



Reflection

On Predatory Nature of Scientific Publishing

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Abstract:

A reflection on publishing activities as experienced by the author is presented. Recently, the journals of the publisher Multidisciplinary Digital Publishing Institute have been declared as “predatory”. In this contribution, challenges of scientific publishing are discussed. Good practices of the MDPI publisher as experienced by the author are reflected.

Keywords: Predatory journals; MDPI; Authors; Reviewers; Editors



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1. Predator

According to the dictionaries, the meanings of the word “predator” first consider the animal world. Predator is an animal that hunts, kills, and eats other animals (Cambridge, 2023), an organism that primarily obtains food by the killing and consuming of other organisms (Merriam-Webster, 2023), an animal that lives by killing and eating other animals, an animal that preys on other animals (Britannica, 2023).

Transferred to human world, predator is someone who follows people in order to harm them or commit a crime against them (Cambridge, 2023), one who injures or exploits others for personal gain or profit (Merriam-Webster, 2023), a person who looks for other people in order to use, control, or harm them in some way (Britannica, 2023), someone who tries to use another person’s weakness to get advantages (Longman, 2023).

Further transferred to systems, predator is a company that buys or tries to buy another company that is in a weaker financial position (Cambridge, 2023), a person, group, or business that exploits, victimizes, or preys on others (Dictionary, 2023), a company which takes advantage of another company weaker than itself, for example by trying to buy it (Longman, 2023).

Further transferred to scientific publishing, a predatory publisher is an opportunistic publishing venue that exploits the academic need to publish but offers little reward for those using their services (Iowa State University Library, 2023).

2. Labeling bad practice in scientific publication as “predatory”

In science, publication is a key element. Publication makes possible that the ideas and results of the authors are conveyed to others interested in the subject. This creates a vivid exchange of experiences and induces new ideas that promote the knowledge. It therefore seems logical that the control over this point gives the relevant subject a great power, and eventually, also money.

With recent development, the request for publication has considerably increased and rendered scientific publication very interesting also from the financial point of view. Established publishers are now challenged by new players on the block with skills that previously did not exist or count. In order to survive, a fight for this profitable market is getting tougher. To win the confidence of the stakeholders, different classifications, rules, descriptions, etc. are being developed to justify the policies leading to the resources of the taxpayers’ money. Bad practices are being defined and a term “predatory journal” has been assigned to those that should pertain to such (Beall’s list, 2023) outlining the issues regarding editor and staff, business management and integrity. Furthermore, to lead to measurable outcomes, practical advices are suggested to the scientific society. For example, Oviedo Garcia (2021) published a thorough analysis of a particular publisher with respect to scientometric parameters and concluded:

“In summary, so as not to contribute to the continuance of malpractice: (1) researchers should neither send papers for their publication, nor cite them, nor act as reviewers for them, nor form part of their editorial committees; (2) research institutions should inform researchers of the reality of predatory journals and their iniquitous consequences at an individual and general level; and, (3) evaluation agencies and committees should ignore the registers that refer to predatory journals. Lastly, but by no means least of all, selective databases should conduct periodic controls and strengthen the criteria for the incorporation of journals, so as to prevent their good names from serving, as previously said, to prolong malpractice among journals ‘that prioritize self-interest at the expense of scholarship and are characterized by false or misleading information, deviation from best editorial and publication practices, a lack of transparency, and/or the use of aggressive and indiscriminate solicitation practices (Grudniewicz et al. 2019).”

On February 22, 2023, a notice was posted on a forum Predatory Reports (2023):

“MDPI (Multidisciplinary Digital Publishing Institute) as a publisher of open-access scientific journals was spun off from the Molecular Diversity Preservation International organization. It was formally registered by Shu-Kun Lin and Dietrich Rordorf in May 2010 with its official headquarters in Basel, Switzerland. Including Switzerland, MDPI has editorial offices in 11 countries, with five offices in China, two offices in both Romania and Serbia, and offices in the United Kingdom, Canada, Spain, Poland, Japan, Thailand, and Singapore. As of February 2023, MDPI publishes 413

journals and 9 conference journals. Based on a series of information published, we decided to include the MDPI journals on the predatory publications list.”

