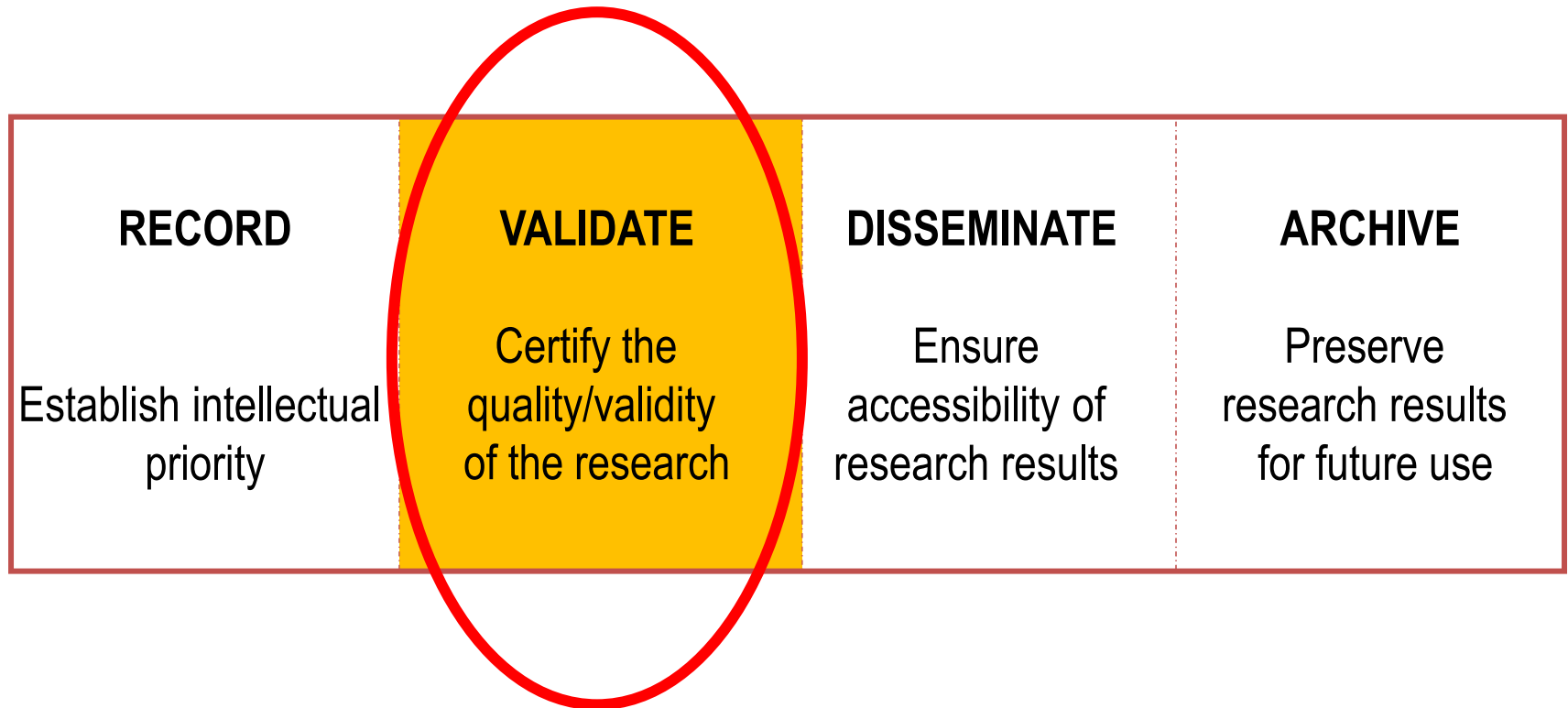


Introduction to peer review

Best practices in writing scientific papers
Round Table 2022 #1 Become a peer reviewer

Françoise Vandooren
Département de bibliothèques et d'information scientifique
Université libre de Bruxelles
7 March 2022

