Future of Scholarly Publishing: A Perspective

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The academic publication takes on an increasingly relevant place to shape, on the one hand, the scholar’s prestige, and on the other, the prestige of the institution to which he or she is attached. In addition, academic publishing is vital for the development of scientific knowledge and the contribution to the community. This paper analyzes several dimensions that may be central to academic publishing in the near future. To this end, in methodological terms, a qualitative approach was favored, namely through the documentary analysis of scientific writings that analyze this topic. The results of this analysis reveal that this is a process in constant and accelerated development, but there will have to be criteria and processes for selecting what is scientifically relevant from what is called “noise” in scientific publishing. Increasing quality will have to be a fundamental element in this process.

Keywords: Academic publication; Scholarly publication; Scientific publication, Publication queries

Introduction

Academic publishing has always been present (1), and it is increasingly taking on a central place, both for shaping the scholar’s prestige, for the institution to which he or she is attached, and for the development of scientific knowledge itself (2-5).

“Scholarly publications in any specialized field are the sources of recent information for progress and development of society. They lead to create and transform new knowledge and stimulate innovation. In the current academic scenario, promotions, career development and recruitment of the individuals are affected by their publications and citations. Similarly, the scholarly publications raise the reputation and economic status of the institutions” (6, p.1).

Academic publishing is an area very much based on “four basic principles or roles of scientific publishing, i.e. scientific priority (registraction), peer review (certification), archiving (preservation) and dissemination, have become the foundations for nearly all scientific journals today” (7, p.1), being in profound change (8-12) and that affects researchers, editors, publishers, funders, policymakers, academics, and representatives of universities, industry, media, and the general public like stakeholders (13, 14), in a society increasingly shaped by the digital (1, 15). As Sâ et al. (16) mentioned, this also shapes new ethical and quality issues of credible publications in digital open access (17), fostered, also, by the COVID-19 pandemic both in form (18) and in the speed of the production cycle (12) (Table 1).

In this paper, the authors, aware of the risks involved in any prospective analysis to reflect present action in the light of possible and desired futures (19, 20), seek to analyze several trends involved in what they consider to be successful future scholarly publishing. Thus, the following topics related to scholarly publishing will be analyzed and discussed: Books, Preprint, Review, Open Access, Megajournals, Publisher, Publication type, Type of papers, Digital publishing, DOI, Type of pdf., Reviewers, Funding, Social media, Language, Open data, Authorship, Ethics, and Publication format.

Methods

In this study, a qualitative methodological approach was preferred. The aim is to understand the multiplicity of facets that characterize the challenges posed by the trends in the configuration of future academic publishing. A search was made in international databases, namely B-ON and SCILIT, between May 10 and 14, 2021. Documentary analysis was the favored technique in this research, developed from different types of documentary sources. The authors used the terms “academic publication”, “scholar publication” and “scientific publication”, favoring in the subsequent thematic content analysis the following categories: Submission process; Strategies against plagiarism; Preprint; Review; Open Access; Social, political and economic impact besides scientific; Mega-journals; International collaboration; Type of publication; Digital publication; Social media; Language; Open data; and Interdisciplinarity.

Trends in Academic Publishing

Table 2 presents the trends analyzed by the authors for scientific publication and which will be justified in the subsections that follow.

Submission Process

The process of submitting a manuscript tends to be simpler today than in past periods, with the dominance of being possible any free format at the time of initial submission, without, as is general today, the need to use a specific template for each journal (21). The authors draw attention to the importance of journals going beyond the formal aspects of articles, even stating: “Imagine if a paper describing an important discovery in the midst of the COVID-19 pandemic were to be delayed by a few days or weeks, simply because the abstract was misplaced and sent back to the author (despite the abstract being copy-and-pasted directly into a free-response field in the submission portal)” (21, p. 2).

Combat Plagiarism

Digital publishing allows greater control of plagiarism situations, which occurs when someone gets hold of the work, ideas and positions of others without being authorized to do so or without properly referencing that work. Among these, we highlight the following:

- Direct plagiarism: occurs when a text or part of it is copied verbatim, without any reference to the source.
- Mosaic form: this is about taking upon oneself the ideas or positions of others, assuming them as if they were of one’s own authorship.
- Self-plagiarism: occurs when an author or authors use their own work, previously published as if it were new.
- Accidental plagiarism: occurs when an author or authors use paraphrases of other authors’ texts without being aware of it (5).

