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EDITORIAL

The changing landscape of scholarly journals

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Cite as:
Stojanovski J. The changing landscape of scholarly journals. ST-OPEN. 2022; 3: e2022.2219.10.

Given the great potential of new technological advances, the scholarly publishing industry has not been effective in adopting real changes and developing more optimal scholarly communication systems (Lewis, 2020; Oppenheim et al., 2000; Pourret, 2020). Still, slow progress is happening in all areas of the publishing landscape (Fyfe et al., 2017). Besides the rapid development of technology, it could be expected that Open Access (OA) to journal articles, research data and other kinds of research output will become the default practice for communicating research results and the primary driver of changes. Published content is increasingly available in different formats more suitable for discovery, retrieval and computer processing. Editorial policies and practices are becoming more transparent, and standards are being developed to ensure more robust collaboration and faster development of science while respecting ethical standards and contributing to responsible research. The peer review process also emerges from the "black box", allowing Open Access to the reviewers' reports and/or identities. There are also lively discussions in the scholarly publishing community about authorship criteria (Aliukonis et al., 2020; Holcombe, 2019), journals' added visibility and indexing (Edelmann & Schoßböck, 2020), multilingualism (Balula & Leão, 2021; Sivertsen, 2018), and measuring impact (Sugimoto & Larivière, 2018). In the following sections, I will briefly describe four scholarly publishing topics subject to heated debates.

Diamond in Focus

The share of OA journal articles is growing, in 2015, it was estimated at 45% (Piwowar et al., 2017), and OA has become a default practice for communicating research results. There are several ways to achieve Open Access to journal articles, most often described as diamond/platinum, gold, green, and bronze routes. Gold journals provide Open Access to

all published articles charging the author or author's employer publishing costs (Article Processing Charges or APC) (J. E. Frantsvåg, 2019; Fruin & Rascoe, 2014), while diamond/platinum journals do not charge for the publication or usage of OA articles (Edelmann & Schoßböck, 2020; Pourret, 2020). The Green Route refers to the self-archiving of (un) published papers in institutional, thematic and other OA repositories (Eisen, 2013; Fruin & Rascoe, 2014). In bronze journals, articles are not accompanied by licenses that regulate their use (Costello, 2019; Piwowar et al., 2017; Pourret, 2020). Finally, hybrid journals, subscription journals publishing partly OA articles (employing the APC model), could not be considered OA journals (Björk, 2017).

According to different journal policies and authors' choices, the green route provides access to different versions of the journal articles: the author's *original manuscript* or preprint that has not undergone the peer review process, the *accepted manuscript* (Accepted Author Manuscript - AAM, Accepted Author Version, postprint) with all changes after the peer review, *uncorrected proof* version that the editor, proofreader or author can still change and the *final version* (Version of Record - VoR) published on the publisher's website (J. P. Tennant et al., 2016).

In parallel with the growing criticism of the APC model (Pourret, 2020), the importance of community-driven diamond journals comes into focus. The estimated number of diamond journals is 29.000, diverting in terms of the region (45% in Europe), discipline (60% in SSH) and language (38% multilingual) (Bosman et al., 2021), still underfunded and publishing on average fewer articles than APC-based gold journals (J. Frantsvåg, 2022). European Commission recognizes the need to improve its understanding of the current landscape of institutional OA publishing activities and the efficiency, quality and good practices of institutional OA publishing service providers. Therefore, in the recently approved Horizon Europe project DIAMAS (Developing Institutional Open Access publishing Models to Advance Scholarly communication) (Ancion et al., 2022) the main objective will be to improve current institutional publishing practices by creating a community supporting services, infrastructure, and setting up an innovative European Quality Standard for Institutional Publishing (EQSIP).

Action Plan for Diamond Open Access: Working collectively towards an equitable, community-driven and academic-led scholarly publishing model aiming a further development of community-driven Diamond OA publishing was presented in March 2022 by Science Europe, cOAlition S, OPERAS, and the French National Research Agency (Ancion et al., 2022). According to the Action Plan, the next phase of Diamond OA development will focus on sharing common resources and raising efficiency, implementing quality standards, improving editorial and management skills, and ensuring sustainability.

Rights retention strategy

The author is the first owner of the copyright of her/his scholarly manuscript unless the employer or funder claims ownership and has exclusive copyright of that work. After submission to the journal or acceptance for publication, the author is usually asked to sign an agreement to transfer the article's copyright to the journal/publisher. The transfer of

copyright means that the author loses most of her/his rights, while the journal/publisher becomes the owner of the published work and conditions any further use of the article.

