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Continuous Publication in Online Scholarly Journals: Opportunities, Challenges, and Editorial Implications

Rizq, Khalil[1*]

Abstract
The digital paradigm in scholarly publishing has precipitated a shift from rigid, issue, based models toward dynamic, article, based workflows. This study provides a comprehensive analysis of the continuous publication model, a system where manuscripts are published individually upon final acceptance, decoupling dissemination from the assembly of static journal issues. Through a qualitative synthesis of publishing policies, scholarly literature, and case studies, this paper elucidates the model's conceptual underpinnings, its tangible benefits in accelerating research dissemination and enhancing accessibility, and the concomitant editorial, ethical, and infrastructural complexities. We identify critical challenges including metadata integrity, version control, archival permanence, and citation consistency. In response, this article makes a novel contribution by proposing the TAP (Temporal, Administrative, Perceptual) Framework for evaluating publication models and outlining a "Multi, Layer Archival" strategy for digital preservation. The findings offer a critical, practical guide for editors, publishers, and scholarly communications specialists seeking to implement or optimize continuous publication, with particular relevance for emerging open, access journals navigating the evolving topology of academic publishing.

Keywords
Continuous Publication · Online Journals · Scholarly Communication · Editorial Workflow · Open Access · Digital Preservation · Publishing Models · Academic Metadata

* Correspondence: khalil@khalilrizq.me
1 Independent Researcher, Scholarly Communication Studies

1. Introduction

The architecture of scholarly communication is undergoing a profound transformation, driven by digital technology, the open science movement, and increasing demands for research efficiency [1][2]. For centuries, the journal issue, a periodic collection of articles, served as the fundamental unit of dissemination, a structure inherited from the material and economic constraints of print [3]. However, in an online environment where immediacy and accessibility are paramount, this issue, based model can introduce artificial delays, creating a dissonance between the conclusion of peer review and the public availability of research findings [4].

Emerging from this context is the **continuous publication** model, an operational paradigm where articles are published as discrete, final, citable entities immediately upon the completion of editorial and peer, review processes, without waiting for a quota of papers to form a traditional issue [5][6]. This model promises to align publishing workflows with the instantaneous potential of digital networks, ostensibly accelerating the pace of scientific discourse. Proponents argue it enhances author satisfaction, improves journal metrics like "time to publication," and serves the public interest by removing access barriers more swiftly [7][8].

Yet, the adoption of continuous publication is not merely a logistical shift; it represents a conceptual recalibration of the journal's role in the scholarly record. It introduces novel challenges that intersect with the core responsibilities of academic publishing: ensuring persistent access, maintaining citation stability, upholding version integrity, and facilitating systematic discovery [9][10]. For editors and publishers, especially within the open, access sphere, navigating this transition requires more than technological adaptation, it demands are, evaluation of editorial policies, ethical guidelines, and long, term stewardship commitments.

This article aims to move beyond superficial appraisal to provide a critical, comprehensive examination of continuous publication. It seeks to: (a) trace its conceptual and historical lineage within scholarly communication; (b) synthesize empirical and discursive evidence of its advantages and pitfalls; (c) analyze the resultant editorial implications through real, world cases; and (d) propose novel frameworks for its ethical and sustainable implementation. By doing so, this paper addresses a significant gap in the literature: the need for a holistic, editorially, focused synthesis that equips journal teams with the theoretical understanding and practical tools necessary to harness this model's potential while mitigating its risks.

2. Literature Review & Conceptual Foundations

2.1 The Evolution of Scholarly Publishing Models

The trajectory from print, centric to digital, first publishing has been well, documented [11][12]. The traditional issue, based model was optimized for physical distribution, bundling articles to

justify printing costs and postal cycles. The advent of online journals initially replicated this structure digitally, leading to "online, first" or "publish, ahead, of, print" practices, which reduced but did not eliminate issue, based delays [13]. The continuous publication model represents a further decoupling, treating the journal not as a periodic collection but as a living, incremental database of certified knowledge [14].

This evolution is paralleled by the rise of "mega, journals" like *PLOS ONE* and *Scientific Reports*, which, by emphasizing scientific soundness over perceived novelty and employing broad scopes, demonstrated the feasibility and scalability of high, volume, article, centered publishing [15][16]. Their operational logic inherently favors continuous workflows, influencing expectations across disciplines.

2.2 Documented Advantages: Speed, Metrics, and Accessibility

A primary driver for continuous publication is the reduction of "time to publication" (TTP). Studies confirm that eliminating the issue assembly queue can shave weeks or months from the publication timeline, allowing research, particularly in fast, moving fields, to reach the community with minimal delay [17][18]. This speed is linked to tangible benefits: earlier citation accrual, accelerated translation into practice, and increased author goodwill [19].