Numerous authors regarded this type of plagiarism as a normal and common one because they thought they just used the same methods and theories in their new studies, so it would have been all right without any changes in the descriptive words. However, the situation is not like that. Many manuscripts were rejected, labeled “plagiarism”, or retracted due to this type of copied work.

Preprint

The preprint consists of a document that is made available online to the public on a specific server for that purpose, which has not yet been published in any scientific journal and, as such, has not gone through the peer-review process (22, 23). Despite the absence of this content validation by peers and/or journal editors, there is always a process of checking for plagiarism and offensive/dangerous content. Thus, the preprint ends up being equivalent to a working paper or work in progress, having all the characteristics of a scientific article, but it has not been verified, reviewed and evaluated by peers (10). This modality of publication of scientific results will predictably take on an increasing centrality in scientific publishing, namely as a rapid way of disseminating science (12). According to Qaiser (22),

“The only way to make preprints a great place for accelerated publishing and minimize associated risk of sharing non-reviewed findings is that the au-
Table 1. The Impact of COVID-19 on Scholarly Publishing.

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<th>Independent Trends</th>
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Table 2. Some Trends Predicted for Scientific Publishing.

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Source: Prepared by the Authors.

...thors, readers, and most importantly media reporters act in a vigilant manner by following the sharing responsibility and guidelines adhering to the highest ethical standards” (p. 1).

Another issue that needs to be pointed out is that most traditionally publishing journals are not the accepting preprint format as their manuscript source. Even the original purpose of preprint is to accelerate publication, but it sometimes delays the processing due to copyright-related issues.

**Review**

Review is the usual peer-review in the control of scientific publication (12, 22, 24-27), with an increase in open review being expected (16). Ferreira and Serpa (24) argued that peer-reviews, in most cases still closed to the public domain and part of the internal process of publishers, should be made public, as well as their authors, in order to contribute to the “[...] accountability and subsequent legitimation of the scientific quality of what is published by allowing greater control over what is publishable and published, in a control that also takes place ‘a posteriori’ of
the publication” (p. 11).

In fact, the peer-review process in different modalities (24) has been tending to become more transparent, and the measures that follow are increasingly used by publishers should be highlighted.

Open Access
Open access (OA) publishing despite its variability is (14), in the authors’ opinion, an inevitability, despite the disparities in acceptance depending on the scientific area in question (2, 16, 18, 28-31). Sá and Serpa offered as an example of this orientation toward open access publishing “[...] the recent phenomenon of OA publishing platforms commissioned by funding organizations” (2, p. 82). The authors add that: “The academic/scientific publication in OA is already a current practice, and the tendency is that it will continue to be adopted worldwide by academics and researchers to disseminate the results of their work to the scientific community and the public at large” (2, p. 84).

Social, Politic and Economic Impact
The scientific impact measured through, for example, bibliometric factors, such as the number of citations of an article or an author, among others (32), tends, increasingly, to be complemented by the evaluation of other dimensions of social, technological and economic impact (31-33). Bautista-Puig et al. stated (33) that,

“Citizen Science (CS) aims primarily to create a new scientific culture able to improve upon the triple interaction between science, society, and policy in the dual pursuit of more democratic research and decision-making informed by sound evidence. It is both an aim and an enabler of open science (OS), to which it contributes by involving citizens in research and encouraging participation in the generation of new knowledge” (p. 1).

Mega-journals
Mega-journals already have an interesting history (34, 35), and the Open Access Mega-Journals (OAMJs) are now an unavoidable dimension of the science communication system (36-38), due to their characteristics, namely their broad scope, high publishing volume, a peer-review process based on the scientific soundness of the content, and an open-access model (39, 40). Their relevance is increasing, even with renowned publishers favoring an economy of scale (38, 39). As Lázároiu (41) points out,

“Mega-journals thoroughly shift the tendency in academic publishing which has generated growing specialism, with outlets focusing on ever-narrower spheres of interest. Mega-journals provide publishers the capacity for outstanding economies of scale. Publishers can design time-saving mechanisms and combined systems for an individual journal rather than having to handle massive sets of journal titles, all with distinct standards for inclusion. Mega-journals are instrumental in substantial system-wide savings” (p. 1047).

To some extent, a mega-journal is responsible for the distribution of scientific information, rather than the monitoring function associated with top journals (41), by favoring scientific soundness peer-review rather than possible novelty (36, 39, 41, 42). This phenomenon of the proliferation of mega-journals is not viewed in the same way, and in a peaceful manner, by the scientific community (37).

