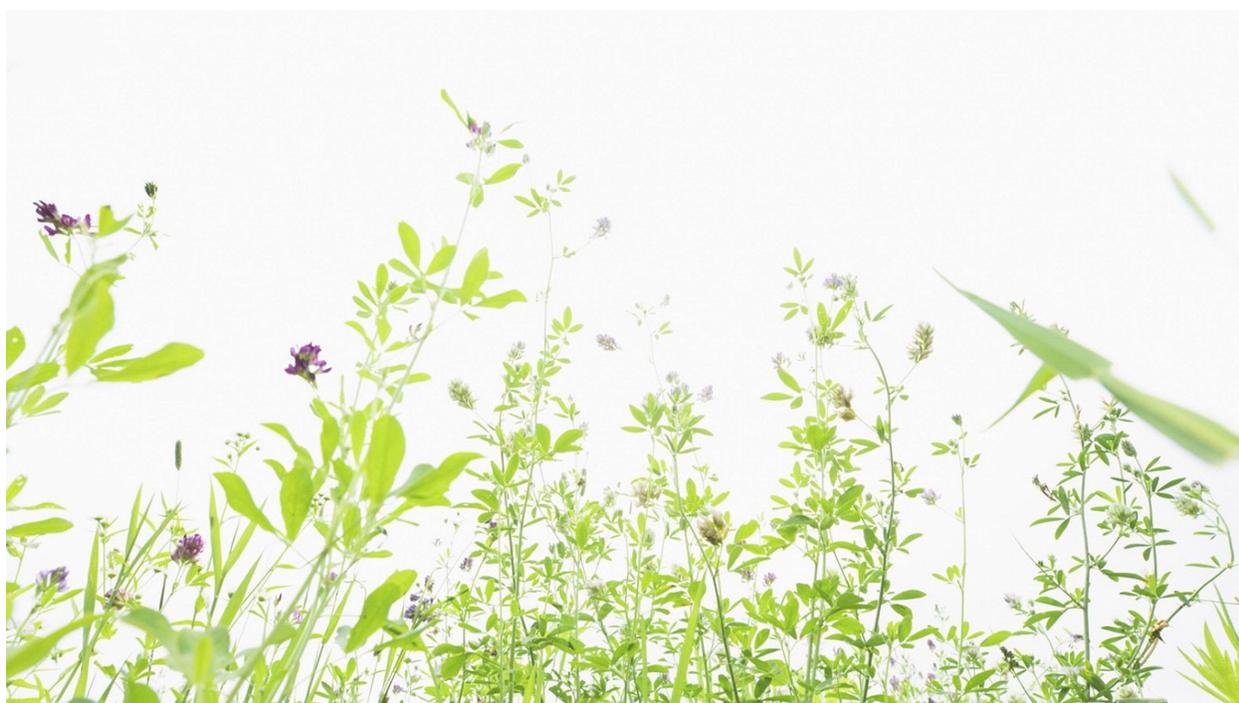


Fostering Bibliodiversity in Scholarly Communications

A Call for Action!

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Introduction

Diversity is an important characteristic of any healthy ecosystem, including scholarly communications. Diversity in services and platforms, funding mechanisms, and evaluation measures will allow the scholarly communication system to accommodate the different workflows, languages, publication outputs, and research topics that support the needs and epistemic pluralism of different research communities. In addition, diversity reduces the risk of vendor lock-in, which inevitably leads to monopoly, monoculture, and high prices.

Bibliodiversity has been in steady decline for decades.¹ Far from promoting diversity, the dominant “ecosystem” of scholarly publishing today increasingly resembles what Vandana Shiva (1993) has called the “monocultures of the mind”², characterized by the homogenization of publication formats and outlets that are largely owned by a small number of multinational publishers who are far more interested in profit maximization than the health of the system. Yet, a diverse scholarly communications system is essential for addressing the complex challenges we face.