Furthermore, continuous publication aligns seamlessly with the open, access (OA) imperative. By publishing articles immediately upon readiness, OA journals can fulfill their mission of barrier, free access without imposing additional waiting periods, thus maximizing the public return on research investment [20]. From a metric perspective, journals benefit from a steadier flow of content, which can positively impact frequency, based metrics and online visibility [21].

2.3 Identified Challenges and Critiques

The literature also surfaces significant concerns. **Citation and indexing** pose a major challenge: articles published outside a traditional issue require clear, consistent metadata (volume, article number, publication date) to ensure proper indexing in databases like Web of Science or Scopus and to generate stable citations [22][23]. Inconsistent practices can lead to confusion and errors in the scholarly record.

Version control and permanence are heightened concerns. The model’s fluidity raises questions about the definitiveness of the "version of record." Robust policies are needed to distinguish between corrected versions and original articles, ensuring the integrity of the scholarly archive [24]. Closely tied to this is **digital preservation**. A continuous stream of individual articles necessitates proactive, automated archiving strategies with trusted third, party repositories (e.g., CLOCKSS, Portico) to guarantee long, term survival beyond a journal's native platform [25][26].

Perceptual and sociological challenges persist. Some scholars and institutions, accustomed to the heft and prestige of a physical "issue," may perceive continuous publication as less formal or prestigious [27]. Furthermore, the model places greater responsibility on readers to actively monitor journal content or rely on alerts, potentially altering engagement dynamics [28].

2.4 Gaps in the Current Discourse

While existing studies effectively list pros and cons, there is a paucity of research offering integrated frameworks that connect the *temporal* (speed), *administrative* (workflow, metadata), and *perceptual* (credibility, habit) dimensions of this shift. Most guidance remains atomized, addressing metadata standards or archiving in isolation. This paper seeks to fill this gap by providing a synthesized analysis and proposing holistic implementation frameworks.

3. Methodology

This study employs a **qualitative descriptive research design** centered on **critical document analysis**[29]. The objective is not to generate new primary data but to synthesize, interpret, and constructively critique existing knowledge and documented practices to build novel conceptual frameworks for application.

3.1 Data Collection

A purposive sample of documents was assembled between [Insert Date Range] to ensure breadth and relevance. Sources included:

1. **Formal Publishing Policies:** Explicit guidelines from established journals known to utilize continuous publication (e.g., from publishers like Springer Nature's "Continuous Article Publishing", Elsevier's "Article in Press", and full OA publishers like BMC and PLOS).
2. **Scholarly Literature:** Peer, reviewed articles, editorials, and conference proceedings from the fields of information science, scient metrics, and scholarly communication, identified via databases including Scopus, Web of Science, and LISA.
3. **Technical and Standards Documents:** Recommendations from key bodies such as the **National Information Standards Organization (NISO)**[30], the **Digital Preservation Coalition (DPC)**, and the **Committee on Publication Ethics (COPE)** regarding article identifiers, versioning, and preservation.
4. **Public Case Studies and Editorials:** Reflections and post, mortems published by editors and publishing managers detailing their experiences transitioning to or managing continuous publication.

3.2 Data Analysis

The analysis followed a **thematic synthesis approach**[31]. After an initial familiarization phase, documents were systematically coded using NVivo software. Initial codes (e.g., "TTP reduction," "metadata confusion," "preservation anxiety") were iteratively grouped into broader descriptive themes. These themes were then subjected to analytical scrutiny to generate overarching "analytical themes" that form the structure of this paper's findings and discussion, namely, the interconnected domains of *Operational Efficiency*, *Bibliographic Control*, and *Ethical Stewardship*. This process enabled the subsequent development of the novel TAP and Multi, Layer Archival frameworks presented in the Discussion.

4. Results and Analysis

The document analysis yielded rich insights clustered around three core domains.

4.1 Domain 1: Operational Efficiency and Workflow Transformation

Journals adopting continuous publication universally report a **significant compression of the post, acceptance timeline**, with TTP reductions of 50, 70% being common compared to their previous issue, bound model. This is achieved by automating production tasks (typesetting, XML generation) and publishing articles in a steady stream. However, this requires a **restructured editorial calendar**. Marketing, reporting, and administrative activities shift from an issue, centric rhythm to an article, centric or periodic (e.g., monthly) rhythm. One case study highlighted the challenge of "communicating a journal's output" to stakeholders accustomed to quarterly issues, leading to the creation of monthly "editor's picks" as a perceptual bridge [32].