The functions of scientific publication

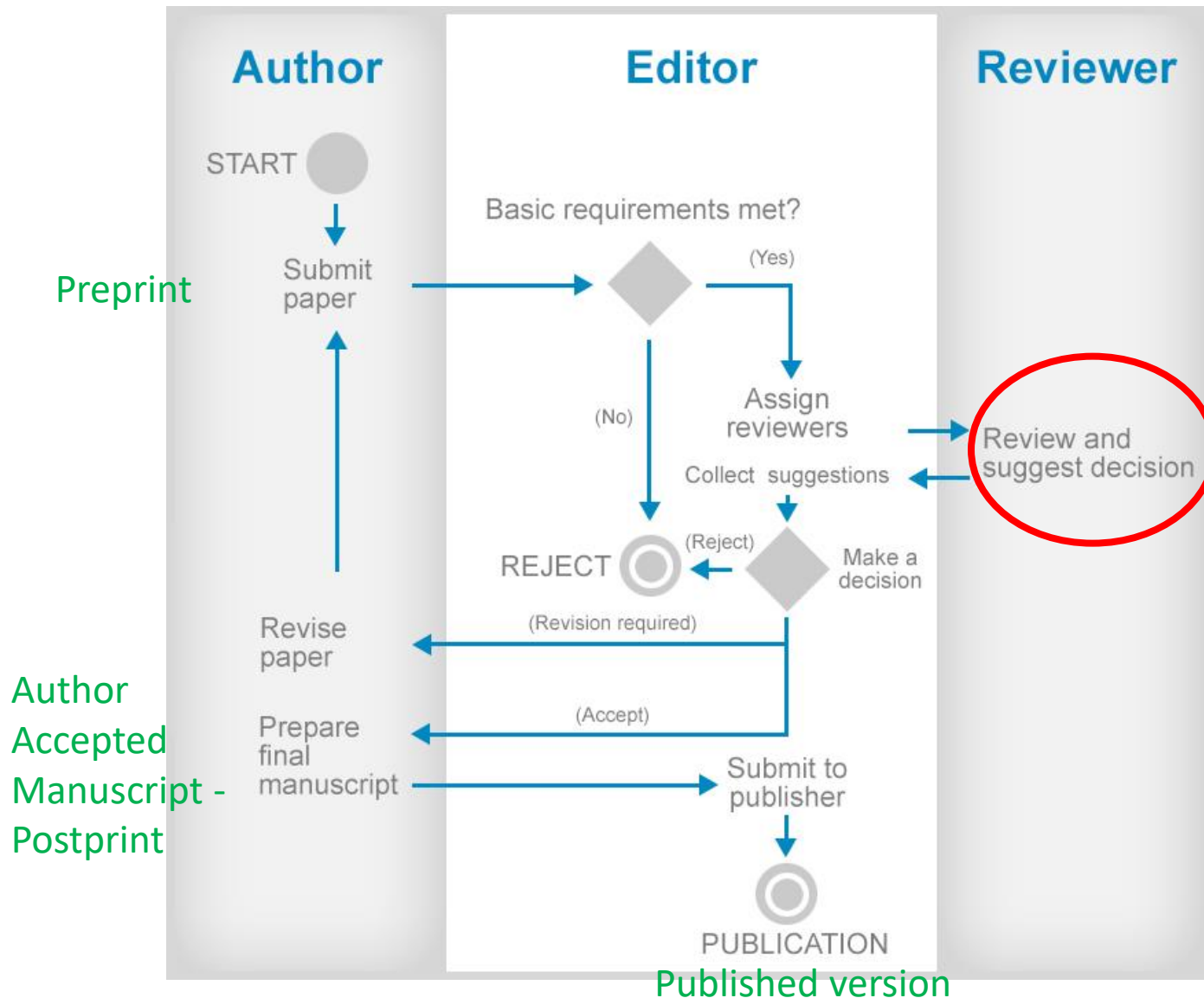


Roles in scientific journal publishing

- Editor in chief:
editorial policy, decision to publish or not
- Editorial board, **reviewers**:
evaluating manuscripts
- Publisher:
editing, disseminating, selling the journal
+ infrastructure for submitting manuscripts,
managing peer review, search and access journals

Traditional peer review

Traditional peer review process



Traditional peer review

- The review process is confidential
 - Blind : the author does not know the identity of the reviewers
 - Double blind : the author does not know the identity of the reviewers and the reviewers do not know the identity of the author(s)
 - the reviews are not published.

Is the traditional peer-review system broken?

THE CONVERSATION

Academic rigour, journalistic flair

The peer-review system for academic papers is badly in need of repair

February 26, 2017 4:59pm GMT



The scientific refereeing process can be tedious, time-consuming and isn't very rewarding. Shutterstock

The New York Times

Peer Review: The Worst Way to Judge Research, Except for All the Others

A look at the system's weaknesses, and possible ways to combat them.



They Ocasio/The New York Times

Authors



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EXPLORING LIFE, INSPIRING INNOVATION

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Is Peer Review Broken?



Jan 31, 2006

BY ALISON MCCOOK

Peter Lawrence, a developmental biologist who is also an editor at the journal *Development* and former editorial board member at *Cell*, has been publishing papers in academic journals for 40 years. His first 70 or so papers were "never rejected," he says, but that's all changed. Now, he has significantly more trouble getting articles into the first journal he submits them to.

"The rising [rejections] means an increase in angry authors."

-Drummond Rennie

JOURNAL OF THE ROYAL SOCIETY OF MEDICINE Volume 99 April 2006

Peer review: a flawed process at the heart of science and journals

Richard Smith

J R Soc Med 2006;99:178-182



By Aaron E. Carroll

(Jean-François Flot, Introducing PCI. [Open Science webinars – free and FAIR Open Access](#), 26 October 2021.)

