

THE OPEN ACCESS MOVEMENT, TO MAKE ACADEMIC PAPERS ACCESSIBLE FOR ALL

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To enjoy additional benefits

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Open access (OA) is a term associated with certain practices in academic publishing which improve access to scholarly work. An OA scientific paper will be free and fully accessible. The OA movement is prominent today because of the high cost of accessing scientific papers. It's common for a paper published by many journals to cost \$15+ to read once and \$30+ for permanent access. Subscriptions to these journals have also become more expensive, costing universities several crores a year. There are many OA initiatives that offer better alternatives. India recently took the first steps of its [‘One Nation, One Subscription’ \(ONOS\) scheme](#): the government, instead of universities, will negotiate with publishers for a capped and fixed fee to access their papers (of studies funded by the state) and pay the fees, so that everyone in the country can read the papers at no additional cost. The [Education Ministry](#) has so far shortlisted 70 publishers and set an implementation deadline of April 1, 2023.

Scientists write up a paper and submit it to a journal. Editors at the journal share the manuscript with peer-reviewers — experts on the same topic who scrutinise the authors' claims, and also provide feedback on structuring the manuscript, including references to previous results, reaching certain conclusions, etc. After the review is complete, the draft is finalised and the journal publishes the paper — in print, online or both.

In the 'subscription model', papers published online are behind a paywall. Paywall fees have increased in leaps over time. In a [2018 analysis](#), Duke University found that 59 of the 100 "most highly cited articles ever published are behind a paywall" and that the "average cost of one of these articles for an unaffiliated researcher is \$33.41" — or 2,285 (2018). A [2020 report](#) prepared by fellows of India's science academies wrote, "During 2018, India spent an estimated 1,500 crore for subscriptions to [e-journals] and/or print journals." Higher access costs put papers out of reach of other researchers as well as journalists, policymakers, students, etc.

OA gained momentum with the advent of the internet in the early 1990s, followed by researchers', librarians', and other stakeholders' interest in reducing publishing costs and improving access. In 1991, physicist Paul Ginsparg created arXiv.org, a preprint repository. A preprint is the manuscript before it has been submitted to a journal. Preprint papers aren't peer-reviewed in the conventional sense, but some workarounds exist, like post-publication peer-review.

The availability of preprints prompted many journals to switch to OA as well, but with a twist. Some of them began to charge the authors of a paper before publishing instead of the paper's readers after publishing — a fee that journals called an article processing charge (APC). The APC model is called Gold OA. There are two other types that are popular, and several others overall. In Green OA, an institute-level repository archives copies of papers by its researchers and makes them public after an embargo period, often specified by the journals that publish the papers. In Diamond OA, a journal publishes papers at no cost. Additionally, while hybrid journals follow the subscription model, once a paper is published and paywalled, its authors can pay extra to 'make' it OA.

There are also gratis and libre OA. According to [one definition](#), "gratis OA alone allows no uses beyond fair use, and libre OA allows one or more uses beyond fair use". Sci-Hub, a web platform that provides open-access to lakhs of illegally obtained research papers, and whose legality is currently being considered in the Delhi High Court, is [said to be Black OA](#).

However, many journals charge exorbitant APCs. *Nature Communications* publishes papers that are openly available but [its APC per accepted paper](#) is 5.2 lakh. ([There are waivers](#) for low-income and lower-middle-income countries but India isn't eligible.) In 2016-2019, the 2020 report stated, Indian researchers spent 38 crore to publish papers in "just two OA journals: *PLOS One* and *Scientific Reports*".

The government conceived of ONOS in 2020 to lower this bill, but experts remain sceptical. There are three main concerns — first, while the government will pay a fixed sum to journals, this sum could still be large; secondly which journals will be included in the negotiations and why? (a 'recommended list' [faced some resistance](#) in 2020); and finally as India has a large population of researchers with diverse interests, journals may not agree on a common price.

UNESCO's 2021 ['Recommendation on Open Science'](#) asked that "no one [is left] behind with regard to access to science and benefits from scientific progress" as countries confront epochal problems like global-warming and zoonoses.

The contemporary focus is on the means to secure OA's adoption. In 2018, an international consortium created an initiative called Plan S. The member-organisations under [Plan S](#) work to ensure that from 2021, "scientific publications that result from research funded by public grants" are "published in compliant OA journals or platforms". In January 2021, the [Bill & Melinda Gates Foundation](#) deployed a policy to enable "the unrestricted access and reuse of all peer-reviewed published research funded, in whole or in part, by the foundation". Other research-funding organisations have published similar policies.

However, researchers required to meet such targets often pay large sums to Gold OA or hybrid journals.

Michael Donaldson, a member of the scholarly publishing industry, has written that across the industry, the OA transition "has been slowed by the challenge of identifying sustainable ways to cover the costs of OA publishing."

In the words of librarian [Melissa Cantrell](#), "If we imagine scholarly communications as a city, OA strategies may dwell in the tall, reflective high rises, but we should pay more attention to the OA practices ... in the huddled masses on the street".

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