In December 2022, MDPI reached the milestone of one million articles published, from these, about 300,000 were peer reviewed and published in 2022 (MDPI, 2023). In 2022, 98 MDPI journals have earned an Impact Factor in Clarivate’s Journal Citation Reports and 86 percent of journals have increased their Impact Factor from 2020 (MDPI, 2023). At the end of 2022 the workforce of MDPI counted 6750 employees (MDPI, 2023).

A question could be asked: With one million of publications authored on the average by more than one author, a number of reviewers proportional to the number of manuscripts sent, and hundreds of editors handling the manuscripts: How many of these persons (if not all) have committed malpractices and harmed science? Or – are there some other problems or reasons leading to such labeling of this particular publisher, evidently successful in publication and in income. On the other hand, What are the roots of the success of MDPI?

3. An author’s perspective

To an author, a mentor of PhD students, and an applicant for grants, the relevant questions would likely be: Does the journal have an Impact Factor and therefore the eligibility for the PhD material publication required by local academics? Will the publication be considered as a valid reference for grant applications? Will the publication be considered for personal promotion (e.g. habilitation)? How likely is it that the manuscript will be accepted? Are we able to put together the money for publication?

In the predatory chain, I see the authors that think in this way as the weakest link – the prey. On the average there is a lot of work and dedication of the authors and resources in a manuscript. Clearly, an unpublished scientific work has only some intimate value to the authors which does not justify the public money and resources that have been spent to create it. An author who does not publish will not be able to get funding for further research meaning that publication is a vital need for the authors whose jobs and careers are at stake.

As a coauthor I have published about 250 papers, of these, about 15 papers in MDPI. None of our manuscripts sent to MDPI was rejected already by the editors as “out of scope” or “not reaching the priority” which are common phrases used in rejection letters of some journals. In MDPI, all our manuscripts were peer reviewed and not all were accepted for publication. To my best knowledge, we have never considered the fees as a crucial factor in choosing a journal, and most of the journals that we have published in have charged publication in a more or less comparable amount. Some journals (but not MDPI) require money also for handling the rejected manuscripts. But, the largest losses following the rejection of the manuscript (provided that the manuscript was actually sound and later published elsewhere) are the loss of zest within the team, the loss of time and energy spent to prepare the manuscript for submission to another journal and slowing down of the research process resulting in delays for providing the references required for project reports and Ph.D. theses. These losses are eventually reflected also in money and they largely exceed possible differences in fees from different journals.

4. A reviewer’s perspective

To a reviewer, the relevant questions would be: Am I able to meet the deadline for the review? Am I able to use the platform of the journal? Is the manuscript presented in such way that I can understand the message of the authors? Will the editors consider my comments?

I do not keep records on the number of reviews that I have made, but I estimate that there were about 300. I have reviewed about 10 manuscripts in MDPI journals in 2021 and 2022. When I started to review, it sometimes took me a week to study the manuscript and to write a review, but now, especially for excellent and well written manuscripts I can do it much faster, therefore, a deadline 6 days or 1 month does not mean much difference in this respect. I would expect that the majority of reviewers think likewise.



I think that it is not necessary that all the reviewers are experts on the field. Some comments are common for all fields (ethical issues, clarity, presentation, language), and sometimes, comments from other fields can bring new points of view.

