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Commentary

To Publish Scientific Journals: For Some, the Big Business of the Century

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This brief commentary addresses the escalating issues within the scientific publishing industry. The author highlights the proliferation of predatory journals and the adoption of similar profit-driven models by established publishers. He points out the ethical dilemma posed by Gold Open Access (OA) journals, which charge significant Article Publishing Charges (APC) to authors while not compensating peer reviewers. The commentary underscores the resulting strain on the peer-review process, with a decline in the availability and quality of reviewers. The author observes a shift from the traditional reciprocal peer-review system to one burdened by challenges, including shortened review deadlines, reliance on less experienced reviewers, and instances of manuscripts being unreviewed. He advocates for compensating reviewers if authors are charged for publication, warning that the current system risks the integrity of peer-reviewed research. Finally, the commentary applauds initiatives like the resignation of editorial board members from Elsevier journals to start non-profit journals, urging scientific communities to regain control of scholarly publishing.

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In recent years, there has been a tremendous change in the system of publication of the results of scientific studies in specialized journals. In a few years, it has gone from paper publications to online papers. Obviously, the use of Internet tools has meant a huge reduction in publication costs for the publishers, with the consequent increase in their profits. Anyway, the appearance of the publications named Open Access has been one of the most relevant sources of income for these companies.

In the heat of these changes, hundreds of new journals have appeared, many of which are classified as "predatory." However, the legendary scientific companies (the giant Elsevier among them) rapidly detected the great opportunity to increase profits. This business is very simple for them. Authors who want to see their paper published as Open Access must pay tremendous amounts (APCs > 3,000-4,000 Euros) to publish these papers. In contrast, interestingly, the reviewers of that paper do not receive a single euro/dollar for their work, which means no less than 4-6 hours, depending on the manuscript.

The scientific community has fallen into the trap of the metrics. For instance, for promotions in universities, research centers, etc., usually few members of the commissions/committees read the articles of the candidates. Currently and

unfortunately, the key point is simply in which journal the paper is published, what the impact factor of the journal is, how many citations the paper has received, what the h-index of the author is, etc. And on these issues are living the "predatory journals and/or greedy publishers." In the era of the Current Contents (in paper), I enjoyed reading the editorials of Dr. Eugene Garfield, one of the best experts on metrics in science, but at the same time a person who recommended being very careful in using metrics. I am sure he would disagree with the current use.

Scientific data must be published because it is essential for the advancement of science. However, that cannot be the shameful business that publishing has become. Taking into account that the reviewers are the basic point of the chain, based on my long experience, I would like to recommend to my scientific colleagues to carefully think about which journals they accept invitations to review for. Here I would include journals of professional societies, also journals without article processing charges (APCs), or that simply cover the obvious costs that the process of publishing entails. Of course, far from the amounts mentioned above.

An important piece of advice from an old senior scientist addressed to the younger members of scientific commissions/committees: Read the best papers of the candidates and forget the metrics. A comparison from real life: France and Spain have a great number of reputed wines that belong to a number of origins. However, the good origin of a wine does not necessarily imply that it is a good wine. Switzerland has excellent chocolate, but not all of it is first class, or the same for the beers of Belgium, among many other examples. You may apply this to the metrics of scientific journals. A bad paper can be published in a "good" journal and vice versa.

Last, but not least, at the beginning of my scientific career, when the Internet was in its very early beginnings, I did not have excessive problems getting copies of the papers that interested me. By simply writing to the authors (addresses were in Current Contents), they graciously sent a copy of their articles. As an author, I always did the same. There were no APCs then. You simply paid for the offprints that you required at a very reasonable price.

With Google and the numerous social networks, right now it is certainly easy to obtain a copy of any paper, whether it is open access or not. Either you will find it on the Internet, or you can request it from the corresponding author, who 90% of the time will provide you with a PDF copy for research and/or teaching purposes. The OA and their APCs are a banal attempt to put "doors into the field." If the authors take the bait, it will undoubtedly be a big deal for the publishers.

I want to conclude with a resounding NO to the exorbitant APCs.

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Author's Biographical Note

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Academic Appointments:

- Full Professor of Toxicology and Environmental Health, 1991–2022, School of Medicine, "Rovira i Virgili" University, Catalonia, Spain.
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- Emeritus Professor, since September 2022, School of Medicine, "Rovira i Virgili" University.
- Visiting Associate Professor, Department of Environmental Health Sciences, The Johns Hopkins University, USA, 1987.
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Research & Publications:

- Founder and Emeritus Director of TECNATOX (TECNATOX).
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Awards & Honors:

- Highly Cited Researcher, 2014 & 2015.
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Editorial Roles:

- Editor-in-Chief of Food and Chemical Toxicology (2014–2022) and Environmental Research (2014–2023).
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