Open Access allows copyright owners to share rights using an open license. Due to its simplicity and easy understanding by the users/readers, the most popular licenses for OA resources are Creative Commons (CC) licenses (Figure 1). Licenses protect authors and journals against unauthorized use and inform readers how they may/may not reuse the content. Therefore, bronze journals are only conditionally OA journals since they do not have an explicit open license accompanying published OA articles.

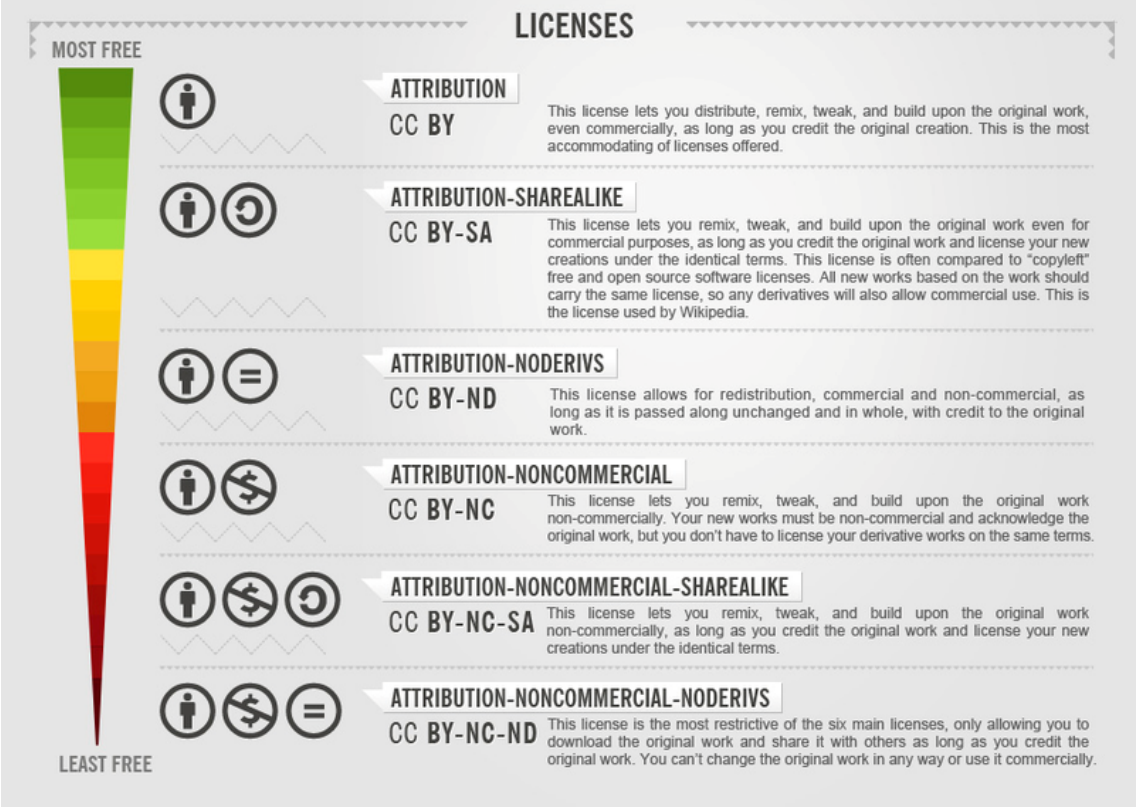

Figure 1. CC License Freedom Scale Chart by Foter (CC-BY- SA-3.0).

In order to allow compliance with Plan S (*"Authors or their institutions retain copyright to their publications. All publications must be published under an open license, preferably the Creative Commons Attribution license CC BY..."*) and promote the green route to OA cOAlition S developed in 2021 *Rights Retention Strategy (RRS,* https://www.coalition-s.org/rights-retention-strategy/) RRS is promoted mainly by funders within cOAlition S but impacts the global publishing landscape. Subjected to different interpretations and critics from commercial publishers, RRS guides the author toward claiming a CC-BY license over her/his original manuscript on the cover page (e.g. *"A CC BY or equivalent license is applied to the AAM arising from this submission"* or similar statement provided by funder) (Eglen, 2021). Consequently, any AAM arising from this submission can be deposited in the OA repository under the same license and without embargo.

Differences among OA journals concerning policies on rights and licenses are extensive, and the adoption of RRS on a larger scale, especially by commercial publishers, is rela-

tively slow. Although widely adopted CC licenses already regulate the usage of the content published in OA journals, the copyright ownership practices still vary. Authors rarely negotiate the content of the copyright transfer agreements for personal and public gain. However, a shift towards retaining copyright over her/his work by the author or author's employer is more and more present.

