

From Open Access to Preprints: Are We Repeating the Same Mistakes in Scholarly Publishing?

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Editor's Note: Today's post is by Jonny Coates. Jonny, originally an immunologist, is a leading expert in preprints and metascience, focusing on science communication, trust, and research culture reform.

For more than two decades, the open access (OA) movement has been one of the most influential reform efforts in scholarly communication. It reshaped policies, business models, and expectations around the dissemination of research. Yet the movement has also faced persistent criticism, including from longtime observer and journalist Richard Poynder, who in 2023 announced that he would no longer cover open access after concluding that the movement had failed to achieve its original goals.

In an ebook outlining his reasoning, Poynder argued that open access not only fell short of its ambitions, but in some cases produced unintended consequences, including the rise of predatory publishing, the normalization of pay-to-publish models, growing inequities, and new opportunities for publishers to extract revenue through “double dipping”.

Whether one agrees with Poynder's conclusion, his critique raises an uncomfortable but important question for other reform efforts in scholarly publishing. In particular, the preprint movement, once seen as a pragmatic, low-cost, researcher-driven route to openness, now faces its own moment of uncertainty.



In 2023, bioRxiv marked a decade of rapid growth in life-science preprints. Yet only two years later, the landscape looks less secure. The Chan Zuckerberg Initiative (CZI), long the most significant funder of preprint infrastructure, has largely withdrawn from the space. Advocacy organizations have shifted their priorities and lost their expertise, and adoption rates in several fields appear to be plateauing. At the same time, new initiatives such as Publish-Review-Curate (PRC) are emerging, potentially fragmenting effort and authority within the ecosystem. Questions have already been raised about the current trajectory of the preprint movement.

I revisit Poynder's arguments about why OA faltered to examine if the preprint community is at risk of repeating some of the same mistakes and how it might course correct.

Argument 1: Advocates did not take ownership of their own movement and allowed co-option by legacy publishers

In his book, Poynder states that “the fundamental problem was that OA advocates did not take ownership of their own movement. They failed, for instance, to establish a central organization (an OA foundation, if you like) to organize and better manage the movement; and they failed to publish a single, canonical definition of open access.”

The general definition of a preprint is “a complete, draft version of a scientific or scholarly manuscript shared publicly on online repositories before formal peer review and publication in a journal.” However, this definition is contested, often viewed as dated and inaccurate. Evidence shows that preprints are not “draft” reports, and many are peer reviewed before posting (by colleagues or journals when preprints are submitted).

Traditional publishers increasingly dominate the space. The largest server, Research Square, is owned by Springer Nature, and each of the major publishers now operate their own servers. Society-owned servers are using publisher-owned platforms, such as the recent announcement that chemRxiv would be moving to Wiley's Research Exchange Preprints platform.

However, traditional publishers' co-option extends beyond infrastructure. As Poynder states in his [book](#), "OA advocates failed to anticipate – and then for too long ignored – how their advocacy was allowing legacy publishers to co-opt open access." Efforts such as PRC are publisher-driven and threaten to divert attention, funding, and resources away from the basic advocacy that this model relies upon. This fragmentation threatens the entire movement. It is also a clear co-option of the preprinting movement to benefit a publisher-dominated model. As with the OA movement, this particular co-option is not just originating from the legacy publishers but from those that are more innovative, too. Indeed, even key advocacy efforts are currently pursuing efforts much more aligned with publisher interests rather than those of researchers.

There is hope. The most well-known bioscience preprint server, [bioRxiv](#), is owned by the non-profit organization [openRxiv](#), which has greater community governance and focus. This server also integrates with multiple third parties, allowing for experimentation within the scholarly communication landscape, free from restricted and publisher-dominated workflows, such as PRC. More recently, [arXiv](#) is also becoming an independent non-profit.

The preprint movement reflects Poynder's first argument; lack of a central strategic organization, increasing fragmentation and hijacking by publisher-aligned interests. However, it has not yet completely fallen, and openRxiv offers a particular ray of hope. A significant renewed effort in advocacy and ownership will be essential to avoid falling afoul of this argument.

Argument 2: Lack of sustainability

Poynder argues that the OA movement did not "give sufficient thought to how OA would be funded". Indeed, this is why we've witnessed the rise of article processing charges (APCs) and transformative agreements.

Preprint servers have relied on funding from grants and funding bodies such as the Wellcome Trust, the Howard Hughes Medical Institute (HHMI), CZI, and the Gates Foundation. As funders withdraw, servers are left to determine other sources of funding. Some are turning to charging institutions whilst also continuing to seek support from funders. Library budgets continue to shrink, and so this funding model may not be sustainable over the long term.

