

Open Access Publishing

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Publishing research in open access journals has been widely discussed over the last decade. Both free access and open access give the reader seamless access to research papers/articles. So, what's the difference? This article discusses the credibility of academic journals, their changing form (print to electronic) and their publishing models, focusing on the Open Access model.

Researchers, the world over, are engaged in discovering new knowledge and reaffirming the results of previous endeavors. The knowledge thus created, should be communicated to the public to use, apply and build upon. Research endeavors get disseminated through academic journals that reveal the author's methods of investigation, observations and outcomes. Academic journals thus map the progress of any particular discipline.

Academic journals have traditionally been published in print format by universities and learned societies; certainly since 1665, if we were to use the *Philosophical Transactions of the Royal Society*, London, as a credit worthy landmark. Embedded stringent editorial practices, editorial boards, and peer review systems, authenticated contents and nurtured the journals into trustworthy repositories of the research ecosystem.

By the end of the II World War (1944) these trusted, non-profit making journals were acquired by commercial publishers and repositioned as profitable endeavors, accessible only through subscriptions. This model, also known as the reader/library pay model worked well for a few years, and in the 1970s, the mismatch between rising subscription rates and the decreasing budgets in institutional libraries, led to a serious crisis, and forced libraries to reduce the number of subscribed print journals.

Electronic journals gave rise to two critical issues viz. pricing and permission. In the mid-1990s, to solve these issues, Open Access movement was initiated to promote free, immediate, permanent worldwide access to peer reviewed journals. In 2002, declaration by the Budapest Open Access Initiative (BOAI), recommended two complementary strategies viz. Open Access and Self Archiving. It states that researchers should get the electronic copy of their papers for the widest possible dissemination, and should be allowed to archive the papers on personal or Institutional Repositories (IR) without the permission of the publisher. The statement clearly stated that OA is

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only applicable to peer-reviewed research papers and pre-prints (copies of the paper accepted for publication). Published paper can only be made available through IR after the embargo/moving wall period (usually 12 to 24 months) is over. This model is popular as Green OA.

Categorically, it did not support, the extra charges to be paid to the publisher, for making the paper accessible online. For access it freely, the researcher/publisher could avail the Creative Commons license for their work, which is built upon the copyright law (<https://creativecommons.org>). Several IRs and pre-print archives were created, amongst which physics (<https://arXiv.org>) by Cornell University, USA, remains the most popular. Registry of Open Access Repositories (<http://roar.eprints.org>) lists more than 4750 repositories. Though the IR started with lot of enthusiasm, it failed due to variety of reasons, like the lack of skilled personnel, infrastructure, funding, and awareness among the faculty members and other end users.

In the 1990s, in order to compete with the traditional publishing model, publishers came up with a new revenue-generating model-the author's pay model sidestepping libraries. Authors who wish to publish their article online after the acceptance, can pay extra charges to make it accessible to public immediately. They can pay either from their pocket or by institution or by funding agency. These charges are known as Article Processing Charges (APCs), for allowing immediate access to research papers. High internet speed made this model very successful. Each publisher drew up its own OA policy for APCs, to cover the cost of review, manuscript preparation and server space. These journals are known as Gold OA journals.

This model has become popular because of no subscriptions, no paywall and wider audience. Moreover, researchers may get more visibility for their papers in the form of citations. OA publishers launched Gold OA Mega Journals (OAMJ) that had broad subject coverage in which several thousand papers have now been published per year. OAMJs popular feature is the quicker turnaround time between reviewers and researchers. *PLOS One*, *BMJ Open*, *Scientific Reports* are known OAMJs.

To summarize, unless the researcher has substantial funding for paying APCs, he/she cannot make the research open to the public in Gold OA and OAMJ journals even after the acceptance from publisher. The budget of the institution and libraries were severely impaired by the demands of Gold OA. In fact, the publishers have resorted to double dipping, retaining their income from subscriptions in hybrid journals and take advantage of OA by APCs from author. Holley mentions in 'Open Access: Current Overview and Future Prospects' (2018), that the original intent of OA was to limit the monopoly of profit-making commercial publishers, but in reality, the very opposite transpired.

