

## Rejuvenating Green OA for a Greener Pasture

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# Rejuvenating Green OA for a Greener Pasture

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## Abstract

This paper is a critical sequel to John Dove's paper titled "Maximum Dissemination: A Possible Model for Society Journals in the Humanities and Social Sciences to Support 'Open' While Retaining Their Subscription Revenue," presented at the Charleston Conference 2019. Dove's OA advocacy has included both gold and green. Dove's innovative model, which makes full use of the green route to achieve maximum dissemination of authors' works through open repositories, suggests a switch in the functional responsibility for depositing authors' manuscripts from author to publisher. The model has publishers act as agents of the authors as much through the green route as their subscription route. Dove has suggested this maximum use of the green path by the publisher for specific journals in specific disciplines. This paper looks to examine the feasibility of green OA model in this context, and then to consider other ways to expand on this idea to other green OA-supporting publishers. It further looks at the possibilities of the model driving the reemergence of green OA as a favored option for facilitating immediate and parallel dissemination of authors' papers through both green and subscription channels.

## Introduction

All through the history of print journals, publishers rarely took the responsibility for archiving and dissemination of all that they published. These two functions were and continue to be managed by libraries with the support of abstracting and indexing services, which acted as the dissemination media for libraries and their user community. Publishers confined their responsibility to publish through a peer-reviewed editorial process and deliver the published journals to subscribers, largely libraries, through the subscription model. Libraries facilitated the physical access to published papers, not only for their users within but also to the users without, through extensively practiced interlibrary document delivery services. Authors too played (and continue to play) an invisible but impactful role in the dissemination process by exchanging papers among their peers as preprints (before publishing) and reprints (postpublishing) and citing papers they found relevant to the context of their paper. The idea of authors sharing their papers as preprints started during the 1960s but stopped or slowed down due to resistance by publishers who feared that their revenue might be affected by this practice. The resistance became a rule characterized as the Ingelfinger rule, originally stipulated by the *New England Journal of Medicine*. The crisis of confidence between the scholarly community and publishers perhaps started during this period. Sharing preprints as a dissemination model had a rebirth in 1991 in the form of e-prints by a group of scholars in physics, mathematics, and computer sciences, resulting in a new digital archive of preprints at the Los Alamos National Laboratory,

which came to be known as arXiv. The seeds of OA were sown from this point, signaling preprint repositories as the medium of maximum dissemination of research papers that could not be reached through journals behind paywalls.

The evolution of the Internet resulted in a kind of role-reversal between libraries and publishers. Empowered by the emerging digital publishing technologies driven by the Internet, publishers started taking control of archiving and dissemination functions as an integral part of their publishing process. This new power gained by the publishers resulted in continued escalation of journal prices and greater publisher control over published content. This development further worsened the crisis of confidence between publishers and the scholarly community. The crisis led to the formal launch of the OA movement, with authors strongly and firmly invoking their rights to self-archive their papers as preprints at the Budapest OA Initiative (<https://www.budapestopenaccessinitiative.org/read>). Thus, OA was born with green as the first and preferred option.

## OA Success and Achievements

After nearly 18 years of well-sustained movement, OA has come to stay, but has yet to find firm footing through a long sustainable business model either through green OA or gold OA or any of their combinations. How much has the OA movement achieved in its nearly two decades of a turbulent, often hostile, contradictory, and chaotic journey with every stakeholder taking their own noncompromising position? The beauty of this exciting and

evolving movement is: users are reaping the benefits with significant and ongoing increases in the OA paper population; publishers are finding new ways to outsmart the OA advocates and enthusiasts; and the research funding agencies are stepping in to take control of the situation to drive it in a direction that ensures maximum dissemination through OA, securing the interests of all stakeholders.

Here is a snapshot of the OA movement highlighting its success so far.

- Out of about 79 million papers with DOI, 30% are free to read (CrossRef data, October 26, 2019).
- By percentage distribution, bronze OA (embargoed) accounts for the highest percentage of OA prevalence (see Table 1) (Piwowar, 2018).
- The OA paper population continues to grow year after year. According to J-Gate, a journal discovery service that tracks and indexes published papers from 48,000+ journals in the English language, 37% of close to 3 million articles published in 2018 are available free now and 51% of journals are fully OA titles ([www.jgateplus.com](http://www.jgateplus.com)).
- OA articles receive 18% more citations than average (eather Piwowar, 2018).
- 81% of 2,561 scholarly publishers listed in Sherpa/Romeo allow authors to archive their submitted work either pre- or post peer-reviewed (Sherpa/Romeo site).
- The large majority of faculty (64%) and researchers favor open access over a subscription model as revealed in a recent Ithaca survey (Blankstein & Wolff-Eisenberg, 2019).