International Collaboration
Currently, there is - and will continue to be - a growing appreciation of international collaboration (43, 44), namely with the establishment of international research and development networks: “Scientists collaborate internationally when it enhances their academic prestige, scientific recognition, and access to research funding, as indicated by the credibility cycle, prestige maximization, and global science models” (45, p. 1). However, the collaboration-related knowledge distribution may be associated with the concerns of intellectual property, and needs serious consideration.

Type of Publication
Regarding their type, publications will tend to take the form of replication papers based on experimentation, with the logic that ascribed to them by Harremoës (46): “An experiment is reproducible if a similar experiment will support the same conclusions. The more variation that is allowed in an experimental setup that still supports the same conclusion, the more valid is the conclusion” (p. 2).

Social science journals currently seem to give more relevance to manuscripts submitted for evaluation and publication in the form of empirical research articles, following the exact sciences’ model and, preferably, with the possibility of replication of the research. On the contrary, the publication of scientific studies based on reasoned logical argumentation seems to occupy an increasingly less relevant place in this process of publication and dissemination of science (47).

Digital Publishing
Digital publishing allows for a profound change in scientific publishing, both in the form of publication (no space limitations, with the possibility of publishing images, films, ... at low cost), enabling increased visual communication (48-51). This aspect is of special relevance, considering the centrality of visual communication in contemporary societies. Additionally, digital publication enables the manuscript to be published immediately, without further delay (3, 4, 10, 38). In this regard, Sá et al. (16) argued that,

“The printed publication becomes less relevant in comparison with the digital publication, for example, through a journal website. [...] Specifically in academic publications (e-journals and ebooks), the unstoppable movement, in our opinion, of Open Access – which makes the manuscripts available for reading by any user with internet access without the need for any payment or subscription” (p. 214).

Therefore, reading through a digital device is inevitable and increasingly gaining ground over reading on paper. The fact that we live in a growingly technological, digital and virtual world leads to the conclusion that this type of reading will be increas-
ingly used in higher education, but with rapid progression to the other levels of education. This type of instrument has enormous potential benefits, but it becomes necessary to ensure that it is correctly used by teachers and students (31, 52).

Social Media
Social media coverage is increasingly used to spread the message of scientific publications (29, 53). However, for the successful use of digital social media for the publication of scientific information, it is important that societies bet on and invest in the digital literacy of their citizens, as it should not be taken for granted simply because we live in a context of an increasingly digital society (54).

Indeed, according to Sá et al. (16), social media permeate our, namely through social networks, which reveals the great importance for scholars of their digital visibility, in addition to seeing their work published and cited. In this line, Ferreira and Serpa (50) suggested that,

"[...] this new dimension, which is being added to the success and legitimacy of the scholar and his/her institution, will have probable direct consequences both on the form and on the contents of future publications. The willingness of scholars to produce publications worthy of social visibility may foster a growing number of publications that are attractive, perhaps less complex and more accessible to the "uninitiated", what we call glamorous publications" (p. 58).

Taking, then, into account this context in constant and rapid dynamics and change, it becomes necessary to rethink the measures used to assess the quality of scientific publications. Their scientific credibility, impact and value should be assessed using measures of a heterogeneous nature, but this measurement that also relies, on the impact on social media, for example, through altmetrics (12), in turn, calls into question the whole concept of measuring scientific output (55).

Language
English is and will continue to be the lingua franca of science (7), despite the limitations and difficulties this poses to scientists for whom English is not their mother tongue (9, 56, 57).

The research that has been developed in the field of academic literacy reveals, among other things, the unequal distribution of (geolinguistic) power. In terms of scientific publishing, power is equivalent to "[...] the ability to participate in a discourse and be heard, or to communicate an idea in a voice that feels like your own. But for most, it means being recognized and rewarded for what you do" (57, p. 11).

However, several authors emphasize that in addition to injustices, one may be losing very relevant scientific information, which calls for a more inclusive science (58),

"[...]the dominance of English in scientific communications also brings up the worry of a loss of diversity in scientific-publishing ecology, as many institutions and universities are under the pressure of 'internationalization' often signified by publishing in English. Scientific publications in non-English languages should be protected in order to encourage research and publications on issues focusing on regional or cultural specificities. It is often ignored that scientific publications in local languages can play an important role in scientific communications, policymaking and science education" (7, p. 1).