Research assessment

Research assessment has been the focus of discussion in recent years, and the charm of the "simplicity" of bibliometric indicators is gradually fading out in the eyes of researchers, research funders, policymakers and institutions. Although quantitative bibliometric indicators, such as journal impact factor, number of papers published and number of citations collected, are still widely used in hiring and academic promotion in many countries (Pontika et al., 2022), their misuse and neglecting of the complexity of scientific research and its impact on society call for more qualitative, comprehensive and multidimensional research assessment approach. In their call for the assessment incentivizing higher quality and more impactful research, European Commission refers to the major evolution research is undergoing (European Comission, 2021). The Paris Call on Research assessment recognizes the importance of openness in "improving the quality, efficiency and impact of research "and calls for "an assessment system where research proposals, researchers, research units and research institutions are evaluated on the basis of their intrinsic merits and impact, rather than on the number of publications and where they are published (OSEC, 2022).

Advocating for a multidimensional perspective of research assessment, the League of European Research Universities (LERU) developed two additional perspectives to research assessment, "...a developmental perspective, focusing on transversal dimensions such as leadership, innovation, and collaboration... [and] a contextual perspective, taking into account the particular context of the researcher who is under assessment." Furthermore, LERU recognizes the crucial role of Open Science principles in a multidimensional perspective, distinguishing the research, education, public engagement and outreach, service to the institution, and other dimensions (Overlaet, 2022).

Journals play a significant role in research assessment. While indexing by the most popular disciplinary and multidisciplinary databases is crucial in achieving visibility and readability, different journal rankings and lists should be replaced by a broad view of journal quality and editorial policies. Analyzing different journal lists, Guns and Holowiecki argue that "journal lists are popular because they simplify the complex spectrum of journal quality standards to a one-dimensional list" (Guns & Hołowiecki, 2021). Besides adequate output, content, and management, including peer review, journals should support authors using advanced writing tools, supplying research data, code, ethical statements, and following Open Science principles in reporting on research results. In addition to the quality and transparency of the journal's editorial policies, the authors also expect an appropriate presentation and active promotion of published papers (Avanço et al., 2021).

Repositories and scholarly publishing

The COVID-19 pandemic has demonstrated the importance of the efficient and rapid exchange of scientific information (Muratov et al., 2021). Possibilities for this have opened up with the emergence of OA repositories supporting green route, in which authors can store different types of research output and different versions of the same article. The two most common types of repositories are institutional and subject repositories, although we also distinguish repositories according to the type of research output they store. An example of the "universal" repository that includes all areas and all types of scientific and professional output is Zenodo (Peters et al., 2017).

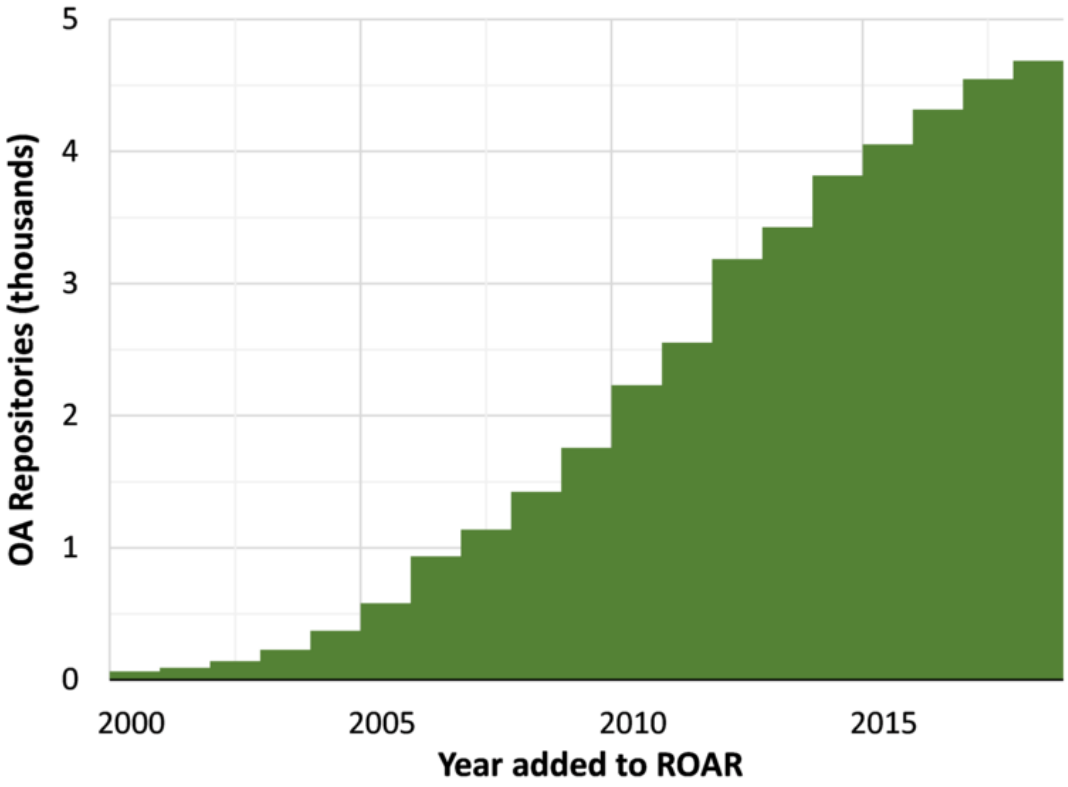

Figure 2. Growth in OA repositories listed in Registry of Open Access Repositories (ROAR), Thomas Shafee (CC-BY- 4.0).