OA model is exploited by certain publishers who have taken advantage of 'Publish or Perish' policy for career advancement of faculty and researchers. In online publishing, these publishers have adopted corrupt practices, disregarding content quality, integrity of research and peer

reviews. This type of publishing was labelled as ‘Predatory publishing’ by Jeffrey Beall in his paper, ‘Predatory publishers are corrupting open access’ (*Nature*, 2012). Scholars / faculty members wanting to publish their research in a short duration of time, prompted OA publishers to take advantage and they brought out the ‘Pay and Publish’ model. Beall’s most damaging indictment of OA was against its destruction of the traditional model of publishing, where there was no monetary exchange between the scholar and the publisher.

Green and Gold OA publishing model by commercial publishers made a huge impact on Indian research. OA movement was initially welcomed, and many IRs were created by universities and institutes; but lack of funding for skilled personnel and infrastructure quickly turned the tide against OA. Lack of funding was the major barrier to publishing in Gold OA and hybrid journals. This resulted in a large number of research papers moving to Green OA but immediate accessibility remained a serious handicap. Though funding is still scarce, the number of papers are slowly increasing in Gold OA over the last decade.

Though the OA movement (Green OA) arrived with the intention of making scholarly publications accessible to all, beyond paywalls, it was exploited by the commercial publishers through APCs. The subsequent rise of predatory publications, became an unacceptable fallout. According to Cabells database, there are more than 13,000 predatory journals (<https://www2.cabells.com>). There are worldwide initiatives to fight against predatory journals such as by Beall’s list of predatory journals, USA, UGC-CARE initiative (<http://ugccare.unipune.ac.in>), India, Kscien list of predatory journals by Kscien Organization for Scientific Research (<http://kscien.org/predatory.php>), Centre for Journalology, (<http://www.ohri.ca/journalology/>), Ottawa Hospital, Research Institute, Canada.

Overall, there are four OA models available for journals.

1. **OA free model:** Journals indexed in DOAJ for which neither author nor reader/library has to pay
2. **Green OA:** Subscription-based model with 12-48 months embargo or moving wall period.
3. **Gold OA:** Author pay model, surviving on Article Processing Charges (APCs)
4. **Predatory OA:** Pay and Publish model in which the peer review process and standard publishing practices are overruled.

According to Peter Suber (Director of the Harvard Open Access Project), in his latest interview, the philosophy of OA movement was unfamiliar and misunderstood by the research community. Therefore, open platforms, pre-print servers, are required to be established, where results of genuine research would get placed to be read, commented on and shared by all, without the pay wall hurdles of the commercial publishers (<https://openinterview.org/2019/06/29/peter-suber:-the-largest-obstacles-to-open-access-are-unfamiliarity-and-misunderstanding-of-open-access-itself/>). Publishing in open platforms without APC, would be the first check for a researcher committed to maintaining the integrity and ethics.

Different publishing models have created confusion among researchers. They should be trained and accustomed with all types of models of publishing. They need to know following key points before publishing their research.

- Difference between credible, authentic and predatory journals.
- All OA journals are not predatory journals.
- Before submitting papers, authenticity of journals should be checked based on credentials of editors, quality of published articles, hidden charges, etc.
- There are funding opportunities for researchers to publish in Gold OA journals.
- Difference between predatory pre-print servers and authentic one.

Finally, each researcher must be aware of various publishing models, including their pros and cons. A wider dissemination of information about these key points, discussion on subject-specific preprint archives, the larger role of institutional funding and repositories is required among researchers, particularly in India, so that they are not misled by publishers and can facilitate their research reaching a wider audience.

Check list for identifying authentic journals

- ✓ Whether there is diversity of contributors or are they all from the same institution/region
- ✓ Whether the articles are carefully proof-read
- ✓ Whether the journal data on website/webpage is correctly done, in correct English
- ✓ Does it have an Ethics policy?