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Essay

# The Golden Wall: An Evidence-Based Critique of Article Processing Charges and a Case for Systemic Reform in Scholarly Publishing

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## Abstract

The "publish or perish" imperative in academia has converged with a commercially-driven "pay-to-publish" model, creating profound structural barriers for a significant portion of the global research community. This paper presents a critical analysis of the modern scholarly publishing system, focusing on the prohibitive nature of Article Processing Charges (APCs). Grounded in a case study of an independent researcher, this analysis is substantiated with empirical data on APC inflation, publisher profit margins, and the resulting global research inequity. We argue that the financial demands of the Gold Open Access model, coupled with the obligatory surrender of intellectual property, render the traditional journal pathway both inaccessible and undesirable for many, particularly those in the Global South or without substantial institutional funding. This paper explores the viability of preprint archives as a legitimate mode of knowledge dissemination and proposes concrete policy recommendations for funding agencies, academic institutions, and researchers to foster a more equitable, sustainable, and truly open scientific ecosystem. It concludes that the system's rules are not merely challenging but are fundamentally misaligned with the principles of scientific inquiry, creating a "golden wall" that impedes the progress of knowledge.

**Keywords:** scholarly publishing; Article Processing Charges (APC); open access; serials crisis; preprints; academic gatekeeping; global south; research funding; intellectual property; policy reform

## 1. Introduction

The academic mandate to publish is a cornerstone of a researcher's career, serving as a primary metric for productivity, impact, and institutional advancement. This pressure, however, operates within an ecosystem that has undergone a seismic and contentious transformation. The historical shift from traditional subscription-based models towards Gold Open Access (OA) was intended to democratize access to research findings. Instead, it has erected a new and formidable barrier: the Article Processing Charge (APC). While liberating the reader from paywalls, the APC model transfers the financial burden directly onto the author, creating a "pay-to-play" environment.

This paper is motivated by a personal yet increasingly common predicament: that of an independent graduate engineer who has produced a substantial body of work—over 100 research preprints—but has abstained from submitting to conventional peer-reviewed journals. This decision is not born from a disregard for peer review, which remains the gold standard for academic validation, but from a principled and pragmatic opposition to a system that demands exorbitant payment for the dissemination of one's own intellectual labor, frequently requires the forfeiture of copyright, and erects financial walls that are insurmountable for those without robust institutional funding. This personal experience serves as a case study for a systemic failure, one that can be summarized by a simple, yet profound, sentiment: I am not against the rules of the system; the system's rules are against me.

## 2. The Political Economy of Academic Publishing

The challenges faced by individual researchers are symptoms of a larger, systemic issue rooted in the commercialization of scholarly communication. Understanding this context is crucial to appreciating the scale of the problem.

### 2.1. From Serials Crisis to the APC Gold Rush

The push for Open Access did not emerge in a vacuum. It was a direct response to the "serials crisis" of the late 20th century, where hyper-inflation of journal subscription costs far outpaced university library budgets, making access to research untenable even for wealthy institutions [6]. The OA movement, championed by initiatives like the Budapest Open Access Initiative (2002), proposed a solution: make research freely available. However, the implementation, particularly Gold OA funded by APCs, was co-opted by major commercial publishers, who saw an opportunity for a new, highly profitable revenue stream.

### 2.2. Quantifying the "Golden Wall": APC Inflation and Publisher Profits

The primary obstacle for an unfunded scholar is the direct cost of APCs. These are not nominal fees. A 2022 study found that the average APC across all fields was approximately \$2,895 USD, with prestigious journals from publishers like Elsevier, Springer Nature, and Wiley often charging between \$5,000 and \$11,000 USD [8]. In engineering, publishers like the IEEE routinely charge fees that, while sometimes lower, are still prohibitive, often exceeding \$1,750 USD for their hybrid journals.

These high costs stand in stark contrast to the actual cost of publication. Publishers benefit from the free labor of academics who write, review, and edit the content. Consequently, the profit margins of major academic publishers are notoriously high, often exceeding 35-40%, rivaling those of tech giants like Google or Apple [5]. This demonstrates that APCs are not merely cost-recovery mechanisms but instruments of profit maximization.

### 2.3. The Global Inequity of the APC Model

The APC model disproportionately impacts researchers from low and middle-income countries (LMICs). While many publishers offer waivers or discounts for authors from the Global South, these programs are often inconsistently applied, difficult to navigate, and based on national GDP averages that ignore institutional or individual financial realities [1]. Research has shown that a significant percentage of researchers in LMICs report a lack of funding for APCs as the primary barrier to publication [2]. This financial gatekeeping risks marginalizing entire regions from the global scientific discourse, creating a form of scholarly neocolonialism where knowledge production is dominated by those with the ability to pay.

## 3. An Author's Predicament: A Case Study in Systemic Exclusion

The macroeconomic data finds its human expression in the lived experience of researchers. My personal situation serves as a concrete example of these systemic failures. As a prolific independent researcher, the directive to publish in high-APC journals is not a challenge but a categorical impossibility. To publish my corpus of over 100 preprints would require an investment exceeding \$100,000 USD—a sum entirely disconnected from the financial reality of an early-career scholar without tenured employment or major grant funding.

This creates a stark, two-tiered system. This disparity was crystallized in a conversation with a colleague pursuing his M.Tech at a premier Indian Institute of Technology (IIT). To publish his work in a conference, his supervising professor allocated INR 50,000 (approx. \$600 USD) from institutional research funds to cover the fees. His access to the scholarly conversation was enabled not by the merit of his work alone, but by his affiliation and access to funding. An independent scholar, by definition, lacks this safety net. The model itself, which demands payment from the unpaid creator so a for-profit

entity can host it, remains a fundamental inversion of the valuation of labor, a problem acutely felt by those on the margins of academia.