Traditional peer review criticism

- **Asymmetrical:** often, reviewers know the authors' identity but the reverse is not true
- **Not transparent:** the review process is not publicly available
- **Slow:** it can take months or even years for the review process to reach a decision
- **Wasteful:** results not deemed sensational or significant enough have trouble getting published, leading to a waste of resources
- **Undemocratic:** especially in prestigious journals, the persons in charge of handling the review process and making final decisions are less and less often practising scientists

(Jean-François Flot, Introducing PCI. [Open Science webinars – free and FAIR Open Access](#), 26 October 2021.)

Open Peer Review

Open peer review

Different levels of openness:

- Open up identities

Authors and reviewers are aware of each other's identity

- Make review reports open and accessible

Review reports are published alongside the relevant article.

- Open up participation

The wider community is able to contribute to the review process (peer researchers or even general public).

Open peer review

- Encourage interaction

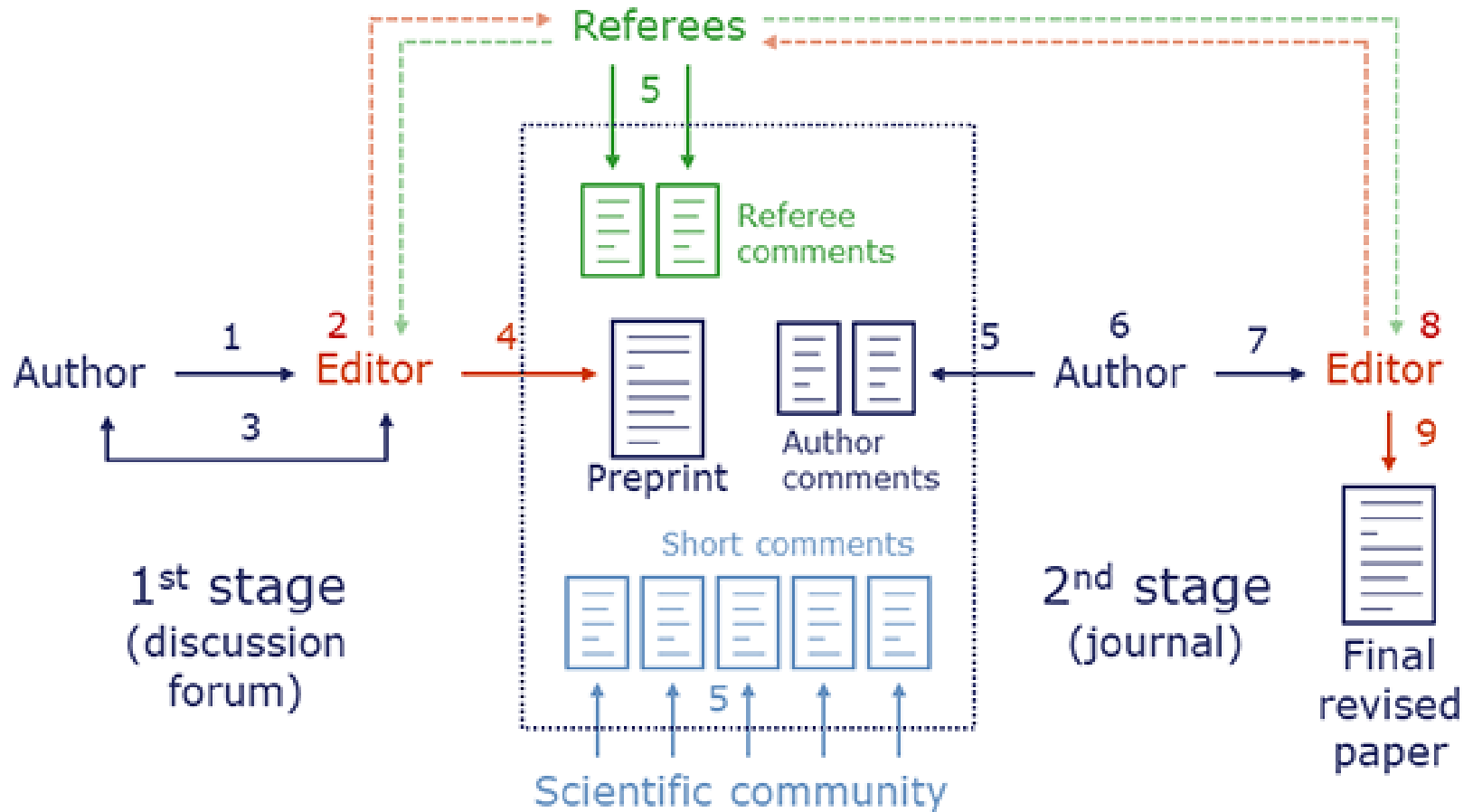
Direct, reciprocal discussion between author(s) and reviewers and/or between reviewers is allowed and encouraged.