As we transition to open access and open science, there is an opportunity to reverse this decline and foster greater diversity in scholarly communications; what the Jussieu Call refers to as *bibliodiversity*³. Bibliodiversity, by its nature, cannot be pursued through a single, unified approach, however it does require strong coordination in order to avoid a fragmented and siloed ecosystem. Building on the principles outlined in the Jussieu Call, this paper explores the current state of diversity in scholarly communications, and issues a call for action, specifying what each community can do individually and collectively to support greater bibliodiversity in a more intentional fashion.

¹ Lipscomb, Carolyn E. *Mergers in the publishing industry*. Bulletin of the Medical Library Association. 2001 Jul; 89(3): 307–308.

² Shiva, Vandana, *Monocultures of the Mind: Perspectives on Biodiversity and Biotechnology*. Zed Books Ltd., 1993.

³ Jussieu Call for Open science and bibliodiversity. (2017, October 10). <https://jussieucall.org/jussieu-call/>

A Call for Action!

We are calling on the community to take concerted efforts to foster bibliodiversity through the following actions:

Funders and Institutions

Endorse the Declaration on Research Assessment (DORA), which recognizes the need to improve the ways in which the outputs of scholarly research are evaluated, and work with peers to develop and adopt more relevant and fair methods for assessing research

Fund and support local, national and regional open, interoperable infrastructures and services

Infrastructure Providers

Adopt community governance models for services

Use open and interoperable standards

Collaborate with other organizations to develop shared infrastructure

Researchers

Use open and community-based infrastructures and take part in their governance

Advocate for these infrastructures and make the case for their value with peers.

Libraries, Consortia, and Library Associations

Assess levels of diversity of existing investments

Establish standard models and criteria for funding alternatives to “pay for access” or “pay to publish” (transactional funding models) so that libraries can more easily invest in diverse content and services, including open infrastructure

Policy Makers

Include bibliodiversity as an underlying principle in the context of open science and open access policies

Develop frameworks that ensure scholarly communications policies, incentives and funding are aligned with, and not inhibiting, local and national research priorities and values

All

Endorse the Jussieu Call for Open Science and Bibliodiversity⁴

Develop coordinated strategies that align local policy priorities with funding, incentives and infrastructures to support diversity in scholarly communications

⁴ Jussieu Call for Open science and bibliodiversity. (2017, October 10). <https://jussieucall.org/jussieu-call/>

The need for diversity in scholarly communications

“Bibliodiversity” is a term coined by a group of Chilean publishers in the 1990s and is defined as: “cultural diversity applied to the world of books. Echoing biodiversity, it refers to the critical diversity of products (books, scripts, eBooks, apps and oral literature) made available to readers. Bibliodiversity is a complex self-sustaining system of storytelling, writing, publishing and other kinds of production of oral and written literature. The writers and producers are comparable to the inhabitants of an ecosystem. Bibliodiversity contributes to a thriving life of culture and a healthy eco-social system.”⁵

In this regard, the health of the system is not simply about financial viability, as current debates often focus on. Instead it is about enabling a diversity of systems that “preserve and strengthen plurality and the diffusion of ideas”⁶ and allow for the participation of diverse knowledge producers and institutions. Our common goal should be the co-creation of a healthy ecosystem of knowledge(s) that celebrates diversity of thought while addressing epistemic injustice, the understanding that knowledge practices and institutions may be structured and enacted in ways that simultaneously privilege certain epistemic values, while being unjust or dismissive towards particular knowers or ways of knowing (Fricker 2007⁷, Santos 2014⁸). Through bibliodiversity, we can greatly improve research communications, help correct some of these existing biases, while also addressing issues of homogenization and marginalization.

