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Viewpoint

Standard terminology for peer review: Commenting and proposing the inclusion of two new categories

Janaynne Carvalho do Amaral✉

School of Information Sciences, University of Illinois Urbana-Champaign, Champaign, IL, USA
janedoamaral27@gmail.com
orcid.org/0000-0002-9817-4572

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Abstract

In July 2023, version 3.0 of standard terminology for peer review was published by the National Information Standards Organization. The terminology approaches four aspects of the peer review process: identity transparency, reviewer interacts with, review information published, and post-publication commenting. Using examples of open peer review models with public participation implemented by open access journals covering different subjects, the inclusion of two new categories in the next version of the terminology is proposed herein: manuscript review and pre-publication commenting.

Keywords:

ANSI/NISO Z39.106-2023, open peer review, peer review terminology, public peer review, reviewers

Introduction

In 2019, the International Association of Scientific, Technical, and Medical Publishers established a working group to develop standard terminology and definitions for peer review models, thereby supporting improved communication of these models. Version 2.0[2] of the Standard Taxonomy for Peer Review was published in 2020 after public commentary. According to Joris van Rossum, leader of the working group, "journal level means that information is given about which review models are used for each specific journal,"[3] while "article level means that information about the peer review process is collected via the submission systems and published on the article page."[3] Version 3.0 of the standard terminology for peer review, ANSI/NISO Z39.106-2023, was published in July 2023 by the National Information Standards Organization.[4] The terminology approaches four aspects of the peer review process: identity transparency; reviewer interacts with; review information published; and post-publication commenting. *Identity transparency* relates to how much the identities of the author, reviewers, and editors are visible during the peer review process. *Reviewer interacts with* refers to the level of interaction among reviewers, authors, and editors. *Review information published* means the peer review documentation published alongside the paper. *Post-publication commenting* is focused on online comments on the paper after publication. The terminology aims to apply to all peer review models, is constantly updated, and is open to suggestions.[4]

In this Viewpoint, by giving examples of open peer review models with public participation implemented by journals covering different subjects, the inclusion of two new categories is proposed in the next version of the standard terminology for peer review to be applied at the journal level: manuscript review and pre-publication review. The manuscript review category would describe the type of reviewers participating in the review process, and the pre-publication review category would describe how the participation of the public is facilitated by journals. Public participation in peer review refers to the participation of any interested members of the scientific community in the peer review process, with the exception of reviewers invited by journal editors or reviewers indicated by the author upon submission of manuscripts to a journal. This type of participation in open peer review models has been referred to as public peer review (5), crowdsourced review (6), and open participation (7) in the literature.

Open peer review models with public participation

When I started to study open peer review models in 2018, I was mainly intrigued by the reactions of some researchers to my topic of study. Many of those reactions come from a disapproval of revealing reviewers' identities during manuscript review and include non-qualified reviewers in the peer review process of scholarly journals. While as an early career researcher and woman from Latin America, I can understand where the fear of revealing your identity comes from, it looks like there is no consensus among authors, editors, and reviewers about what it means to be a qualified reviewer and, as a result, who is invited and can participate in the peer review process. Moved by a huge curiosity about how journal editors would be implementing open peer review models with public participation, using the terms public peer review,[5] crowdsourced review,[6] and open participation,[7] I found and analysed the models presented in Table 1.

By observing these models, I learned that the meaning of "public" may vary from one discipline to another according to the aims, scope, and goals that the journal wants

Table 1. Examples of open peer review models with public participation

Journal (year of launch)	Publisher	Name of model	Reviewers type	Reviewers' identity	Review process
Atmospheric Chemistry and Physics (2001)	European Geosciences Union, Munich, Germany	Interactive Public Discussion[8]	Editor Nominated referees Members of the scientific community	Anonymous before acceptance of the manuscript as a preprint. Anonymous or named. Named.	"It involves a discussion stage, where the manuscript is posted as preprint on European Geosciences Union's (EGU) preprint repository EGUsphere followed by public commenting by the referees, authors, and other members of the scientific community." Publish community comments and referee comments.
Economic Thought: History, Philosophy, and Methodology (2012)	World Economics Association, Bristol, England	Open Peer Discussion Forum[9]	Editor "Comments are welcome as well as solicited from experts in the field"	"As a rule, commentators should give their name. If they fear hurting their relationship with authors, they can use an alias, which has to be clearly recognizable as such."	"Papers (with named authors) will be posted on the journal's Open Peer Discussion forum for a minimum of 8 weeks to solicit comment and debate."
Journal of Instructional Research (2012)	Center for Innovation in Research and Teaching at Grand Canyon University, Phoenix, Arizona	Interactive Public Review followed by traditional masked review[10]	Editor Scholars Designated reviewers	"Scholars wishing to contribute to the discussion surrounding each paper must register with Journal of Instructional Research (JIR) to publicly post their comments." "Designated reviewers from the Peer Review Board will be assigned to review the discussion paper and provide feedback; reviewers may elect to sign their public comments or remain anonymous."	"During the 1-month interactive review stage, manuscripts are publicly available for review by the journal's peer review board as well as scholars in the broader academic community." "Revised papers are subjected to a traditional masked peer review to determine final acceptance for publication."
The BMJ (2014)	BMJ Publishing Group Ltd, London, United Kingdom	Open Peer Review[11]	Editor Academic reviewers Patient reviewers	Both types of reviewers are asked to sign their reports.	No commenting platform. Reviewers write reports.
Research Involvement and Engagement (2015)	BioMed Central, London, England	Open Peer Review System[12]	Academic Editor Patient Editor Academic reviewers Patient reviewers	Both types of reviewers are asked to sign their reports. Two or more experts are invited to review.	No commenting platform. Reviewers write reports.