**Table 1. Percentage share of all OA types.**

Access Type	% Share
OA (all types)	27.9%
Bronze OA	16.2%
Hybrid OA (a version of gold)	3.6%
Gold OA	3.2%
Green OA	4.8%
Closed (behind paywalls)	72.0%

Source: Piwowar, 2018.

- The gold (APC-based) OA model is estimated to have achieved a revenue level of \$450 million, which is around 5% of subscription-based journals' revenue (Auclair, 2015).

### Where Does the Green OA Initiative Stand Today?

Green OA is a parasite of the subscription model and can be considered as complementary to the subscription model. But the journal publishers, fearing the threat of extinction from the all-powerful OA movement, started coming to terms with several new initiatives by the scholarly community and the governments in support of OA. They redefined their strategies to ensure the continuity of their healthy and rewarding business, which is not unnatural. In their new strategy, they have aggressively followed the gold model, creating new variants like hybrid OA and bronze OA (embargoed), blending them with the still dominant subscription model in their serious pursuit of a sustainable future business model. However, the revenue success of OA models is far behind the subscription model at just around 5% (Auclair, 2015). The potential dangers of predatory journals, a product of gold OA, also cannot be discounted. If these developments are any indications of the inevitability of the subscription model in some form with publishers' continued role and involvement as key stakeholders in the OA movement, OA advocates may have to think of revisiting the OA journey so far from a long-term strategic perspective of achieving the maximum dissemination goal. John Dove's model (Dove, 2019) of flipping the preprint submission process to a repository from author to publisher could be an interesting beginning in this direction to strengthen and advance green OA.

### Dove's Model

Dove's OA advocacy and research has included ways in which both the gold and the green routes to OA can be improved on and, even in some cases, combined, as they must be, if we are to provide open access to the backlist (Dove, 2015).

It is primarily the lack of consistent funding in the humanities and social sciences (HSS) that motivated Dove to come up with an innovative model in which subscriptions without paywalls and total commitment to the green path could be just the right choice for some disciplines. He calls this model of 100%

compliance with archiving of author accepted manuscripts (AAMs) “Maximum Dissemination.”

If there is an easy way to archive preprints of all published papers under authors’ right to self-archive, it will lead to achieving the maximum dissemination goal through the green OA route. John Dove’s model exploits this capability of green OA to coexist with subscriptions but with the added twist of achieving 100% compliance and taking down the subscription’s paywall.

In its pursuit of the maximum dissemination ideal, the model identifies a large group of what Dove calls marginalized users who are deprived of access due to the paywalls that stand guard over accessing subscription content. While these paywalls control access by these marginalized groups, the gold OA creates another set of marginalized communities among authors who cannot afford to pay article processing charges (APCs). There are certainly a whole number of models where APC is paid by some kind of subsidy. The problem that Dove points out in those models is that they turn the publishing operation into a cost center instead of a revenue center, making it unsustainable in the long run.

However, green OA suffers from a peculiar author inertia, which is the cause of a serious logjam in its anticipated progress and success. A recently published survey based on the large random critical sample method estimates green OA’s share in the total OA papers population at 17.2% (Piwowar, 2018). This slow rate of green OA progress confirms serious inertia by authors, which is intriguing as more than 80% of the publishers on Sherpa/Romeo allow authors to self-archive. This is in spite of several tools such as Dissemin (<https://dissem.in>), Open Access Button (<https://openaccessbutton.org>), and so on that are available for making the depositing task easier for authors. The current green path of allowing authors to self-archive is simply not working because it is simply too much work for the author.

Dove’s model requires the publisher to exploit the green path on behalf of authors. The publisher will take down the paywall, thereby achieving 100% immediate green with no embargo. It requires that publishers act as the catalysts of dissemination by proactively shouldering the responsibility to submit AAM to an appropriate national repository and provide the link to that repository from their site in addition to the link they provide for their published PDF version. This, Dove believes, will break the jinx

of author inertia and ensure guaranteed availability of AAM of all published papers from such journals for maximum dissemination.

### What Could Be Publishers’ Reactions to Taking This Responsibility?

On the face of it, the idea may look naïve and counterproductive to publishers’ commercial objectives. But it has its strong merits as much as its serious limitations. Arguing as devil’s advocate in my role as a former librarian and currently supporting a co-publishing program for a few professional societies in India for publishing their journals through our company, I identify the following pros and cons with an attempt to counterbalance them.