Several types of research outputs are most common in repositories. First, these are preprints, i.e. original author's versions of articles shared before, during or after the peer review process, most often published later in a journal. Such repositories are sometimes called preprint servers. Second, universities store graduate and doctoral theses in repositories. Third, an increasing number of repositories are dedicated to storing research data. The development of repositories began in the early 1990s (arXiv.org) and flourished in the 2000s with the development of numerous institutional and thematic repositories (Zenodo, Open Science Framework, CiteSeerX, BioRxiv) (Figure 2). In particular, the financial pressure imposed by APC-based journals and still a significant number of subsription based journals has popularized the green path of sharing research results (Green, 2019; Jain et al., 2021; Solomon et al., 2016).

Sharing manuscripts using preprint servers has numerous advantages, including immediate availability, free of cost for researchers and users, rapid dissemination of work-in-progress to a wider audience, feedback from the entire research community or a group of experts, a fair and straightforward way to establish precedence, documentation of the history of ideas, exposure to articles that would otherwise not be published (i.e. negative results, replications), and possible citation advantage (Desjardins-Proulx et al., 2013; Ferreira & Serpa, 2018; Puebla et al., 2021). However, one of the main concerns is that there is no guarantee for the study's validity, and making preprints broadly available could spread inaccurate or false information, leading to non-reviewed material being cited and information overload. In addition, not all journals accept preprint posting prior to submission, and the author could have trouble publishing in journals which did not embrace the preprint movement (Ferreira & Serpa, 2018; Puebla et al., 2021).

The growing repositories' infrastructure opened a range of new opportunities for journals. According to Tennant, "the overlay journal is built on the concept of deconstructed journals and represents a type of journal that operates by having peer review as an additional layer on top of collections of preprints" (J. Tennant et al., 2018). Subject repositories hosting preprints and institutional repositories may also include books and book chapters, conference papers, graduation and doctoral theses, reports, working papers, presentations and posters. Consequently, overlay journals can have different approaches to the source of the submitted material and the submission process. Some overlay journals require submission by the author, some are selecting articles for peer review based on the editor's selection (also looking at the CC license in place), and some are inviting an author to modify the existing format stored in the repository to the appropriate article format. Depending on the author's or repository manager's choice, differences may occur in (not) enabling and managing comments at the repository level. Commenting offers the possibility of improving the paper, and comments can be incorporated into the subsequent version of the manuscript (Berthaud et al., 2014). The method of selecting reviewers can also vary among overlay journals. What is common is that overlay journals employ editorial assessment, similar to the traditional ones (Puebla et al., 2021).

Although most overlay journals include articles submitted by authors via a preprint server and provide blinded peer review (Thornton & Kroeker, 2021), there are examples of journals employing additional selection by journal editors. According to their quality and originality, ST-OPEN (Split: University of Split, 2022) selects students' theses (Creative Commons license) from the institutional DABAR repository (Zagreb: Sveučilišni računski Centar Sveučilišta u Zagrebu, 2022). The editorial process includes broad cooperation among students, mentors, university staff, editors and reviewers. Encouraging students to enter the world of science by publishing their research articles in ST-OPEN overlay journal may result in a lengthy editorial and peer review process, but worth an effort.

Despite the increasing number of publishing platforms, journals have retained their importance and prestige as the most present form of scientific publishing. Peer review remains a vital tool that limits academic misconduct with all its flaws. The advantages of overlay journals include promoting Open Access, lower costs of publishing and storing papers, more transparent editorial practices and better-regulated rights and licenses. In

addition, such journals encourage the publication of research output in repositories in the earliest stages of creation, which accelerates the exchange of knowledge, cooperation and efficiency of scientific research. For the editorial board of any scholarly journal or publishing platform, it is essential to raise quality continuously by following applicable quality standards.

Provenance: Commissioned.

Peer review: Internally reviewed.

Received: 30 June 2021 / **Published online:** 11 August 2022.

Funding: This research received no specific grant from any funding agency in public, commercial or not-for-profit sectors.

Authorship declaration: JS is the sole author of the study.

Competing interests: The author completed the ICMJE Unified Competing Interest form (available upon request from the corresponding author) and declares no conflicts of interest.

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