

THE IMPACT OF THE ARTICLE PROCESSING CHARGE MODEL ON THE PEER REVIEW CRISIS

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Nowadays the scientific community is facing quite the challenge: the “Peer review crisis”. But let’s rewind a bit. To dig deeper into this topic and to grant a better understanding some base information must be introduced. What is a peer review? Who are the peer reviewers? Peer review is the process by which a scientific manuscript, research proposal, or scholarly work is critically evaluated by independent experts (“peers”) in the same field before it is published or funded ¹.

Its main goal is to ensure the quality, validity, originality, and relevance of the work. Peer reviewers are researchers or professionals with expertise in the topic under review. They provide constructive feedback, identify strengths and weaknesses, and recommend whether the work should be accepted, revised, or rejected. Nearly every journal has peer reviewers who have been carefully chosen by editorial boards for their expertise in the materials that are consistent with the mission of the journal ².

They act as a quality filter and help authors improve their work, thus contributing to the integrity and credibility of scientific communication. Based on this definition, one could assume that this system is flawless. Well, it is not, as of today this system is under unprecedented pressure.

The number of papers submitted to journals has drastically increased over the past decade, especially during the recent COVID-19 pandemic, while the pool of qualified reviewers has not grown at the same pace ³.

Editors report sending more invitations to secure enough reviews, and average review times are stretching longer, sometimes taking months and almost surpassing the year threshold before a decision is made. This has led to what has been first introduced a “peer review crisis”, characterized by “reviewer fatigue,” lower acceptance rates of review requests, and concerns about the declining quality of reports.

A major driver of this surge in submissions is the “pay to publish” model, also known as Article Processing Charges (APC). In this system, authors (or their institutions) pay a fee to make their work open access, freely available to the public. Open access has undeniable benefits: it democratizes knowledge and makes research widely accessible. However, the financial incentive to accept more articles creates pressure on publishers to process, and often accelerate, peer review, which risks making it more superficial.

In predatory journals, which exploit this model, peer review is sometimes bypassed entirely, turning publication into a mere transaction. This convergence of rising submission volume and financial incentives risks eroding trust in the system.

If peer review becomes shallow or inconsistent, readers may struggle to distinguish between solid science and poorly vetted work. The solution is

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not to abandon open access but to rethink how peer review is funded and organized.

If publishers collect APCs, part of these funds could compensate reviewers for their time, making the system more sustainable. Training early-career researchers as reviewers, implementing structured review forms, and experimenting with transparent or post-publication peer review could also help restore rigor and trust³.

The peer review crisis is not merely a technical challenge but a cultural one. Scientific publishing must strike a new balance between accessibility, speed, and quality. If we fail to act, we risk flooding the literature with quantity at the expense of quality and mainly credibility, mining the foundation of science itself.

To say that these reviewers work is truly one of a kind would be an understatement. It is extremely important, especially in medicine, where flawed publication can cause real harm to the patients. It is precisely the

importance of this work, often overlooked and poorly understood, especially by early-career physicians approaching the world of scientific publishing, that makes this problem impossible to ignore. The current trend must be recognized and, if anything, reversed.

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