- *Add-on-efforts*: It is an additional task with additional costs even if the process is fully automated. Smaller publishers may feel the burden is severe as they largely outsource their IT support functions. Incorporating parallel uploading of AAMs as a standard functional feature in the journal publishing platforms like OJS can make publishers’ task easier.
- *Revenue loss*: The journal website will show two full-text links: one for subscribers’ access to the published version and another for free access to the author’s manuscript version directing the user to a repository. The library budgets around the world are either flat or declining. Hence, there is a definite danger of subscriber institutions opting out from subscriptions in the following years, particularly when the library comes under budget stress, unless the subscribed version is compellingly far superior in its content value and differentiation. Even if the journal doesn’t suffer from immediate decline in its subscription revenue base, the future revenue growth is likely to be stunted due to the immediate and parallel availability of the free version with the paid version. Arguing against the fear of revenue loss is easier as there is no empirical data to prove that this model will hurt the subscription revenue beyond sustainability. On the contrary, the current subscription model has survived so far in spite of fierce and often hostile advocacy against this model by OA enthusiasts.
- *Value differentiation*: However, to mitigate risks of revenue loss, the publisher can

highlight the specific and compelling value differentiation features of the published version to users downloading the article by listing separately in the preprint version all key features or content values excluded from the free version that are available in the paid version, such as: (a) neatly tabulated data tables with highlight features; (b) info-graphics; (c) photographs; (c) full-text links to cited references; (d) a searchable version of PDF downloads, and so forth.

- *Usage impact:* Usage by download will dramatically increase, which can be showcased to subscribing libraries and authors. Evidence based on the average relative citation (ARC) impact of different access categories also suggests that OA-available papers received an average of 18% more citations than what was expected and those behind a paywall were cited below the world average (Piwowar, 2018).
- Publishers will gain authors' loyalty and respect as their partners.

### Looking Beyond Flagship Society Journals

While Dove's proposal assumes the feasibility of implementing his model is limited to flagship society journals with solid revenue stream in the HSS domain, there is no reason to believe that its feasibility can't be extended to other types of subscription-based journals that have given their open support to green OA. Recent developments in OA following the emergence of the Plan S initiative are signaling greater hopes for green OA as a more acceptable model for publishers. This may open up a larger canvas for testing Dove's model of flipping the preprint submission process from author to publisher.

### Greener Perspective of Plan S Impact

The recently announced Plan S model by a group of European funding agencies as the way forward for achieving immediate and maximum dissemination is driving the OA movement toward complete gold. While green is a complementary model to traditional publishing, gold is a total switch from the library subscription to the author pays model. The gold model redefines the publisher-author relationship from a partner role to a customer relationship. The former is complementary in nature while the latter is competitive and demanding in character.

Publishers have been more aggressive with the gold model by introducing a hybrid journal model, resulting in a comparatively faster growth of gold as against green. As can be seen from Table 1, the gold OA category including the gold in hybrid OA accounts for 24.3% of the total OA papers population, which is much higher than the share of green OA at 17.2%. While publishers were possibly aiming toward using the gold model as a growth model to replace the current library subscription model over time to meet the objectives of the OA movement, the Plan S model has created an element of discomfort among publishers with several concerns. Plan S is likely to result in publishers losing their identity as publishers and copyright owners to become publishing contractors, like printers, on the terms stipulated by Plan S. It will be a total loss of business freedom for them and the journal will cease to be a designed product in a highly readable format with visual appeal. In the aftermath of the Plan S announcement, publishers are finding green OA to be the more comfortable option. A recent survey of 27 nonprofit publishers by HighWire Press found that the publishers rated green OA without an embargo more favorably than all other OA types (Brainard, 2019). Even authors are unlikely to feel comfortable with the Plan S–stipulated gold OA model as they fear that the model may hurt their academic freedom, which is the primary incentive for innovation and research in the academic world.

Plan S does not discourage subscription journals as long they support green OA, with the condition that a copy of AAM, or the final published article, shall be deposited in an approved OA repository. Most of the major publishers who have publicly declared their intent to support green OA (Sherpa/Romeo) may realign their business strategies to go fully green as their favored choice. Incorporating Dove's model will prove to be a great incentive to publishers in complying with Plan S while retaining their current business independence.

### Conclusion

Dove's model has the potential for fitting in well with all types of traditional journal publishers who are aligning their long-term growth strategies with green OA. It will also be a demanding challenge for publishers to innovate and create a distinctly new set of values that will enhance the content value of the author's work in the published version. Authors are publishers' business partners as they provide raw material for the final product. It is important to

retain this relationship that has served well for over three centuries. Publishers taking a positive call on Dove's idea will strengthen this relationship.

The OA movement is still in its maturing phase. Several models have emerged with Plan S being the latest as a critical evaluator of the existing models to find a new and globally acceptable one. Plan S supports both gold and green OA. Publishers have

contributed reasonably well in expanding the OA paper population by supporting all models directly or indirectly while exercising the usual caution required by business prudence. The full green OA-supported subscription model where publishers take a proactive role in implementing Dove's model may prove to be a significant contribution to nurture green OA toward achieving both immediate and maximum dissemination.

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