

## Viewpoint

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YY is an Associate Editor for *Collabra: Psychology* (<https://online.ucpress.edu/collabra>), a Senior Editor for *Journal of Illusion* (<https://journalofillusion.net/index.php/joi>), a Managing Board Member for *PCI Registered Reports* (<https://rr.peercommunityin.org/>), and an Editorial Board Member for *Peer Community Journal* (<https://peercommunityjournal.org/>), *PeerJ* (<https://peerj.com/>), *Cognitive Studies* (<https://www.jstage.jst.go.jp/browse/jcss>), *Trends in Scholarly Publishing* (<https://tsp.scioone.com/cms/>), *Scientific Reports* (<https://www.nature.com/srep/>), *Japanese Psychological Research* (<https://onlinelibrary.wiley.com/journal/14685884>), and *Japanese Journal of Psychology* (<https://www.jstage.jst.go.jp/browse/jipsy/>).

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# Is it open access if registration is required to obtain scientific content?

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## Abstract

Some journals require users to register before accessing a scientific paper, despite labelling that content as open access (OA) and free-of-charge. We refer to such cases as members-only OA (MOOA), which we contend is not 'free' since users are forced to 'pay' with personal data. Scholarly content may be accessible via MOOA to either the in-browser text (HTML) or to the archival-friendly version (PDF), or both. We suggest a four-tier typology to capture the degree of openness based on this observation. We believe that technical guidelines of OA implementation should not permit MOOA.

## Keywords:

Academic publishing, licenses, open access (OA), registration wall, usability

### 'Free' to read is not necessarily open access

Although the definition of open access (OA) is both fluid and subject to interpretation, a universally accepted notion of OA encompasses two principles, namely of making content '*free to read and free to reuse*' (p. 3).<sup>1</sup> These principles are embraced by globally large organizations related to scholarly OA publishing, such as the Directory of Open Access Journals (DOAJ) and the Open Access Scholarly Publishers Association (OASPA), initiatives such as Plan S (an OA initiative originally led by a consortium of large European research funders), and even controversial pirate OA sites like Sci-Hub.

While the principles remain constant, there are variations in their implementation. The varying types of access to OA content are colour coded – as in green, gold, platinum (diamond), or black OA – depending on the licence type, whether article processing charges have been paid or not, or whether access is illicit.<sup>1</sup> The present viewpoint supplements such observations with a debate on what exactly is open in OA. We coin the term members-only OA (MOOA) to denote cases when registration is necessary to access a scholarly paper, even if the registration and subsequent access do not require monetary payments by readers. The requirement to register an account or to log in to access a journal platform decreases the practical impact of OA, demotivating users to consume a paper available under an OA licence. Having readers register with an online system implies the possibility of collecting information about the reader and using it for future operations, such as email promotions, even if personal data use is generally subject to strict privacy protection laws.<sup>2</sup> In MOOA, we believe that access to OA content is not free, because users pay by sharing personal data.









The two most commonly used OA formats are HTML and PDF: HTML is most suitable

for reading directly in a browser, allowing optimized fonts and window sizes. This is especially useful for users with certain visual difficulties.<sup>3</sup> HTML also facilitates copying, for example, to look up the meaning of an English expression. PDF files are more suitable for readers who prefer to read papers in a print-resembling layout or want to archive and perhaps annotate them. Other archiving formats are available, such as XML files, saving the web version as offline bookmarks via applications like Pocket, or simply printing the online output in paper form, but we assume that when scholars archive a copy of the literature, the most convenient form is the PDF file.

Most OA journals provide articles in both HTML and PDF formats. Alternatively, a paper may be free to read in its HTML version, but registration is required to access the PDF version (HTML-only OA) or the HTML version requires registration and the PDF version is freely accessible (PDF-only OA). Finally, both versions might require user registration (Table 1).

An indirect condemnation of MOOA is already visible across various institutions. For instance, to be included in the DOAJ, journals should make the full text of all articles available for free without any delay, whereby '[r]equiring users to register to read content is not accepted'.<sup>4</sup> Similarly, Plan S states that journals should 'enable authors to publish with immediate and permanent Open Access (without any kind of technical or other form of obstacles)',<sup>5</sup> although it does not offer any concrete examples for the term 'technical obstacles'. Finally, the FAIR principles – an acronym denoting the idea that data should be Findable, Accessible, Interoperable, and Reusable – state that authentication procedures to access data should only be implemented 'where necessary' (principle A1.2).<sup>6</sup> One could extend the FAIR principles to

**Table 1. A typology of OA openness based on a disaggregation of (online) access to scientific papers into their HTML and their PDF versions, respectively**

HTML	PDF	Type	Description	Examples
		Full OA	Access to both the HTML and the PDF versions without requiring payment or registration	The modal OASPA journal <sup>a</sup>
		HTML-only OA (i.e., the PDF version is subject to MOOA)	The HTML version can be read without payment or registration, but there is no PDF version, or one must register to access it	IntechOpen, ACP, JAMA, <i>Cureus</i> (current) <sup>b</sup>
		PDF-only OA	The PDF version is accessible without payment or registration, but there is no HTML version <sup>c</sup>	ARCC <sup>d</sup>
		Closed OA (i.e., MOOA)	Neither an HTML version nor a PDF can be accessed unless the user registers	<i>Academia Letters</i> (formerly), SSRN (formerly), ARCC (formerly), <i>Agrobios Newsletter</i> <sup>e</sup>

ACP: American College of Physicians; ARCC: Agricultural Research Communication Center; JAMA: *The Journal of the American Medical Association*; MOOA: members-only open access; OASPA: Open Access Scholarly Publishers Association; SSRN: Social Science Research Network.

