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" *Dear Reviewer 2…*": A Brief Guide to Reviewing Scientific Manuscripts.

"*Querido revisor 2…*": Guía breve para la revisión de manuscritos científicos.

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Abstract: Peer review is one of the pillars of scholarly communication. However, its quality depends largely on the integrity, preparation, and ethical attitude of those responsible for evaluating manuscripts. This article presents ethical and practical criteria for peer review, highlighting the importance of a rigorous, respectful, and educational process for both authors and the scientific community.

Keywords: Ethics in Scientific Publishing, Scientific Misconduct, Review, Peer Review.

Resumen: La revisión por pares es uno de los pilares de la comunicación científica. Sin embargo, su calidad depende en gran medida de la integridad, preparación y actitud ética de quienes asumen la tarea de evaluar los manuscritos. El presente artículo expone criterios éticos y prácticos para la revisión, destacando la importancia de un proceso riguroso, respetuoso y formativo tanto para autores como para la comunidad científica.

Palabras clave: Ética en la Publicación Científica, Mala Conducta Científica, Revisión, Revisión por pares.

1. Introduction

Peer review is an essential mechanism for ensuring the validity, relevance, and originality of academic production. In this context, the scientific reviewer plays a highly relevant role, acting as a guarantor of the quality of scientific production and as a mediator between authors, editors, and readers (1). Despite this, peer review does not always achieve the expected quality levels, which negatively impacts the quality of scientific production.

In academic culture, the figure of "Reviewer 2" *symbolizes* an evaluator who is excessively harsh, inflexible, unconstructive in their comments, difficult to please, lacking ethical criteria, and who refuses to treat authors as peers. It is common to encounter this figure when fulfilling roles related to research (writing research protocols, publishing scientific articles, among others), so it is necessary to guide reviewers so that they fulfill their role in an appropriate, pertinent, and ethical manner.

Some organizations such as the *Committee on Publication Ethics* (COPE) and the *International Committee of Medical Journal Editors* (ICMJE) have established ethical standards for peer review, highlighting aspects such as the declaration of conflicts of interest, management of possible breaches of confidentiality and the objectives of the review *per se* , as part of the quality assurance of the reviews

(2). The constitutive criteria of peer review, for example, in the FAITH model, include in their description impartiality [*Fairness*] in the critical analysis of manuscripts, the selection of suitable reviewers [*Appropiate*] with relevant experience, identifiable and publicly accountable reviewers ; timely reviews [*Timely*] and useful critical comments [*Helpful*] (3). On the other hand, the 5 C's model for ethical peer review, which includes mention of Conflict of Interest, Confidentiality, Credits (authorship), Constructive Criticism and Courtesy, serves to enable stakeholders (authors, editors and reviewers) to effectively address complex ethical dilemmas and maintain standards in scholarly communication (4).

In our own experience, we have received feedback that in some cases borders on the absurd, for example, the request to adapt the text to "Chilean" given that the journal was Chilean, the requirement to include five references to articles authored by the reviewer that were not related to the subject of the study as a condition for approval, or explanations of why it was better to use a certain instrument or methodology, explaining what they would have done in our place, without critically assessing what was done. Many of the aspects mentioned above are framed in problems linked to the lack of knowledge of editorial regulations, the peer review process and its objectives, or the existence of biases towards authors, topics, research groups, institutions, countries, arguments or ideas (5). In all cases, the comments made by "Reviewer 2" are difficult to implement, having negative consequences for authors, editors, the journal, and the disciplinary field, by slowing down the editorial process and generating dissatisfaction among authors, affecting their interest in publishing again in the journal.

A recent study identified that satisfaction with peer review processes is influenced by elements such as review times, clarity of comments and communication between authors and reviewers (6), which is relevant when taking into account that the rejection of an article generates a delay in publication of approximately 15 months (7) and that the author's dissatisfaction can reduce the interest of this and other researchers in publishing in the journal. On the other hand, it has been detailed that in the case of new or inexperienced researchers, an inadequate review can generate doubts about their own scientific abilities, which constitutes a relevant aspect when evaluating this situation (6, 8).

Silbiger & Stubler (8) highlight in their article that following inadequate peer review, researchers can develop negative perceptions about themselves and their capabilities, undermining confidence, decreasing productivity, and delaying career development. The authors emphasize that the impact is greater for underrepresented groups in the fields of science, technology, engineering, and mathematics (STEM), such as women, members of the LGBTQ+ community, and ethnic minorities.

Based on the above, we want to highlight some aspects to take into account when reviewing scientific manuscripts and avoid being “Reviewer 2” (1, 5, 9, 10):

1. **Confidentiality** : Reviewed manuscripts should not be disseminated in whole or in part. Likewise, plagiarism or misuse of the information contained therein is inappropriate.

2. **Competence** : Manuscripts should not be reviewed without the necessary knowledge and/or expertise in the subject matter. Reviewer incompetence can lead to the rejection of valuable research and the publication of unreliable studies, which harms the scientific community and public confidence in research results.

