



Advancing trusted research

A Standard Terminology for Peer Review

Version 2.1

Version history

1.0	July 15 2020	Developed by the Working Group with comments/input from selected organizations and individuals.
1.5	Sept 20 2020	Adapted version based on comments received in the consultation phase.
2.0	Sept 29 2020	Adapted version based on comments on version 1.5
2.1	December 2 2021	Several changes, more prominently change 'taxonomy' with 'terminology'

Background

STM, the International Association of Scientific, Technical and Medical Publishers, has recognised a need to identify and standardise definitions and terminology in (open) peer review practices. A peer review terminology that is used across publishers will help make the peer review process for articles and journals more transparent, and enable the community to better assess and compare peer review practices between different journals. With this background, STM has set up a working group to develop such standardised definitions and associated best practice recommendations.

Since September 2021, this initiative has continued as a NISO working group.

WG Members

Steve Pinchotti. Altum, Inc.
Lois Jones. American Psychological Association (APA)
Caroline Webber. Aries Systems Corporation
Nick Taylor. ATYPON
Naseem Naqvi. British Blockchain Association
Alison Paskins. Cambridge University Press
Trevor Lane. Committee on Publication Ethics (COPE)
Anna Jester. eJournalPress
Andy Collings. eLife
Oliver Rickard. HighWire Press
Alison Larkin. IEEE
Kim Eggleton. IOP Publishing
Michael Willis. John Wiley & Sons, Ltd.
Nettie Lagace. NISO
Nick Lindsay. Massachusetts Institute of Technology (MIT)
Gabe Stein. Massachusetts Institute of Technology (MIT)
Dr. Michelle Urberg. Music Library Association
Jill Reilly. National Agricultural Library
Dr. Bahar Mehmani. Elsevier
Katrina Pickersgill. SAGE Publishing
Jon Speilburg. SPIE
Virginia Mercer. Springer Nature
Tim Shipley. Springer Nature
Sabina Alam. Taylor & Francis Group
Tony Alves. HighWire Press
Lisa Hinchliffe. University of Illinois at Urbana-Champaign
Joris van Rossum. STM (Chair) (rossum@stm-assoc.org)

Scope

The scope of this terminology is (external¹) peer review of journal articles. The terminology might expand to the peer review of other classes of objects at a later phase (e.g. books, pre-prints, data) but the focus is on articles initially as we believe that here is the greatest need. Its successful implementation will also make it possible to effectively expand to other objects at a later phase.

¹ Contrary to peer review conducted by editorial boards or publishing staff

Machine readability of the review terminology applied to journals and individual articles is a longer term goal of this initiative, but not included in this phase. The terminology does not include icons or other visual markers, these also might be included later.

The terminology is to be applied on the journal level (describing what kind of review models are used for a journal) as well as on the article level (what kind of review did a particular article undergo), and communicated on the appropriate places and moments (e.g. Guide of Authors, Article Page).

The terminology is intended to apply to all review models. Some exceptional review models might not be included (e.g. the F1000 model review model) in case these models are fully transparent by design, and including these models would make the terminology unnecessarily complex.

The scope of review (e.g. whether an article is reviewed for novelty, potential impact, rigour of methods or analysis) is not included, as these editorial approaches are not sufficiently defined and demarcated. At the same time, we recommend that the scope of review is communicated to authors and also on the article page in case it clearly deviates from the standard (e.g. review on sound science, statistics). The article acceptance decision making process (e.g., made by a single Editor-in-Chief, a panel of Editors, an Associate Editor ratified by an Editor-in-Chief) is out of scope.

The term 'blind' in 'double blind etc.' is replaced by 'anonymized' to avoid concerns about using ableist terms.

The terminology will be regularly updated and suggestions can be made. More information can be found at

<https://www.stm-assoc.org/standards-technology/peer-review-terminology-project/>.

Terminology

The terminology describes the different peer review models in four elements of the process: (1) identity transparency, (2) who the reviewer interacts with, (3) what information about the review process is published, and (4) whether post-publication commenting takes place.

1. Identity transparency:

This category describes the extent to which identities of participants are made visible to each other during the review process. Identities not made visible during the process can be made visible at publication on the article page (see table 3). Please note that for this and the other tables the information **in bold** should be used in communication.