to achieve. For example, for *The BMJ* and *Research Involvement and Engagement*, "Patient and public involvement in peer review of research manuscripts represents a landmark shift in the concept of peer review at journals, reflecting a desire to ensure research is appropriate and relevant to end users."[13] By contrast, "Economic Thought is committed to openness in academic publishing and wishes to enhance the social and cooperative aspects of research."[9] In addition, the review models implemented by journals from Table 1 have many types of reviewers, and, because of this segmentation, the identity policies are different for each group of reviewers. While *The BMJ* and *Research Involvement and Engagement* ask academic reviewers and patient reviewers to reveal their identities, *Atmospheric Chemistry and Physics*, *Economic Thought: History, Philosophy, and Methodology*, and *Journal of Instructional Research* make signing the review mandatory for public reviewers and optional for reviewers invited to peer review. Furthermore, participation of the public in peer review can happen through a third platform, a journal commenting platform, or through the direct inclusion of new types of reviewers in the review process. Public participation in open peer review models with public participation can promote or not interaction among reviewers, authors, and editors, and the review can be published as comments or reports.

Based on these observations, two new categories (manuscript review and pre-publication commenting) are suggested for inclusion in the next version of Standard Terminology

Table 2. Categories suggested for the next version of the standard terminology for peer review

Reviewer type		Pre-publication commenting	
This category would describe the types of reviewers participating in the review process and the openness of their identity during the manuscript evaluation.		This category would describe how the journal enables the participation of many types of reviewers in the review process and what is published about the manuscript evaluation.	
Type	**Description**	**Type**	**Description**
Editor	The editor confirms whether the manuscript fits within the journal's scope. Identity can be anonymous or visible.	**Preprint platform**	Participation is open through a preprint platform. Comments and reports are published.
Selected reviewers	Editors select and invite reviewers. Identity can be anonymous or visible.	**Comment section**	Participation is open through the journal website. Comments are published.
Indicated reviewers	Authors indicate reviewers to their manuscript. Identity can be anonymous or visible.	**Through peer review reports**	Peer review reports are published alongside the manuscript.
Members of the scientific community	Any researcher regardless of career stage or field of study. Identity can be anonymous or visible.		
Public	Citizens without academic credentials participating or not participating in the research process. Identities are visible.		

for Peer Review (Table 2). The inclusion of these categories in version 3.0 of Standard Terminology for Peer Review would change the order of the current categories of the table. Following the seven dimensions of the characterisation of the peer review processes, that is, 1) When review takes place, 2) What is assessed, 3) Who are the reviewers, 4) Anonymity of authors, 5) Anonymity of reviewers open review, 6) Interaction, 7) Reader commentary,[14] I suggest the inclusion of the categories pre-publication commenting and manuscript review before the category identity transparency. In this sense, this is how the content order of the next version of the terminology would be: 1) Pre-publication commenting, 2) Manuscript review, 3) Identity Transparency, 4) Reviewers interact with, 5) Review Information Published, 6) Post-Publication commenting.

There are limitations to this proposal, chiefly that a small sample of journals was included. Resource limitations are the main reason for this, owing to this work being completed during my PhD studies in Brazil. Future investigation is warranted into other open peer review models. Nevertheless, I hope this viewpoint contributes to the development of the next version of the Standard Terminology for Peer Review. The inclusion of the categories proposed will increase the visibility of open peer review models with public participation and will contribute to recognising the work of all types of peer reviewers engaged with the improvement of manuscripts submitted for publication.

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