Although preprint servers are an order of magnitude cheaper than journals, they still have costs. Researchers who set up preprint servers on the OSF platform (run by the Center for Open Science (COS)) discovered this when COS began charging for the use of the infrastructure, resulting in several [preprint servers shutting down](#). The rise of AI has also caused issues for some preprint servers without screening processes (primarily OSF and psyArXiv) [to temporarily stop accepting submissions](#). Even those servers with current screening in place are having issues with [AI-generated content](#). For now, many servers rely on volunteers to screen preprints, but where in-house staff is used, this incurs additional costs.

Sustainability is a perennial issue that the preprint movement has not yet solved. Publisher-owned servers benefit from more secure funding (and this is one way publishers could use their profits to benefit the scientific community). However, this removes preprint servers from researcher governance and control. Efforts such as PRC risk further escalating costs through two means. Firstly, the services themselves are funded by organizations or funders — taking funding away from preprint servers and other efforts — and secondly by introducing article review charges in addition to APCs (or article "curation" charges); reviewing charges have already been [suggested](#). These costs are likely to be borne by authors, and therefore funders or institutions, further spreading an already thin funding source.

Poynder [summarizes](#) the sustainability problem well: "But why do I think scholar-led initiatives are unlikely to prove sustainable? Because in the main they are reliant on money from libraries and funders." Preprints are much more sustainable than the many OA approaches due to significantly lower costs and less specialization, but they do (currently) rely on libraries and funders.

Argument 3: Mandates and top-down control

Poynder puts this pointedly, describing OA efforts as “morph[ing] into a top-down system of command and control” and describing mandates as “something that resembles an administrative power grab more than a principled researcher-led movement focused on sharing”. This is a strong view of mandates, but one that (anecdotally) many researchers share.

Preprints are often promoted as restoring author control. However, it could be argued, as Poynder does, that mandating preprints removes this choice and turns the movement into a top-down effort rather than the necessary cultural shift that grassroots efforts can achieve.

Preprint mandates are increasing, too. HHMI, the Gates Foundation, and Aligning Science Across Parkinson's have all introduced policies mandating preprints. These policies are typically motivated by legitimate goals, and yet they also illustrate how quickly a voluntary practice can become institutionalized. Perhaps a good example of supporting preprinting without mandates can be found in the EMBO policy, which supports the citation of preprints in fellowship applications but does not mandate their use by grantees. This approach can reward desired behaviors without removing researcher choices. Naturally, over time, researchers who engage with the desired behaviors will be advantaged, and others will follow suit to avoid being disadvantaged.

A significant issue with mandating preprint posting is that such efforts do not always include the necessary education, training, or outreach. This forces compliance without helping researchers understand why they should comply or how such actions are beneficial. Additionally, funders spend funds and resources on ensuring compliance with mandates, which can be challenging and expensive.

Here, the preprint space is actively pursuing mandates for preprinting. Advocates largely see these mandates as a positive development, but there is little evidence about how researchers perceive them.

Argument 4: No overarching strategy

The OA movement had “no coherent overarching strategy,” as Poynder states. “This could have perverse effects, which has in fact been an abiding feature of OA initiatives.”

As discussed under the first argument, the preprint movement never had a truly centralized organization. Key organizations that *could* have filled this role never provided a fully overarching strategy, and now, as preprint adoption is stalling, are focussed much more on efforts benefiting publishers. This also highlights a larger issue with preprint advocacy: current efforts have plateaued, and there is little willingness to attempt different outreach and educational activities.

Plan U represents a vision for preprints (see Argument 3 above re: mandates), but was never backed up with an organization to deliver that vision and is not a strategic document. An updated vision was presented by Richard Sever in 2023, but again, there is no clear (public) strategy on achieving this vision. If a coalition can be formed between preprint servers, researchers, institutions, and funders, then it may be possible to develop a more coherent and overarching strategy.

As discussed, some preprint-related efforts such as PRC are being developed in a manner that is likely to cause perverse effects, suggesting that the preprint movement is not only suffering from a lack of strategy but is now positioning to inflict damage — “an abiding feature of OA initiatives”.

openRxiv may attempt to provide this overarching strategy, but the fragmentation of the landscape and competing interests of those who have consolidated power could prevent progress. Regardless, the preprint movement does not have an overarching strategy and therefore falls into the same issue that the OA movement suffered from.

Argument 5: Loss of evidence-driven approaches and objectivity

Poynder determined that “many OA advocates seemed to stop being objective in their advocacy, as the “cause” began to take precedence over rational discussion, objective weighing of facts, and clear-headed assessment of the advantages and disadvantages of open access.” Unfortunately, this is becoming true of the preprint movement, too.

There is a small minority who are concentrating power within the movement and using this to further their own agendas, without self-reflection or accepting criticism. Often, these individuals have conflicts of interest, such as creating and running the services that they promote. Additionally, new efforts are often created and developed in closed, invitation-only meetings that limit participation. PRC is a prime example of a new effort developed in a manner inconsistent with open science practices and reluctant to criticism. Significant evidence now exists demonstrating preprints are comparable to their peer-reviewed counterparts. However, the PRC effort centralizes peer review to advance the preprint review services reliant on such a model.