We find it necessary to foster an Open Access model that is not restricted to a single approach based on the transfer of subscriptions towards APCs (publication fees charged to authors to allow free access to their articles). Such an approach would hamper innovation and otherwise would slow if not check the advent of bibliodiversity. Jussieu Call

⁵ Declaration of Independent Publishers 2014: https://www.alliance-editeurs.org/IMG/pdf/international_declaration_of_independent_publishers_2014-2.pdf

⁶ Also from the Declaration of Independent Publishers 2014

⁷ Fricker, Miranda, *Epistemic Injustice: Power and the Ethics of Knowing*, Oxford University Press, 2007

⁸ Santos, Boaventura de Sousa, *Epistemologies of the South: Justice against Epistemicide*. Paradigm Publishers, 2014

Barriers to bibliodiversity

There are several interrelated factors that contribute to the decrease in diversity in scholarly publishing and communications over the past several decades:

Dominance of English as the lingua franca

The current dominant position of the English language in scientific publishing has resulted in a model of globalization of research that doesn't properly reflect the variety of local, regional and international, inter-cultural practices in various disciplines and research communities. To ignore the diversity of languages beyond English, discounts the reality of intense scientific cooperation in other linguistic areas⁹ or in multilingual regional areas¹⁰.

This situation harms knowledge production on several levels. It drives policy-makers and other evaluation bodies in different countries to pressure researchers to publish in 'international' publishing venues, (i.e. English-language journals) - in some extreme cases even equating publications in English with high quality and localized publications with lower quality. This implies an unjustified bias in the evaluation of researchers' work based on criteria that have no relation with scientific quality.

As the Helsinki Initiative on Multilingualism in Scholarly Communication articulates¹¹, the disqualification of local or national languages in academic publishing is the most important - and often forgotten - factor that prevents societies from using and taking advantage of research done where they live. The major shift that open science currently represents in the history of scholarship is highly premised on the need to increase the societal impact of research and reconnect research with the society for the benefit of both. Making research outputs available means much more than making them technically accessible on the Internet. Currently, large parts of knowledge produced by researchers in different countries are unavailable to different local audiences that need access to knowledge to innovate and improve the efficiency of their practice, such as teachers, engineers, medical staff, farmers, journalists and others, because it is written and published in a different language, and most predominantly in English due to the pressure coming from the national or institutional evaluation systems.

⁹ Packer, Abel, "Globalization and inclusiveness of scholarly communication. Scielo transition to Open Science", Operas Conference, June 2018.

¹⁰ Heilbron, Johan, Thibaud Boncourt, Rafael Schögler, Gisèle Sapiro, "European Social Sciences and Humanities (SSH) in a Global Context", Preliminary findings from the INTERCO-SSH Project, February 2017

¹¹ Helsinki Initiative on Multilingualism in Scholarly Communication (2019). Helsinki: Federation of Finnish Learned Societies, Committee for Public Information, Finnish Association for Scholarly Publishing, Universities Norway & European Network for Research Evaluation in the Social Sciences and the Humanities. <https://www.helsinki-initiative.org/>

The dominant position of a lingua franca is useful for the widespread dissemination of ideas across the world. However, it can also impede the use of research results at the local level. A good communication system must support these two important elements. A diversity of languages in academic publishing will not result in content being less accessible globally as long as it is supported by a specific effort to increase discoverability (with metadata in several languages, for example) and translation enabled by the new generation of translation technologies.

Concentration of infrastructures and services

For decades, commercial companies in the academic publishing sector have been carrying out portfolio building strategies based on mergers and acquisitions of large companies as well as buying up small publishers or journals. The result of this has been a concentration of players in the sector, which today is dominated by a small number of companies who own thousands of journals and dozens of presses.¹² For example, the scholarly journals market, which accounts for the vast majority of spending in scholarly communications, has undergone significant consolidation, resulting in the top five publishers controlling about 50% of the market and above 70% in some disciplines.¹³ More recently, some of those companies have entered into diversification strategies, expanding their investments to services across the whole lifecycle of research¹⁴. These companies are transforming from publishing companies into research infrastructure enterprises, and are increasingly integrating the services they provide, which range from data management, to publishing, to research assessment, and so on. This situation is particularly dangerous as it can lock research communities into commercial and proprietary services, undermining the “market” and stifling the development of new services that research communities want. Infrastructure solutions should be determined by scholarly communities themselves and not imposed by for-profit service providers, whose interests do not align with those of the scholarly communities.

