009), <http://research.microsoft.com/en-us/collaboration/fourthparadigm/>.

⁴² Joan K. Lippincott and Diane Goldenberg-Hart, Digital Scholarship Centers: Trends & Good Practice, December, 2014, <https://www.cni.org/events/cni-workshops/digital-scholarship-centers-cni-workshop>.

⁴³ In the Memorandum “Expanding Public Access to the Results of Federally Funded Research,” issued on February 22, 2013, the White House mandated that publications and data that are the results of federally funded research needed to be available to the public, generally within one year of publication. A helpful overview can be found on the SPARC Website: <http://sparcopen.org/our-work/2013-executive-directive/>.

⁴⁴ Housewright et al., *Faculty Survey 2012*, 42.

⁴⁵ Ibid., 44.

⁴⁶ <https://www.theguardian.com/science/2012/apr/24/harvard-university-journal-publishers-prices>.

⁴⁷ <https://apps.mla.org/pdf/schlrlypblshng.pdf>,
<http://www.unc.edu/scholcomdig/whitepapers/panitch-michalak.html>.

⁴⁸ Stanley Chodorow, “Scholarship and Scholarly Communication in the Electronic Age,” *Educause Review* 35 (2000): 86-93, <https://net.educause.edu/ir/library/pdf/ERM001B.pdf>.

⁴⁹ <http://mcpres.media-commons.org/plannedobsolescence/five-the-university/profit-publishing-and-the-university-mission/>.

⁵⁰ Colin Steele, "Scholarly Monograph Publishing in the 21st Century: The Future More Than Ever Should Be an Open Book," *Journal of Electronic Publishing* 11, no. 2 (2008): 1-14, doi:10.3998/3336451.0011.201.

⁵¹ Paul Courant identifies the tension between universities' interest in the public good and in advancing scholarship generally, and their local financial interests. Most university presses expressly avoid publishing scholarship authored by faculty on their campuses. University presses may therefore have difficulty convincing campus administrators of the press's value to the campus mission. Furthermore, given that most universities do not operate presses, those that do may feel they contribute disproportionately to supporting scholarly communications. University presses frequently refer to this as the free-rider problem. For more, see Paul Courant, "What Might Be in Store for Universities' Presses," *Journal of Electronic Publishing* 13, no. 2 (2010), doi: <http://dx.doi.org/10.3998/3336451.0013.206>.

⁵² Steele, "Scholarly Monograph."

⁵³ For a thorough analysis of the state of affairs in humanities publishing, see Kathleen Fitzpatrick, *Planned Obsolescence: Publishing, Technology, and the Future of the Academy* (New York: NYU Press, 2011), <http://mcpress.media-commons.org/plannedobsolescence/introduction/undead/>.

⁵⁴ University Publishing in the Digital Age, 14.

⁵⁵ <https://www.google.com/?ion=1&espv=2#q=knowledge%20unlatched>.

⁵⁶ <https://www.openlibhums.org/>.

⁵⁷ http://www.aaupnet.org/images/stories/data/librarypresscollaboration_report_corrected.pdf.

⁵⁸ Charlotte Roh, “Library-Press Collaborations: A Study Taken on Behalf of the University of Arizona,” *Journal of Librarianship and Scholarly Communication* 2, no. 4 (2014): eP1102, <http://dx.doi.org/10.7710/2162-3309.1102>.

⁵⁹ See, for example, the 115 libraries listed in the 2016 *Library Publishing Directory*, <http://www.librarypublishing.org/resources/directory/lpd2016>.

⁶⁰ Diane Harley, Sophia Krzys Acord, Sarah Earl-Novell, Shannon Lawrence, and C. Judson King, *Assessing the Future Landscape of Scholarly Communication: An Exploration of Faculty Values and Needs in Seven Disciplines* (UC Berkeley: Center for Studies in Higher Education, January, 2010), http://escholarship.org/uc/cshe_fsc.