



## Open access and academic imperialism

Recently, major scientific funding bodies in several European countries agreed to mandate that researchers they fund (approximately €7.6 billion annually) should publish their results in open-access journals, intending to penalize authors who publish in journals that use a paywall for some or all of their articles (Enserink 2018).

We think this policy is a mistake.

Access to journals for authors and readers is a complex and nuanced topic, encompassing the cost of publication, academic freedom, and the potential for conflicts of interest between editors required to guarantee the quality of papers and authors paying for publication. We focus on a single issue, that of equity of access to publication by readers and authors.

It costs money to publish scientific articles, no matter who pays for access to them. Until recently, the predominant or only option available to most authors was to submit to journals that require readers to pay to read the articles. Often called a paywall, we call this the reader-pays model. This model provides the opportunity for authors to publish for free. We call open access, the author-pays model. The latter provides unfettered access to readers but requires the author to pay a fee, once the article is accepted. The move by European funding bodies will precipitate a long-term gradual shift toward author-pays models.

While many author-pays journals adopt policies that reduce the financial barriers to publishing equitably (e.g., automatic waiver programs indexed to median research grant size in each country or automatic waivers for papers submitted from developing economies), a significant number have fixed charges (Lawson 2015). Some author-pays journals offer reduced charges to people from developing economies, but even reduced charges are impossible for many potential authors.

Enforcing author-pay models will strengthen the hand of those who have resources and weaken the hand of those who do not have, magnifying the north-south academic divide, creating another structural bias, and further narrowing the knowledge-production system (Medie & Kang 2018; Nagendra et al. 2018). People with limited access to resources will find it increasingly difficult to publish in the best journals. The European

mandate will amplify the advantages of some scientists working in developed countries over their less affluent counterparts.

The author-pays inequality may also affect equity of access within countries, including those considered developed, where there can be major differences between different research groups in their ability to pay (Openjuru et al. 2015). It is harder for disadvantaged groups from these jurisdictions to appeal for waivers (Lawson 2015), deepening the divide between those who can pay and those who cannot.

Hybrid journals, such as *Conservation Biology*, offer both modes, leaving it to the authors to decide what they can manage and prefer. The ability to pay is no obstacle to publication. Authors from many developing countries have appealed to us directly not to become a fully author-pays journal because they cannot afford any publication fee. In the hybrid model, authors declare their intention to pay open access charges once the paper is accepted, overcoming potential conflicts of interest.

Hybrid models offer significant advantages that encourage diversity in scientific publication. Importantly, they help to level the playing field for authors who otherwise may feel that the barriers to publish are too high (Horton 2003). Authors who cannot pay will see their work getting published. There is a widely held misconception that in reader-pays journals, “accessing publications in top journals is restricted to the universities, organizations, and individuals who can afford it” (Lee 2018). For access to published articles other than their own, people without direct access or sufficient resources can access accepted (prepublication) versions online, read the abstracts, and email the authors for copies or access them through colleagues (Voronin et al. 2011).

Labels, such as *OA* and *hybrid*, include a range of publishing models. Open Science is a wonderful ideal, the greatness of which sometimes seems to prevent discussion of its nuances, unintended consequences, tradeoffs, and perverse incentives. Despite its lofty ideal, the European initiative is a blunt instrument that may significantly damage scientific knowledge exchange and silence researchers who are not funded by these institutions and who cannot afford to pay.

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