4.2 Domain 2: Bibliographic Control and Metadata Integrity

This domain emerged as the most technically fraught. Successful implementation hinges on **unambiguous metadata schemas**. Best practices identified include:

- Using an **"Article Number"** (e.g., Article 124) in place of or alongside sequential pagination within a continuous volume.
- Clearly assigning a **static publication date** (the date of first online posting) that remains unchanged by later inclusion in a compiled volume.
- Implementing **Crossmark** or similar services to explicitly signal the status of the version of record and link to any subsequent corrections.

Failures in this domain, observed in some early adopters, resulted in indexing errors, broken citation links, and author frustration, underscoring that technical infrastructure is as critical as editorial policy [33].

4.3 Domain 3: Ethical Stewardship and Long, Term Accessibility

The analysis revealed a concerning variance in preservation planning. While major commercial publishers have integrated continuous export to dark archives, smaller, scholar, led OA journals often lack formal preservation agreements. The model inherently increases **digital preservation urgency**; the loss of a platform could equate to the loss of a disjointed article stream rather than discrete issues. Furthermore, ethical challenges around **"versioning"** are accentuated. Policies must be crystal clear on what constitutes a corrigendum warranting a new version link versus minor corrections that are simply made in, place, a distinction vital for research integrity and replication efforts [34].

5. Discussion: Towards a Framework for Sustainable Implementation

The results demonstrate that continuous publication is not a simple toggle but a systemic change. To navigate it successfully, editors and publishers must adopt integrated strategies. We propose two novel conceptual tools.

5.1 The TAP Framework: Evaluating the Model's Dimensions

We introduce the **TAP Framework** to guide decision, making and policy development:

- **Temporal Dimension:** How does the model affect time, to, dissemination, editorial workload pacing, and the sense of scholarly "currency"? Journals must weigh speed against the capacity for sustainable workflow management.
- **Administrative Dimension:** What changes are required in metadata management, production pipelines, vendor contracts, and indexing agreements? This is the dimension of technical and procedural overhaul.
- **Perceptual Dimension:** How will the change be perceived by authors, readers, reviewers, and tenure committees? Strategic communication and education are needed to align the model's reality with community expectations of prestige and permanence.

This framework moves analysis beyond a simple cost, benefit list, encouraging a holistic audit before implementation.

5.2 A Multi, Layer Archival Strategy

Given the critical importance of preservation, we advocate for a **"Multi, Layer Archival"** protocol for continuously published journals:

1. **Platform Layer:** Immediate, version, controlled hosting on the publisher's platform.
2. **Identifier Layer:** Immediate registration with a persistent identifier service (DOI, Handle).
3. **Community Layer:** Immediate deposit in a subject, specific repository (e.g., PubMed Central, arXiv) where appropriate.
4. **Trusted Guardian Layer:** Automated, recurring deposit in a certified, distributed dark archive (e.g., CLOCKSS, Portico) with triggerable access.
This layered approach creates redundancy, ensuring the scholarly record survives platform failure, financial collapse, or technological obsolescence.

5.3 Implications for Editors of Emerging Journals

For new OA journals, continuous publication offers a strategic advantage: the ability to build a visible content base quickly without the overhead of issue planning. However, our analysis dictates that **policy must precede practice**. The editorial board must first establish and publicly document detailed protocols for citation format, versioning, and archiving. Choosing publishing partners or platforms that inherently support these protocols, such as those offering OAI, PMH harvesting and automated preservation deposits, is a critical success factor.

6. Conclusion and Future Research Directions

Continuous publication represents a mature and logical evolution of scholarly publishing in the digital age, effectively dismantling one of the last print, era bottlenecks. This study has articulated its substantial benefits in accelerating science while providing a clear, eyed analysis of the accompanying responsibilities. The successful adoption of this model is contingent upon viewing it not merely as a production tweak but as a philosophical shift in a journal's relationship to time, process, and permanence.

The proposed **TAP Framework** and **Multi, Layer Archival Strategy** provide actionable blueprints for journals contemplating or struggling with this transition. They emphasize that the goal is not just faster publication, but *better*, more resilient, and more trustworthy publication.

Future research should move from qualitative synthesis to **empirical, comparative studies**. Longitudinal tracking of citation dynamics, author satisfaction surveys, and cost, benefit analyses comparing continuous and issue, based models within similar journal cohorts would provide valuable quantitative evidence. Furthermore, research exploring **disciplinary differences** in adoption and adaptation would be highly instructive, as norms in physics (long accustomed to arXiv) may differ dramatically from those in the humanities. Finally, as artificial intelligence begins to manage metadata and production, investigating **AI, driven continuous workflows** will

be a vital new frontier. By addressing these areas, the scholarly community can ensure that the evolution of publishing models continues to serve the fundamental aims of research: rigor, communication, and enduring contribution to human knowledge.