Biodiversity requires a variety of open infrastructures and services around the globe - a network of community-driven infrastructures - localized and serving the needs of different communities. In addition, we have learned from the past that simply focusing on the technical and economic dimensions of publishing is not sufficient and we have to pay equal if not more attention to the socio-political dimensions of infrastructure design and building. We need to think beyond whether the system is open or closed, but also who builds the

¹² Larivière, Vincent., Haustein, Stefanie., Mongeon, Philippe . The Oligopoly of Academic Publishers in the Digital Era. PLoS ONE, 10(6), 2015. <https://doi.org/10.1371/journal.pone.0127502>

¹³ Lariviere et.al. 2015

¹⁴ Chen, George ; Posada, Alejandro, and Chan, Leslie, “Vertical Integration in Academic Publishing : Implications for Knowledge Inequality” In : *Connecting the Knowledge Commons — From Projects to Sustainable Infrastructure : The 22nd International Conference on Electronic Publishing – Revised Selected Papers* [en ligne]. Marseille : OpenEdition Press, 2019. DOI : 10.4000/books.oep.9068

services and infrastructures, who sets the agenda, who makes the decisions about standards, for what purpose, and who has control, ownership and governance of the system (and knowledge produced). As infrastructures that underlie scholarly communications are never neutral, we need to be cognizant about biases that may further entrench inequity in whose knowledge is privileged and whose knowledge is made invisible by the current system.

The need for a diversity of services and open infrastructures, operating alongside a common set of open principles, and with community governance, has not yet been widely acknowledged¹⁵. While the recent news that cOAlition S will fund a study “to identify ways to support publishing initiatives wishing to implement diamond business models”¹⁶ is a positive development, the predominant strategy to date for transitioning to OA is to invest in established, proprietary infrastructures, rather than to support smaller services, or open systems and platforms that are governed by the communities they serve¹⁷. As a result, many local, regional and national infrastructures are overlooked by potential funders and struggle to ensure their sustainability, let alone allow them to innovate. This, in turn, makes them vulnerable to takeover by the dominant commercial companies aforementioned.

Limited funding models

Driven by the commercial sector, the subscription funding model for scholarly publications emerged mainly after WWII, in a print environment where institutions and individuals purchased physical publications. In early 2000, as services migrated from print to digital, the subscription-based model, so highly lucrative for publishers, persisted, and has been further entrenched through big deal strategies and one size fits all packages.

Currently, libraries (or library consortia) and, in some regions, governments purchase big deal packages through multi-year licenses, which tend to increase in size and cost every new negotiation period demanding redirection of spending by libraries from other resources¹⁸. They become locked-in because publishers offer a smaller number of titles for only slightly less than the entire package, making it very difficult for libraries to reduce their spending.¹⁹ Because of this market situation, the amount of funding available for smaller, diverse, and innovative services and infrastructures is increasingly marginalized,

¹⁵ Invest in Open Infrastructure statement. <https://investinopen.org/docs/statement0.2>

¹⁶ Exploring collaborative non-commercial publishing models for Open Access: Apply to perform a study | Plan S. <https://www.coalition-s.org/exploring-collaborative-non-commercial-publishing-models-for-open-access/>

¹⁷ For example see the recent announcement that F1000, recently acquired by Taylor and Francis, has been awarded the contract to set up and manage an open access publishing platform for the European Commission

¹⁸ Shearer, Kathleen, *Responding to Unsustainable Journal Costs: A CARL Brief*. Canadian Association of Research Libraries. February 15 2018 http://www.carl-abrc.ca/wp-content/uploads/2018/02/CARL_Brief_Subscription_Costs_en.pdf

¹⁹ https://web.archive.org/web/20161225060007/http://crkn-rcdr.ca/sites/crkn/files/2016-08/5-imitg-sustainability_challenges_en_final.pdf

representing a shrinking portion of the current institutional spending on scholarly communications and smaller services end up competing with each other for very limited resources.