- Use open platforms

Review is de-coupled from publishing in that it is facilitated by a different organizational entity than the venue of publication.

Example of interactive public peer review

Copernicus Interactive Public Peer Review



Predicting turbidity and Aluminum in drinking water treatment plants using Hybrid Network (GA- ANN) and GEP

Ruba Alsaeed et al.

Status: final response (author comments only)

Comment types: AC – author | RC – referee | CC – community | EC – editor | CEC – chief editor |  Report abuse

Login for authors/topical editors

Subscribe to comment alert

CC1: 'Comment on dwes-2021-8', fadi Asker, 02 Apr 2021 

The article in general is good written and it is about a very important issue related to drinking water treatmentI noticed that the references are quite new. And tge equation gives the article more stringth, likewise the GUI .

But I have a question why the researcher used Ga and Ann and GEP

not fuzzy for example?

And at the end of the article I think it is good to mention the other 3 equation that reselted from the research, not just the best one

GOOD LUCK

Citation: <https://doi.org/10.5194/dwes-2021-8-CC1>



AC1: 'Reply on CC1', Ruba Alsaeed, 02 Apr 2021 

We used GA-ANN Because there is some articles on the internet about predicting turbidity and other parameters by Fuzzy logic

So to do something new , we used ANN Hybrid with GA, GA was used because many researches in other fields said that GA can improve the structure of ANN. And it gave great results comparing to similar researches.

And for the other 3 equation, I can provide them in the final copy if I am allowed to add something to the article.

GEP was great tool for predicting in a very amazing way.

Citation: <https://doi.org/10.5194/dwes-2021-8-AC1>



CC2: 'Comment on dwes-2021-8', Salim Heddad, 03 Apr 2021 

AC3: 'Reply on CC2', Ruba Alsaeed, 12 Apr 2021 

AC4: 'Reply on CC2', Ruba Alsaeed, 12 Apr 2021 

Advantages of open peer review

- Transparency
- Speed
- Reliability
- Consistency
- Motivation and valorization

Drawbacks

- Bias
- Anonymity provides protection to authors and reviewers
- Difficulty in recruiting open peer reviewers

Reviewer Incentives

Incentives

Nonfinancial incentives

- being up-to-date with research developments
- increased expertise in reviewing, and in writing
- free journal access or subscription
- acknowledgment in journal websites, letter of thanks, certificates of excellence
- published and citable open reviews
- editorial board appointment.

Crediting incentives

- formally recognizing the reviewing work in researcher's assessment
- linking peer review activity to ORCID records using DOIs; in Publons

Visibility of reviewing activities



Jérôme Carette

 Top peer reviewer

Post Doc - BATir, [Université Libre de Bruxelles](#)

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PUBLICATIONS	TOTAL TIMES CITED	H-INDEX	VERIFIED REVIEWS
13	254	8 	37

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-  Metrics
-  Publications
-  [Peer review](#)

Verified reviews

 (8) Applied Sciences WOS	 (8) Materials WOS
 (6) Construction and Building Materials WOS	 (3) Cement and Concrete Composites WOS
 (3) European Journal of Environmental ... WOS	 (2) Composites Part B: Engineering WOS
 (2) Measurement WOS	 (2) Sensors WOS
 (1) Buildings WOS	 (1) Polymers WOS

Showing 10 of 11 [SHOW MORE](#)

Incentives

Financial incentives

- waiver of publication charges and free access to paid articles
- Cash incentives? may affect the quality of review, transform the review process into business

Reviewer training

Training

- reviewing author instructions from journals
- reading the open reviews of other articles and learn from the comments of reviewers and answers by authors
- receiving guidance from academic peers

Clarivate
Web of Science™

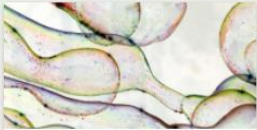
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Other types of open peer reviewing and publishing platforms

Peer Community In (PCI):

- Preprint + data are posted on a preprint server and submitted to a PCI community; if accepted by a Recommender, it is peer reviewed; if accepted, the Recommender writes a report that is published on open access, with the reviews, on PCI. Preprint can be published in a journal or in the PCI Journal

Watch [the video presentation](#) by Jean-François Flot (minute 17:00)

F1000:

- Peer review of articles published in F1000Research takes place after publication on F1000; expert reviewers are suggested primarily by the authors ; peer review process is entirely open and transparent:

Watch [the video interview of Jean-Louis Tison](#), professor at ULB

He explains the open peer review system
used by the journal The Cryosphere



References

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