Type:	Description:
All identities visible	<i>Reviewer identity is visible to author, author identity is visible to reviewer, reviewer and author identity is visible to (decision-making) editor</i>
Single anonymized	<i>Reviewer identity is not made visible to author, author identity is visible to reviewer, reviewer and author identity is visible to (decision-making) editor</i>
Double anonymized	<i>Reviewer identity is not made visible to author, author identity is not made visible to reviewer, reviewer and author identity is visible to (decision-making) editor</i>
Triple anonymized	<i>Reviewer identity is not made visible to author, author identity is not made visible to reviewer, reviewer & author identity is not made visible to (decision-making) editor</i>

2. Reviewer interacts with:	
This category relates to direct interaction or exchange of information (e.g. via submission systems or email) during the peer review process. Multiple types of this category can be selected, where applicable. Whatever is communicated about the review process after publication is covered in the category 'Reviewer Information Published'.	
<i>Type:</i>	<i>Description:</i>
Editor	<i>Communication between editor and reviewer (traditional model). Also known as 'independent review'. Identities can be anonymized or visible</i>
Other Reviewer(s)	<i>Direct interaction/collaboration (e.g. via submission system or email) between reviewers, or the possibility to receive and/or comment on each other's reports before reviewer makes recommendation to the editor. Identities can be anonymized or visible</i>
Authors	<i>Direct interaction/collaboration (e.g. via submission system or email) between author and reviewer before reviewer makes recommendation to the editor. Identities can be anonymized or visible</i>

3. Review information published:	
This relates to information that is published about the review process on the article page. Select and list the items that are applicable.	
Type:	Description:
None	<i>No information about the review process or editorial decision process is published</i>
Review summaries	<i>Can be summaries or parts of the reviews, or a summary of the review process</i>
Review reports	<i>Full content of the reviewer reports is published.</i>
Review reports author opt in	<i>Full content of the reviewer reports is published if the corresponding author opts for this</i>
Review reports reviewer opt in	<i>Full content of the reviewer reports is published if the reviewer(s) opt(s) for this</i>
Submitted manuscript	
Submitted manuscript author opt in	
Author/editor communication	<i>Including editor decision letter and reviewer responses (rebuttals)</i>
Reviewer identities	
Reviewer identities reviewer opt in	
Editor identities	<i>Identities of the handling editors</i>

4. Post publication commenting:	
Relates to comments on the online published version of the version of record. Article types such as comment / reply / letter are not considered post publication commenting as they are stand-alone publications. Only use this category when applicable.	
<i>Type:</i>	<i>Description:</i>
Open	<i>Commenting open to anybody. Can be anonymous, require signing in and/or registration (e.g. via ORCID)</i>
On invitation	<i>Only editor- (or publisher-) selected and/or invited individuals can comment on the article post publication</i>

Use of terminology

As an example, the description of a (traditional) review process to authors (e.g. on the Guide for Authors) would be:

Identity transparency: Single anonymized

Reviewer interacts with: Editor

Review information published: None

Publishers can include links in these descriptions which lead to a page where the terms are explained.

In case journals will allow authors to choose between review models, all the options should be listed. E.g.

Identity transparency: Single anonymized, double anonymized

Only in the case of post publication commenting, this should be actively communicated. For example:

Identity transparency: All identities visible

Reviewer interacts with: Editor, Other Reviewer(s)

Review information published: Review reports, reviewer identities

Post publication commenting: Open

The tables below summarize which elements of the terminology should be used to describe the review models **to authors** through the appropriate channels (e.g. Guide for Authors, Journal Homepage, Submission Systems), and **to readers** on the article page (print, PDF and online).

1. Identity transparency

<i>To Authors (e.g. Guide for Authors)</i>	<i>On Article Page</i>
<i>Mandatory to communicate review model(s) used in the journal</i>	<i>Mandatory to display model used for article</i>

2. Reviewer interacts with

<i>To Authors (e.g. Guide for Authors)</i>	<i>On Article Page</i>
<i>Mandatory to communicate review model(s) used in the journal</i>	<i>Mandatory to display model used for article</i>

3. Review Information published

<i>To Authors (e.g. Guide for Authors)</i>	<i>On Article Page</i>
<i>Mandatory to display what will be published (multiple options possible)</i>	<i>Not necessary to display policy (as information itself is published there)</i>

4. Post publication commenting

<i>To Authors (e.g. Guide for Authors)</i>	<i>On Article Page</i>
<i>Mandatory to display model, but only if applicable</i>	<i>Not necessary to display policy (as comments themselves are published on the article page (online))</i>

In some cases, publishers are encouraged to provide more details in the description. For example, if registration is needed for post publication commenting ('Post publication commenting: Open'), we recommend to specify this.

We encourage journals to communicate whether they accept manuscripts and/or reviews from other journals ('cascades' or 'transfers') or platforms (e.g. Peerage of Science).

In case the journal uses alternative forms of peer review (e.g. review done by editors vs. external reviewers), journals are encouraged to mention this as well.

In addition to describing the review model that was used for the submitted manuscript on the article page, we strongly recommend that the following information is displayed:

- Date of submission
- Date of acceptance
- Date of publication
- Whether the manuscript was fast-tracked
- Number of reviewer reports submitted in first round
- Number of revision rounds
- Whether any technical tools (including AI/ML) were used in the editorial process such as:
 - Plagiarism checks
 - Tools to assess the validity or consistency of statistics
 - Tools to assess the reproducibility or methodological rigor of research
 - Tools to detect image manipulation
 - Tools to check references