Many library consortia and universities are advancing a strategy to transition to full open access, which involves negotiating so-called “transformational agreements” with publishers that repurposes their subscription expenditures to cover the costs of open access publishing. This strategy, while increasing the amount of open access content available, is unlikely to improve the current state of bibliodiversity, as it simply redirects existing funding towards the same few large publishers. And while some funders and libraries are investing in non-APC open access publishing (for example the recent announcement that the French National Fund for Open Science will provide funding for three open infrastructures²⁰) the amount of funding available for these types of services represents only a small portion of the total funds in the scholarly communications system.²¹ This is partly because libraries and funders have not yet integrated into their operations robust, alternative funding models that allow them to direct funds to non-APC journals and other types of open services and infrastructures. There is a reluctance to embrace new models that are non-transactional (that is, do not involve a pay for access or pay to publish transactions), where they cannot easily demonstrate that services are provided directly in exchange for funding. Alternate funding schemes that enable organizations to support the diversity of services will need to be widely adopted if we are to protect and nurture a healthy scholarly communications system.

As an example, a recent discussion on the SCHOLCOMM mailing list highlights the financial challenges experienced by smaller and not-for-profit publishers, which will certainly be exacerbated by the economic impact of the covid-19 pandemic. In response to a call to support publisher diversity, Charles Watkinson, Director, University of Michigan Press, says, “we're starting to perceive the financial damage the current crisis will do to universities and their libraries' budgets and feeling increasingly vulnerable” as “there will also undoubtedly be questions from administrations about whether libraries can afford to support born-OA publishers”²². Paige Mann, Librarian from the University of Redland who started the thread asks, “Do we flip our budgets so that we prioritize independents and learned societies, and leave what remains in our budgets to oligopolists? Do we proactively reach out to diamond/platinum OA publishers to ask if they need library support

²⁰ French National Fund for Open Science support to three international infrastructures. March 10, 2020 <https://www.ouvri.lascience.fr/french-national-fund-for-open-science-support-to-three-international-infrastructures/>

²¹ Union, P. O. of the E. Future of scholarly publishing and scholarly communication: Report of the Expert Group to the European Commission. January 30, 2019 <https://publications.europa.eu/en/publication-detail/-/publication/464477b3-2559-11e9-8d04-01aa75ed71a1>

²² Charles Watkinson, [SCHOLCOMM] A call to support publisher diversity. March 28, 2020 <https://lists.ala.org/sympa/arc/scholcomm/2020-03/msg00140.html>

lest they turn to oligopolists?”²³ There is an urgent need to advance these types of discussions if we are to protect and nurture bibliodiversity and a healthy scholarly communication ecosystem.

Narrow focus on journal-based policy measures

A major policy lever that affects researchers' choices about where and what to publish are the research assessment frameworks used in universities and by research funders. The journal impact factor is a measure widely relied on to evaluate research contributions.²⁴ As such, high prestige journals, as determined by citation counts and impact factors, have become powerful proxies for significance of research and have become so influential that they can make or break a researcher's career. This is the current state, despite significant evidence that there is only a tenuous correlation between journal prestige and the quality and impact of a research article published in that journal.^{25,26} The prestige factor of a journal is an artificial variable, constructed through bibliometric measures such as the Journal Impact Factor with very little relationship to the quality of the articles it publishes. Nevertheless, principally because of the narrow way that research is assessed, many researchers remain focussed on publishing in these prestige journals.²⁷

The reliance on a narrow range of journal-based assessment measures hinders bibliodiversity in a number of ways. Publishers and journals seek to maximize their bibliometric measures by adopting editorial policies that increase citation counts by publishing hot topics, changing the language of their journal to English, and covering issues of interest globally.^{28,29} Research problems with more local or narrow focus are marginalized, regardless of their potential significance, as researchers and policy makers, funders, and research institutions seek to maximize their number of publications in international journals. This works against true, deep innovations which, by definition, will not be immediately cited. This approach also diminishes many other diverse but valuable contributions to research, such as data curation, reviews, software, monographs, policy