An important role of the reviewer is to consider ethical issues, in particular in matters regarding living things. Besides presentation of the ethical committee permission, it is important that suggestions into clinical practice are amply argued and that too bold statements are rephrased. It seems plausible to me to reject a manuscript if the reviewer's comments on important ethical issues were ignored in the revised version. It had happened to me once because the author would not stay away from suggestions as regards clinical practice, that were not supported by the results. However, the editor accepted the manuscript. I have written to the editor that it has no sense to require a review and then neglect what the reviewer suggested, in particular as it was not much to ask from the authors. I have obtained no answer nor any more requests for review from this journal since. It was not in the MDPI journal.

5. An editor's perspective

To an editor, the relevant questions would be: How will I get contributions? How will I get reviewers? How will I manage manuscripts and reviewers to fit my policy of publishing? I have experience as an editor in different journals, including two MDPI journals, as a guest editor. The answers to the above questions depend largely on the situation of the journal, whether it is a new one with few submissions and without an Impact Factor or an renowned one with many submissions and struggling to keep or improve the Impact Factor. It follows from the definition of the Impact Factor (IF) (in a given year, the two-year journal impact factor is the ratio between the number of citations received in that year for publications in that journal that were published in the two preceding years and the total number of "citable items" published in that journal during the two preceding years) that publishing of many papers will decrease the impact factor of the journal. As the citations follow the trend in the field, the most predictable way to keep the IF high is to keep the number of accepted manuscripts to a minimum, in other words, to reject a given number of manuscripts in any case, regardless of the possibility of their content being of interest to the readers. In an editorial board meeting of one of the journals (but not MDPI), rejecting a high percent of manuscripts was presented as a success. I wonder whether some of these manuscripts were worth publishing or could have been made so by some improvements.

6. Predatory nature of scientific publishing

Peer review issues have been exposed in the discussions regarding predatory journals as a cornerstone of sound academic publishing. In my experience, a good peer review can be of a great help in improving the manuscript and work overall. I remember a comment of an anonymous reviewer that would merit her/him a coauthorship for we have envisaged the shortcomings of our work and considerably improved it. As a corresponding author I would gladly include this reviewer as a coauthor, but this is out of the question as the reviewers were and should have been kept anonymous to the authors. Thus I have remained thankful for ever and am looking up to this review since. But such cases were rather rare in my history of publication. Many times, after the peer review, the manuscript turned out deformed, as we pleased the reviewers to whom our course of arguments was strange. The worst experience were reviews that would not acknowledge deviations from already renowned theories. It took for years to find a journal that would publish radically new approaches, although well argued and supported by the evidences. I found the drawback in emotional reaction of the "experts" who have moved the science forward by their contribution, but were unable to let it be moved forward by others and found new approaches as "false". The sentences like: "is now well understood" seem particularly dangerous. Also, some reviews were destructive and even rude. I remember a very short review of a manuscript sent to a renowned journal saying in a line that "the paper spent on printing would not be justified for yet another publication on the subject". Such reviews can be of no service to authors. But the editor did not see it invalid and based on it, the manuscript was rejected. The manuscript was then published in another journal (Kralj-Iglič, 1996) and was hitherto cited 125 times.



If I sum up my experience, peer reviewers contributed a few major good ideas, that considerably improved the work. Most of the reviews presented good suggestions such as minor improvements, presentation, inclusion of additional references or grammar/language, but did not importantly affect the scientific essence. There was also a considerable number of destructive reviews that either caused a loss of time for rejection of manuscripts that have later proved sound by publication in other journals and by citation, or in my opinion decreased the quality and marginalized the accepted papers. Here, editorial decisions not to send the paper to peer review are not counted. As I have published in many different journals, had no close connections with the editors, and as the number of submissions can be estimated as twice the number of published papers (say about 500), I dare consider my experiences as representative for many other authors who are trying to publish primarily on the account of the content of the work. Questions can therefore be asked: What is the scientific value of the peer review? and What are the ethical premises of the peer review? In my opinion, a place of the reviewer is to suggest possible improvements of the manuscript and discuss potential development of the ideas. It is however questionable on what grounds the reviewer can be considered as a judge of the quality of the scientific work. Clearly, an unpublished scientific work has no value at all for the community and only time can show whether the published work proved useful to someone. Here, a scientific approach is not apt to foresee “which grain will grow and which will not” (unless the mechanisms are in action to deliberately accelerate or decelerate its growth).