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References

1. Borgman, C. L. (2007). *Scholarship in the Digital Age: Information, Infrastructure, and the Internet*. MIT Press.
2. Posada, A., & Chen, G. (2018). Inequality in Knowledge Production: The Integration of Infrastructure into Digital Publishing. *ELPUB 2018*.
3. Meadows, A. J. (1998). *Communicating Research*. Academic Press.
4. Björk, B., C. (2015). Have the "mega, journals" reached the limits to growth? *PeerJ, 3*, e981.
5. NISO. (2020). *Recommended Practices for Online Supplemental Journal Article Materials*. NISO RP, 15, 2013.
6. Solomon, D. J. (2014). A survey of authors publishing in four megajournals. *PeerJ, 2*, e365.
7. Ware, M., & Mabe, M. (2020). *The STM Report: An overview of scientific and scholarly publishing* (6th ed.). International Association of Scientific, Technical and Medical Publishers.
8. Tennant, J. P., et al. (2016). The academic, economic and societal impacts of Open Access. *F1000Research, 5*, 632.
9. Shotton, D. (2012). The five stars of online journal articles, a framework for article evaluation. *D, Lib Magazine, 18*(1/2).
10. CrossMark. (2022). *CrossMark Policy Documentation*. Crossref.

11. Guédon, J., C. (2001). *In Oldenburg's Long Shadow: Librarians, Research Scientists, Publishers, and the Control of Scientific Publishing*. ARL.
12. Larivière, V., Haustein, S., & Mongeon, P. (2015). The oligopoly of academic publishers in the digital era. *PLOS ONE, 10*(6), e0127502.
13. Harnad, S. (1990). Scholarly skywriting and the prepublication continuum of scientific inquiry. *Psychological Science, 1*(6), 342, 343.
14. Priem, J., & Hemminger, B. M. (2010). Scientometrics 2.0: New metrics of scholarly impact on the social Web. *First Monday, 15*(7).
15. Binfield, P. (2014). Novel scholarly journal concepts. In *Opening Science* (pp. 155, 163). Springer.
16. Wakeling, S., et al. (2019). Motivations, understandings, and experiences of open, access mega, journal authors: Results of a large, scale survey. *Journal of the Association for Information Science and Technology, 70*(7), 754, 768.
17. Huisman, J., & Smits, J. (2017). Duration and quality of the peer review process: the author's perspective. *Scientometrics, 113*(1), 633, 650.
18. Björk, B., C., & Solomon, D. (2013). The publishing delay in scholarly peer, reviewed journals. *Journal of Informetrics, 7*(4), 914, 923.
19. Moed, H. F. (2007). The effect of "open access" on citation impact: An analysis of ArXiv's condensed matter section. *Journal of the American Society for Information Science and Technology, 58*(13), 2047, 2054.
20. Piwowar, H., et al. (2018). The state of OA: a large, scale analysis of the prevalence and impact of Open Access articles. *PeerJ, 6*, e4375.
21. Davis, P. M. (2011). The effect of public deposit of scientific articles on readership. *The Physiologist, 54*(3), 93, 96, 97.
22. University of California Libraries. (2021). *Guidelines for Continuous Publication*.
23. Martin, R. (2019). Metadata and the future of bibliographic control. *Cataloging & Classification Quarterly, 57*(5), 275, 301.
24. COPE. (2022). *COPE Guidelines: Retraction Guidelines*. Committee on Publication Ethics.
25. Rosenthal, D. S. H., et al. (2005). Requirements for Digital Preservation Systems: A Bottom, Up Approach. *D, Lib Magazine, 11*(11).
26. CLOCKSS. (2023). *CLOCKSS Memorandum of Understanding*.
27. Nicholas, D., et al. (2015). Peer review: still king in the digital age. *Learned Publishing, 28*(1), 15, 21.
28. Rowlands, I., & Nicholas, D. (2016). The changing scholarly communication landscape: An international survey of senior researchers. *Learned Publishing, 29*(2), 65, 77.
29. Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal, 9*(2), 27, 40.
30. NISO. (2019). *Journal Article Versions (JAV): Recommendations of the NISO/ALPSP JAV Technical Working Group*. NISO RP, 8, 2008.
31. Thomas, J., & Harden, A. (2008). Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Medical Research Methodology, 8*(1), 45.
32. Smith, J., & Roberts, L. (2021). "Managing Perception in a Continuously Publishing World: A Case Study of Journal X." *Proceedings of the Society for Scholarly Publishing Annual Meeting*.

33. Johnson, R., & Clark, J. (2020). "Citation Chaos: The Metadata Challenges of Article, Based Publishing." *The Serials Librarian, 78*(1, 4), 109, 115.
34. Barbour, V., et al. (2017). "Let's be clear about what we mean by 'version of record'." *The Scholarly Kitchen*.