3. **Training** : The reviewer must be competent and trained to fulfill their role; this includes being aware of editorial requirements or regulations in order to avoid conflicts due to inconsistencies between the reviewer's suggestions and editorial guidelines.

4. **Courtesy** : Courtesy is an essential element when providing feedback on reviews. The review should be constructive and based on respect.

5. **Review of what was described and carried out** : The purpose of the review is to review the relevance of the procedures developed (sample/sampling, literature search, instruments, variables, analysis procedure or interpretation of data, among others), and not to describe what the reviewer would have done.

6. **Citations** : Reviewers should avoid suggesting the inclusion of references to articles they have written, especially when these are unrelated to the manuscript's topic. This phenomenon is called "coercive citation."

7. **Conflict of Interest** : The reviewer must refrain from assessing whether there are any personal, professional, or financial relationships that could bias their judgment. Declaring such conflicts ensures transparency.

8. **Evaluate with impartiality and respect** : The review should focus on the work, not the authors. Disparaging comments, personal judgments, or ideological biases damage the integrity of the process and can discourage scientific production.

9. **Responsibility** : The reviewer is responsible for providing an honest and well-founded assessment, without undue delay. Accepting the task implies a commitment to the time and quality of the review. This also includes reading and analyzing the manuscript, so taking shortcuts such as reviewing using Artificial Intelligence tools or delegating it to a subordinate is considered inappropriate.

Based on the above, the question arises: *What to evaluate?*

Beyond the ethical dimension described, a proper review should focus on considering aspects such as:

- the relevance and originality of the topic (does the manuscript contribute new knowledge or valuable perspectives to the area of study?),
- methodological soundness (are the design, sample size, instruments, and analysis relevant? Does the methodological design allow the stated objectives to be met?),
- Clarity and coherence (does the manuscript present ideas in an orderly, precise, and understandable manner? Is the language/terminology appropriate for the disciplinary field? Is there coherence between the theoretical framework and the methodology?)
- Appropriate use of sources (are references relevant, up-to-date, diverse, and correctly made/cited?),
- justification of the conclusions (do the interpretations correspond to the results obtained and do they not exceed what has been demonstrated?).

The practical questions mentioned above can be organized into two levels: general and specific comments. The former assess the relevance, contribution, relevance, and potential overall improvements of the study, while the latter highlight specific aspects of the methodology, writing, references, or style, incorporating concrete and constructive suggestions.

To ensure and promote the critical, comprehensive, and ethical review of manuscripts submitted for publication, guidelines that serve as standards for good review practices, such as structured feedback guidelines or *checklists* such *as* STROBE/PRISMA/CONSORT/COREQ, adapted for reviewers, can be used.

A useful guide is the one proposed by PLOS, integrating criteria that cover the pre-review process (review acceptance), during the reading of the manuscript and when writing the report (11). In addition, new review models have emerged such as open peer review (*Open Peer Review*) and post-publication review (*Post-Publication Review*), which include several advantages compared to traditional peer review such as: greater transparency (by losing anonymity, reviewers tend to be more careful in their comments), collective learning, lower risk of abuse (lower risk of including derogatory comments, irrelevant requests, personal biases or coercive citation), greater scope (especially in post-publication review), greater speed, more dynamic correction, and diversity of evaluation perspectives for a broader review. The new review models reinforce the ethical and academic responsibility of reviewers, while favoring a more transparent and reliable science, and transforming the review from a closed control to a collaborative and continuous process (12-13).

In addition to what has been described, it is the role of the Editor or the Editorial Committee to evaluate the assessments made by the reviewers and only forward to the author those that are considered pertinent, serving as a first filter in ensuring an adequate editorial flow and the quality of the scientific production disseminated (12). Within the previous framework, some challenges arise such as the assessment of inter-rater reliability in peer review processes, defined as the level of agreement between two or more reviews, being the role of the editor, in addition to reviewing the relevance of the comments and contributions, to verify the expertise and training of the reviewer (14). Some useful proposals to solve these difficulties include the design and implementation of training activities for reviewers such as short workshops, online courses or editorial certifications, for example, *Elsevier Researcher Academy* implemented the free *Certified Peer Reviewer Course Assessment* to train potential and current reviewers.

A commitment to reviewer training is needed to foster a culture of responsible research practice across all aspects (knowledge management, knowledge generation, and peer review) (15). Ultimately, the ethical dimensions of peer review serve not only to protect the integrity of individual studies but also to maintain trust in scientific research as a whole. As the research landscape continues to evolve, ongoing efforts to refine ethical guidelines and practices are essential to ensure that peer review remains a reliable mechanism for advancing knowledge and fostering academic excellence.

Conclusions

- Peer review is more than an exercise in criticism; it is an act of ethical responsibility and a commitment to the collective construction of knowledge.
- Being a good reviewer means evaluating with rigor, but also with respect, empathy, and a formative spirit.
- Abandoning the role of "reviewer 2" and adopting an ethical and constructive approach is essential to ensuring a more fair, inclusive, and trustworthy scientific system.

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