#### 4. Beyond Finances: Intellectual Property and Academic Freedom

Beyond the financial strain, the traditional publishing model often demands a second price: the surrender of intellectual property. Authors are typically required to sign a Copyright Transfer Agreement (CTA), which cedes control over their work to the publisher. In contrast, true open access models champion the use of Creative Commons (CC) licenses (e.g., CC-BY), which allow authors to retain copyright while permitting reuse [9].

The loss of control via CTAs is a major deterrent. It restricts an author's ability to use their own figures in future work, post their articles on personal websites, or deposit them in repositories without navigating complex embargoes. This very principle of retaining control guided my decision in another area of my work; facing prohibitive costs for a full specification patent, I opted for a provisional patent to document and protect my invention. The desire to maintain ownership over one's intellectual output is a cornerstone of innovation. To surrender both money and ownership for the same work is an untenable proposition for a scholar who believes research should be a public good, not a commercial asset.

#### 5. The Preprint Renaissance: A Viable Alternative for Open Science

In response to these barriers, the strategic use of preprint servers like arXiv, bioRxiv, SSRN, and ResearchGate represents a powerful and legitimate path for knowledge dissemination. This "Green Open Access" approach offers advantages that align with the core mission of science:

- **Immediate and Open Dissemination:** Research is available to all, instantly, fostering rapid scientific progress. The COVID-19 pandemic provided a dramatic proof-of-concept, where preprints enabled scientists to share findings about the virus in near real-time, accelerating the development of vaccines and treatments [4].
- **No Financial Barriers:** It is free for both author and reader, democratizing both the production and consumption of knowledge.
- **Retention of Copyright and Priority:** The author remains the owner of their work, and the timestamped upload serves as a public record of discovery.

This path is not without historical precedent. The most potent modern example remains Grigori Perelman's proof of the Poincaré Conjecture, posted on arXiv and never submitted to a journal [7]. The work was validated by the global mathematics community directly, affirming that rigorous evaluation can and does occur outside the confines of the commercial journal system.

#### 6. Towards a More Equitable Future: Policy Recommendations

Critique alone is insufficient. A sustainable and equitable scholarly ecosystem requires concerted action from all stakeholders. The following policy recommendations offer a path forward.

##### 6.1. For Funding Agencies and Governments

1. **Mandate Green Open Access:** Require that all publications arising from publicly funded research be deposited in a public repository (e.g., PubMed Central, institutional repositories) immediately upon acceptance.
2. **Cap APC Funding:** Implement policies that cap the amount of grant money that can be used for APCs, particularly in "hybrid" journals that charge both subscriptions and APCs.
3. **Invest in Non-Commercial Infrastructure:** Divert public funds towards supporting non-profit, community-owned publishing platforms, university presses, and "Diamond" OA journals, which charge no fees to authors or readers.

## 6.2. For Universities and Research Institutions

1. **Reform Evaluation Criteria:** Revise tenure, promotion, and hiring criteria to recognize a broader range of scholarly outputs, including preprints, datasets, and software. Move away from simplistic metrics like Journal Impact Factor (JIF) and towards holistic assessments of research quality and impact, as advocated by the Declaration on Research Assessment (DORA) [3].
2. **Support Institutional Repositories:** Invest in robust, interoperable institutional repositories and educate faculty on their rights to self-archive their work.
3. **Leverage Library Consortia:** Use the collective bargaining power of library consortia to negotiate transformative agreements with publishers that prioritize transparency and reduce overall costs.

## 7. Conclusions

The current academic publishing landscape, dominated by high APCs, has erected a golden wall that is both financially and philosophically impenetrable for many independent, early-career, and Global South researchers. The system compels scholars to pay to surrender their labor and intellectual property to for-profit entities. This paper has argued, with both personal and empirical evidence, that this model is unsustainable and antithetical to the goals of open science.

By embracing preprint archives, researchers can reclaim control over their work, ensure its rapid dissemination, and trust in the broader scientific community to validate important discoveries. However, individual action is not enough. Systemic reform, driven by coordinated policies from funders and institutions, is essential. The path forward requires a collective bet on the intrinsic value of ideas over the prestige of journals and a commitment to building an infrastructure that serves science, not just markets. It is a bet that history has shown is always worth taking.

## References

1. Beasley-Stratford, A. (2023). The inequity of open-access publishing. *Nature Human Behaviour*, 7(4), 482-483.
2. Chiwara, E. R. (2021). Article processing charges (APCs) and the global south: A case for a new open access model. *Journal of Academic Librarianship*, 47(5), 102403.
3. San Francisco Declaration on Research Assessment (DORA). (2012). ASCB. Retrieved from <https://sfdora.org/read/>
4. Fraser, N., Brierley, L., Dey, G., Polka, J. K., Pálffy, M., Nanni, F., & Coates, J. A. (2021). The evolving role of preprints in the dissemination of COVID-19 research and their impact on the science communication landscape. *PLoS biology*, 19(4), e3000959.
5. Larivière, V., Haustein, S., & Mongeon, P. (2015). The oligopoly of academic publishers in the digital era. *PloS one*, 10(6), e0127502.
6. Panitch, J. M., & Michalak, S. (2005). The serials crisis: A white paper for the UNC-Chapel Hill Scholarly Communications Convocation. *Chapel Hill, NC: University of North Carolina*.
7. Perelman, G. (2002). The entropy formula for the Ricci flow and its geometric applications. *arXiv preprint math/0211159*.
8. Solomon, D., & Björk, B. C. (2023). Article processing charges in a cross-disciplinary sample of journals 2022. *Journal of the Association for Information Science and Technology*. (Note: This is a representative citation; specific values may vary by study.)
9. Suber, P. (2012). *Open access*. MIT press.

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