Note that the orange, open lock denotes OA in its ideal: freely accessible immediately without any barriers. The grey, closed lock relates to OA licenses but with technical barriers such as registration walls.

<sup>a</sup>As one single journal example, we offer BMC's (part of Springer Nature) *Research Integrity and Peer Review* (<https://researchintegrityjournal.biomedcentral.com/>); many journals in SciELO (<https://www.scielo.org/en/>), which are also indexed in the DOAJ, likewise fall into this category.

<sup>b</sup>*Cureus* (<https://www.cureus.com/>) is a case in which the papers' HTML versions are fully OA, but the PDF files require registration, that is, MOOA.

<sup>c</sup>We note that many small society journals do not publish an HTML version of papers at all, either due to a lack of financial resources or due to limited technical skills. These limitations do not impact the level of 'openness', only the range of access or archival options available to readers. One example is offered by this very journal, *European Science Editing* (<https://ese.arphahub.com/>), which employs the diamond OA model.

<sup>d</sup>In addition to ARCC, many journals hosted at J-STAGE (<https://www.jstage.jst.go.jp/browse/-char/en>) are PDF only.

<sup>e</sup>Agrobios Newsletter claims to offer its contents with "immediate open access" (<https://agrobiosonline.com/journals.php?jrnlpq=info&rs=head&dx==AUVZ0RW5GaKJFbaNVTWJVU&cid=32#jrnContent>), but requires a login in order to access them.

cover scientific articles: we believe the necessity of requiring authentication (i.e., registrations and logins) to access scientific articles may be rather hard to justify.

While these examples show that MOOA is not a novel issue, this topic has remained marginal. Our viewpoint offers nuances that deserve a debate to concretize standards that define the technical implementation behind OA in scientific publications. Although most OASPA members offer both the HTML and PDF versions of their papers in a freely accessible format for anyone, there are examples of extant or extinct journals and similar content providers of scientific articles that do require registrations.

#### Examples of members-only open access

In this section, we offer examples of MOOA among publishers, journals, or other scientific content providers (like pre-print platforms)

that we gathered from our personal experiences as authors and readers.

HTML-only OA: We note three exemplary cases. First, IntechOpen makes it necessary to register and login to access the PDF file of a chapter.<sup>7</sup> Second, in the case of a leading American College of Physicians journal, the *Annals of Internal Medicine*, it is indicated that a one-time registration is required to access 'free, publicly accessible content'.<sup>8</sup> In the case of *The Journal of the American Medical Association*, which is not an OA journal, but which provides 'free access' to some papers that are supposed to be OA or to newly published articles that are immediately readable in a browser, there is a requirement to '[s]ign in to access free PDF', as indicated by one recent example.<sup>9</sup>

PDF-only OA: The Agricultural Research Communication Center, based in Haryana

in India,<sup>10</sup> publishes seven English journals in the agricultural sciences, but none of the journals' papers currently have an HTML text version, and readers currently do not have to register to download the PDF files.

Complete MOOA: The Agricultural Research Communication Center exercised a complete MOOA policy until November 2022, then transitioned to a PDF-only OA model following a formal expression of concern by author 3 of this paper. A short-lived OA journal that used to be published (2020–2022) by Academia.edu, *Academia Letters*,<sup>11</sup> required registration to access a paper. Elsevier's SSRN preprint platform likewise used to operate as an MOOA where no HTML version was available, and access to the PDF files was conditional upon a registration.<sup>12</sup>

MOOA needs to be differentiated from a similar phenomenon where only parts of papers are made accessible to the public – most commonly, the title, the authors, the abstract, sometimes the references, or just specific sections. One example is Elsevier's 'section snippets', as can be found in some of their journals,<sup>13</sup> where some, but not the entire, HTML text is published OA, most likely as an 'enticement' to subscribe. These examples are not covered by our typology.

### Conclusion

In this viewpoint, we argue that the need to register to access OA content is a reduced form of openness, a phenomenon we coin MOOA.

We recognize that not all publishers are able to provide an HTML version due to a lack of financial resources or technical skills, or perhaps awareness. Not every scientific content provider can afford to engage typesetters for multiple publication formats, considering that the provision of HTML versions can be costly.<sup>14</sup> This is especially true for journals

that follow the 'diamond OA' model of not charging publication fees from the authors despite offering OA content. In fact, some journals for which one of the authors (YY) serves on the editorial board are only able to provide a PDF version of papers. We believe that not having HTML versions is inherently different from having them but not offering them without registration. The limitations should thus not be equated with a reluctance to commit to OA principles. Rather, we simply wish to further a debate on the technical implementation of OA-related best practices.

We suggest that the nuances that arise from differentiating the HTML from the PDF versions should be integrated into OA technical guidelines to ensure that neither of the two versions requires registration. This could be extended to other formats, such as EPUB or XML versions of scholarly texts. However, when it comes to the most prevalent formats for academic papers, we are convinced that even if research funders 'support the diversity of business models for Open Access journals and platforms',<sup>5</sup> MOOA should not be tolerated.

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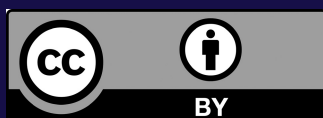
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