As part of this argument, Poynder stated that there is a “lack of consideration for what researchers want.” Indeed, many advocates push a one-size-fits-all approach, ignoring vital disciplinary differences. There is an increasing detachment between those involved in the preprint movement and the average researcher. Many key individuals within the movement lack a life science background, limiting their genuine understanding of the experience and motivations of these researchers. This gap leads to misguided reform efforts that add administrative burdens and increase workloads. Collectively, this can alienate researchers from the very efforts designed to improve science. In private correspondence, many researchers have raised concerns with the current directions of the open science movement.

There are several surveys of researchers’ perceptions toward preprints, yet these are not modifying advocacy efforts. For example, persistent myths and misconceptions surrounding preprints have remained since 2013, yet advocacy efforts have not substantially changed to more directly tackle researchers’ concerns. However, in some cases, this may finally be changing. In 2025, a collaboration between the preprint and assessment reform movements began — albeit with a closed meeting and a degree of moving away from preprints towards the PRC model. It remains to be seen if this will cause long-term detriment or be beneficial.

Despite this, the preprint movement is largely backed by evidence, and some of the most prominent people involved remain objective and self-reflective. Although the preprint movement does not quite meet this argument, it is beginning to waver.

“Before any new OA initiative, policy or mandate is introduced, those proposing it should be duty bound to...do due diligence on the dangers of it creating new problems or having perverse effects,” Poynder states. Those involved in academic reform efforts would do well to remind themselves of this, as when perverse effects occur, they damage the whole movement.

Argument 6: Reform movements act independently

This is not an argument that Poynder specifically made, but it is one that I believe impacts all reform efforts within academia. Many initiatives that aim to improve scholarly communication, or academia more broadly, operate in parallel rather than in coordination, limiting their overall effectiveness and slowing systemic change.

One of the key concerns for researchers adopting preprints is that they are not recognized in assessments for hiring or promotion. Yet despite this, the preprint and assessment reform movements have only very recently come together to directly collaborate. Without alignment between these movements, researchers face conflicting signals: they are encouraged to share work as preprints, yet evaluated using criteria that do not fully acknowledge those practices.

Another example is in the open access movement. Green OA, which includes the use of preprints and repository-based sharing, is often under-represented in broader open access conversations, which instead focus on Gold or Diamond OA publishing models. Therefore, policies and advocacy efforts may prioritize journal-based solutions while overlooking approaches that could be implemented more quickly and at lower cost.

Providing only partial solutions is not a strategic approach to systemic change and risks weakening the impact of reform efforts. When multiple initiatives pursue similar goals in isolation, progress becomes fragmented and slower than it could be through coordinated action. The existence of several separate reform agendas can also create confusion for researchers, who may struggle to understand which practices are expected, rewarded, or permitted within their institutions. Greater collaboration between movements would help create consistent incentives and make it easier for researchers to adopt more open and transparent forms of scholarly communication.

Avoiding another missed opportunity

The experience of open access suggests several lessons for the future development of preprints.

Community governance matters. Infrastructure that remains under academic or non-profit control is less likely to be reshaped purely by commercial incentives. This also helps to ground any efforts in genuinely serving researcher needs.

Equity must be considered early rather than retroactively. Funding models built around author payments risk reproducing the same structural inequalities already visible in APC-funded open access. It is vital that a global approach is taken, which actively includes voices from regions beyond Western Europe and the USA.

Policy debates and advocacy efforts need intellectual pluralism. Reform efforts are healthier when dissenting views and empirical evidence are taken seriously rather than treated as obstacles to momentum.

The behavior of influential actors matters. The trajectory of scholarly communication reform is often determined less by technical possibilities than by the priorities of those shaping policy, discussions, and infrastructure.

Cohesion and strategy are important. Increasing fragmentation and loss of support for vital advocacy are only damaging to the movement. Cohesion and overarching strategy provide consistent incentives and make it easier for researchers to adopt preprinting

A pivotal moment

So, have we learned any lessons from the OA movement, and is the preprint movement about to fail in the same way?

Right now, the preprint movement sits on the precipice, and the decisions made in the next few years will prove pivotal in determining whether preprints become a stable, community-governed part of the scholarly ecosystem or drift into the same patterns of fragmentation, inequity, and co-option that have complicated the open access transition.

But another key question to ask is: is the preprint movement healthy? What's clear is that the movement is not financially healthy, there is an increasing reduction of voices and transparency, adoption is stalling, and the cultural shift needed has not escaped the minority. So whilst the movement has not failed yet, it is definitely unhealthy.

It's not too late, but what is needed may not be attractive to funders, nor those co-opting the effort for their own agendas.