²³ Paige Mann, [SCHOLCOMM] A call to support publisher diversity. March 26, 2020
<https://lists.ala.org/sympa/arc/scholcomm/2020-03/msg00133.html>

²⁴ Saenen, B., Morais, R., Gaillard, V., & Borrell-Damián, L. *Research Assessment in the Transition to Open Science*, EUA Open Science and Access Survey Results. 2019
<https://eua.eu/downloads/publications/research%20assessment%20in%20the%20transition%20to%20open%20science.pdf>

²⁵ Lozano, G.A., Larivière, V., Gingras, Y. (2012). The weakening relationship between the Impact Factor and papers' citations in the digital age. *Journal of the American Society for Information Science and Technology*, 63(11): 2140-2145.

²⁶ Stephan, P., R. Veugelers, J. Wang. (2017) Reviewers are blinkered by bibliometrics, *Nature* April 26, 2017.
<https://www.nature.com/news/reviewers-are-blinkered-by-bibliometrics-1.21877>

²⁷ Guédon, Jean-Claude. Open Access: Toward the Internet of the Mind
<http://www.budapestopenaccessinitiative.org/boai15/Untitleddocument.docx>

²⁸ Bartoli, A., & Medvet, E. Citation Counts and Evaluation of Researchers in the Internet Age. 2013
<https://arxiv.org/pdf/1308.1946.pdf>

²⁹ <https://phys.org/news/2013-05-scientific-insurgents-journal-impact-factors.html>

documents, curricula, protocols and so on, which contribute to the advancement of knowledge in the field and have broader societal impact.

To get a true understanding of quality, originality, innovation, and/or impact of research we must go beyond the numbers (citations or other measures) and look at the qualitative information underneath: who's saying what about research, in which communities the research is being cited, reused, read; and how it is being used and applied beyond the academy. A variable approach involving expert judgement and qualitative modes of evaluation that respect regional and disciplinary diversity is needed to truly understand the quality of research and its impact. Fortunately, these issues are becoming more widely recognized, and the Declaration on Research Assessment (DORA), which raises awareness of "the need to improve the ways in which the outputs of scholarly research are evaluated"³⁰ has been gaining momentum with a growing number of funders and institutions endorsing the initiative.

Conclusion

Designing a system that fosters bibliodiversity, while also supporting research at the international level is extremely challenging. It means achieving a careful balance between unity and diversity; international and local; and careful coordination across different stakeholder communities and regions in order to avoid a fragmented ecosystem. It will require appropriate funding and policies directed to local services and infrastructures, while also engaging at the international level to define the standards and best practices that will ensure interoperability across distributed tools and systems. Each community will need to examine carefully their needs and priorities and work with other stakeholders in their local context to ensure that requirements, incentives, infrastructures and funding are aligned with local priorities and not inadvertently working in opposition. Meanwhile, international communities such as learned societies, RDA, COAR, and so on can act as forums for collectively defining common standards and best practices that allow local, national and regional services across the world to connect with each other. Countries and regions should begin by assessing their existing instruments (funding streams, policies, and incentives) through the lense of how well they support (or not) diversity, and begin to develop plans that will ensure the protection and cultivation of pluralistic, community-governed services, infrastructures and programs that advance local research priorities.

We must act now! The larger the decline, the more difficult it will be to reconstitute diversity into the system. There is a real danger that new budget constraints and an increasing concentration of funds directed to large commercial entities could lead to even

³⁰ DORA – San Francisco Declaration on Research Assessment (DORA). (2012). <https://sfdora.org/>

greater homogeneity and monopolization. To that end, we are calling on researchers, policy makers, funders, service providers, universities and libraries from around the world to work together to address the issue of bibliodiversity. Each actor has an important role to play.