Open Data
Open Data correspond to “data that anyone can access, use and share” (59, p. 2). In the context of Open Science, Open Data take on a central role in scientific research, since they are one of its basic components (18). This concern to make research data public by institutions and researchers materializes what is the basis of an Open Science characterized by good and reliable practices (60). Raffaghello and Manca (59) stated that “The common factor underlying these new practices [...] is mostly a social form of knowledge sharing and construction” (p. 1), in what Wilkinson et al. (61) called FAIR (Findability, Accessibility, Interoperability, and Reusability). Meanwhile, publicizing the data would undoubtedly help avoid the publication of fabricated studies without supervision by the public and produce pressure on the authors not to use fake data.

Thus, the digitized data made available to the scientific community allows, in the view of Raffaghello and Manca (59), an “[...] appropriate communication and sharing, thus implying new discoveries and more balanced efforts from the community of researchers” (p. 2).

Interdisciplinarity
Abramo et al. (62) draw attention to the fact that the increasing complexity of the challenges underlying scientific progress requires that there is an increasingly frequent application of skills and knowledge from various scientific fields, also requiring the creation of synergies among disciplines (13). In this context of high complexity, multidisciplinarity and interdisciplinarity are central: “[...] collaboration between different fields and identify the most recurrent ‘combinations of knowledge’ seen in the resulting publications” (62, p. 14).

Serpa et al. (63) extended the scope of the concept of interdisciplinarity, defining it as “[...] the promotion and mobilization of synergies of two or more different scientific disciplines” (p. 45).

Conclusion
One of the greatest potential benefits of the features envisioned for academic publishing that this paper outlines may be the fact that “Talent is universal, opportunities are not” (56, p. 6),

“In a globalized world, in which digitalization is one of the most important innovations during the last years, everybody should have the same chances of participation irrespective of race, color, gender, ethnicity, cultural background, sexual orientation or financial possibilities” (29, p. 2).

However, while the current landscape of rapidly evolving scientific publications facilitates the dissemination of research, it may, on the other hand, allow “[research waste, predation, and piracy]” (13, p. 1). Thus, the “[...] challenge of distinguishing information from noise, innovation from dystopian-like disruption, and opportunity from threat” (p. 1) is posed by those who
do research and those who disseminate it.

As Bourdieu (64) stated, “the structure of the field, defined by the unequal distribution of capital, that is, of specific weapons or trump cards, makes itself felt, not by direct interaction, intervention, or manipulation, on all agents, but by regulating the possibilities open to them according to whether they are worse or better situated in the field, that is, in this distribution” (p. 53).

Faced with this challenge, respect for academic freedom and its legitimating agent - the academic editor - are fundamental. In fact, following Serpa et al. (32), “The academic editor has been, and still is, the gatekeeper of peer-reviewed scientific publications, by being whom, ultimately, defines whether or not a manuscript can be published” (p. 13).

On the other hand, the fact that it is easy to access information does not guarantee its quality. Thus, in an open science context, it is important that those who seek information have the skills and knowledge to select that which is true and relevant, so that they can prepare an informed and reasoned position (54). This concern with the reliability of information is related to the danger that Mendiz and Torres Viera (56) talk about when they state that “In the battle to conquer everyone’s attention, sensationalist tabloid-style material seems to have replaced academic writing. The focus should be on getting the attention of the specialists through an updated informative model that never loses its primary educational purpose” (p. 6).

The ethical dimension will be central in controlling this process of “transition from the “publish or perish” era to that of “publish and be ethical”, in which a researcher may face the “publish or be ethical” dilemma” (11). Pašalić and Šupak Smolčić (65) presented a real situation of creating a fake journal’s site with the same name as an already established and reputable journal trying to pass itself off as the latter, which put the image of the original journal in question. Reading this very instructive case gives a clear idea of the need but the concomitant difficulty in dealing with these situations.

Increasing quality has to be a fundamental element in this whole process (66). A distinction needs to be made between “practical relevance” and “academic rigor”, as Fraser and Sheehy (67) pointed out, “The real-world relevance of research being published by accounting academics is receiving an increasing level of criticism (mainly anecdotal) by many within the profession, which includes senior and high-profile academics, editors and publishers, governments and professional accounting bodies, and accounting regulatory institutions. Many have argued that the research practice gap is wider in accounting than other academic disciplines, and the findings of this study would support this hypothesis” (p. 30). ■

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