From the author’s perspective I would call a predatory journal the one that rejects manuscripts in order to increase the impact factor of the journal. But as for the nature of the things, in order to keep the reputation of the journal within the existing rules, editors are forced to apply this principle. From the reviewer’s point of view, predatory review is the one that accepts, rejects and deforms manuscripts for personal interests (to gain material or non-material favors or to subdue to pressures from authors or editors). Predatory reviewing is one of the cornerstones of predatory nature of scientific publishing and is not localized within one publisher, as the same reviewers serve to different publishers. From the author’s point of view, predatory practices are to adjust the manuscripts to the likings of the reviewers and editors in spite of disagreement with the requests and reporting of false interpretations, results and authorships. With such practices on all levels of publication, new players on the block need not be scientists that had first proved independent researchers and mentors but can be propelled directly to the top by the virtue of their management and communication skills. Here things become more complex because as they do not have the respective knowledge and experience to understand what is going on on all levels, albeit at its origin, they cannot be guilty of malpractice. Relaxing the ethical constraints by genuine ignorance thus widely opens the doors to achieve profit of any kind.

All these effects may be enhanced by interactions between the colleagues who perform the roles of authors, reviewers and editors. I think that it is fair to admit, that within the existing rules, scientific publishing is predatory in its essence, whereas the origin of the predatory essence is the wish of an individual to control the scientific field and its connections with monetary funds (industry, academia and governmental institutions which take care of the taxpayers’ money) regardless of one’s competence, references and intentions to take care of all who want to contribute. Luckily, the scientific publishing system is a human-made construction and can be adjusted by changing the rules. That is at least to some extent. The mighty law of entropy that makes things predictable if the system is large enough is acting also here. It should be kept in mind that with increasing number of involved subjects the probability of malpractice will increase on all levels.

7. Experience of goodpractice of MDPI

It is not my intention to argue on malpractices of any particular author, reviewer, editor or publisher, although it is to be expected that they occur, by accident or intentionally, driven by a wish to find an easy way to climb the hierarchy and search for material or nonmaterial goods, and due to natural laws, the probability of such would be proportional to the number of manuscripts processed. Those who consider science and ethical issues precious should nevertheless act in best effort to minimize bad practices. Therefore, I



would like to point to good practices of the “notorious” publisher that I have experienced so far: MDPI journals were provided with Impact Factors and the publications were eligible for PhD material. Peer review was timely, and if accepted, papers were published in some days. The submission process was simple. For writing a review, a convenient platform with automatic reminder some days before the deadline was of great help. When I served as a guest editor of a special issue, soliciting of the reviewers was supported by the MDPI staff to overcome a bottleneck in processing the manuscripts. I was not pressured to decision either to accept or to reject any of the manuscripts edited. All these good practices that have to some extent relieved the burden of authorship, review and editing, do not come for granted. Enormous number of manuscripts was produced in the last years and many of these were rejected and re-submitted. I guess MDPI by its well organized processing substantially benefited from this pool, to the satisfaction of the authors and those reviewers and editors that are called to collaborate with authors to present their work in a way to be consumable by the scientific society. Although the publication fee is considered to be high, publication with MDPI proved more economical as it was efficient if one considers time and money consuming re-submissions and lobbying activities that slow down the research process and contribute little or nothing to the scientific essence. Also it is not my intention to investigate or judge whether MDPI is a more or less “predatory” publisher than any other in this profession (according to the definitions of my learned colleagues), however, I think that the scientific society would benefit if other publishers would apply the good practices of MDPI which I have experienced as an author, reviewer and editor, that is to deliver high quality papers to scientific society and thereby promote scientific work.

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