Guiding Principles in an Evolving Research Publishing Landscape

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VP, Society Research Publishing, Asia-Pacific, Wiley
Member, Scholarly and Journals Committee, Australian Publishers Association
Two Questions

• What are the Trends Shaping this Evolving Research Landscape?

• What is the Publisher’s Role in Transparency?
Current Trends in an Evolving Landscape
Current Trends in an Evolving Landscape

- Changing expectations
- Increase in published research.
- Rates of global collaboration.
- Drive towards transparency and openness.
Changing Expectations

What do researchers expect?
2,156 participants who have read or used scientific or scholarly research in the past 12 months

Geographic distribution:
- United States: 17%
- Americas: 14%
- APAC: 18%
- Europe: 26%
- Middle East: 6%
- Africa: 9%
- Central Asia: 10%

Work Setting:
- University or College: 57%
- I am a student: 20%
- Research Institute: 19%
- Hospital/Clinic: 18%
- Government: 12%
- Corporation: 10%
- Not-for-profit: 8%
- Medical School: 7%
- I am not currently employed: 2%
- Other: 7%

Age distribution:
- Under 30: 23%
- 31-40: 29%
- 41-50: 20%
- 51-60: 17%
- Over 60: 10%
- Prefer not to answer: 1%
What do Researchers Expect?

- To read, search and collaborate online
- To identify content that is credible and relevant
- Immediate, easy access to research and research data online
- Immediate, easy access to information, tools and guidelines
- To share and discuss published work online
- Good service: responsive Editors and publishers
Growth of Published Research

Rates of growth in published research
Global Publication of Research

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<tr>
<th>Country</th>
<th>Growth Rate (CAGR)</th>
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<tbody>
<tr>
<td>United States</td>
<td>2.5%</td>
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<tr>
<td>China</td>
<td>13.5%</td>
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<tr>
<td>United Kingdom</td>
<td>3.7%</td>
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<td>Japan</td>
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<tr>
<td>Australia</td>
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<td>WoS Average</td>
<td>4.1%</td>
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Unit = Web of Science citable item
Source: Clarivate Analytics Web of Science
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Globalization and Global Collaboration
Global Collaboration: Authorship

Percentage of articles with overseas co-author(s) 2017

- United Kingdom: 61%
- Australia: 57%
- Canada: 55%
- United States: 40%
- Japan: 33%
- South Korea: 30%
- China: 28%
- India: 23%

Source: Clarivate Analytics WoS, Wiley EBAC
Global Collaboration: Authorship

Share of output with international co-author

- United Kingdom: +13.9%
- Australia: +14.2%
- Canada: +10.8%
- United States: +10.0%
- Japan: +6.4%
- South Korea: +4.1%
- China: +1.9%
- India: +3.0%

Source: Clarivate Analytics WoS, Wiley EBAC
Global Collaboration: Authorship

2010
45,100 Articles
19,400 Articles

43.2% International Collaboration
56.8% Domestic

2017
71,500 Articles
41,100 Articles

57.4% International Collaboration
42.6% Domestic

Source: Clarivate Analytics WoS, Wiley EBAC
Drive Towards Transparency

Developments in Open Science
Open Science

This Open Science revolution is being driven by new, digital tools for scientific collaboration, experiments and analysis and which make scientific knowledge more easily accessible by professionals and the general public, anywhere, at any time.

European Commission
Open Science

FAIR data:

- Findable
- Accessible
- Interoperable
- Re-usable
Researchers expect **immediate access** to content **online**

There is **vastly more published research** than ever before.

Research is global: and rates of **global collaboration** are growing.

These features, and others, fuel the **drive towards transparency** and openness.
The Publishers’ Role in Transparency

Listen to the Research Community
Work Together on Solutions:
• Collaborate
• Set Standards and Policies
• Continuously Improve Infrastructure, Processes and Products
• Consider Incentives and Recognition
Listen to the Research Community
Scientists Perceive a Reproducibility Crisis

IS THERE A REPRODUCIBILITY CRISIS?

- 52% Yes, a significant crisis
- 38% Yes, a slight crisis
- 7% Don't know
- 3% No, there is no crisis

1,576 researchers surveyed

Early Career Researchers Worry about Bias

Knowledge

Pale Male Stale Gate Keepers!

You Know Nothing About Greek Religion!
Overall, how satisfied are you with the peer review system used by scholarly journals?

- Very Satisfied: 1%
- Satisfied: 26%
- Neither satisfied nor dissatisfied: 27%
- Dissatisfied: 37%
- Very dissatisfied: 8%
- Don't know: 1%

The community wants a better solution

#bioPeerReview

ASAPbio
Work Together on Solutions
Reproducibility of research can be improved by increasing transparency of the research process and products.
TOP Guidelines

1. Citations (data, code, materials)
2. Data
3. Analytic methods
4. Materials
5. Design and analysis
6. Preregistration of studies
7. Preregistration of analyses
8. Replication

The Australian Publishers Association’s Scholarly & Journals Committee (SJC) represents its members in matters of local importance where there is a need for group representation, debate and input from the perspectives of scholarly and journals publishers.

Its primary objectives are to:
• Actively encourage participation from scholarly publishers based in Australia
• Share expertise and knowledge
• Encourage information exchange
• Engage with stakeholders in the scholarly and journals arena

Scholarly publishers have a strong track record of embracing new technologies and publishing models. The SJC is committed to continuing to meeting the needs of the academic and research communities in Australia.
Standards, Guidelines and Policies

Common Standards for Open Data

Best Practice for Publication Ethics

COPE is committed to educate and support editors, publishers and those involved in publication ethics with the aim of moving the culture of publishing towards one where ethical practices become the norm, part of the publishing culture. Our approach is firmly in the direction of influencing through education, resources and support of our members alongside the fostering of professional debate in the wider community.
We are Crossref, a not-for-profit membership organization for scholarly publishing working to make content easy to find, link, cite, and assess. We do it in five ways: rallying the community; tagging metadata; running a shared infrastructure; playing with new technology; and making tools and services to improve research communications.

It’s as simple—and as complicated—as that.
Peer review prior to data collection emphasizes the importance of the research question and the methods. High-quality studies are provisionally accepted.

This eliminates questionable research practices, including low statistical power, selective reporting, and publication bias.
“All-in-all, we consider that we have successfully and smoothly moved into a transparent review process, we have received only encouragement and support and we urge other journals to join the ever-increasing number of journals truly committed to transparency in science.”
Better Peer Review?

A 40-plus-page manuscript with:
• 5 essential areas – Integrity, Ethics, Fairness, Usefulness, Timeliness
• Literature review and discussion, 40 case studies
• Recommendations
• 1 self-assessment checklist with better practice standards for each essential area, around 60 questions that journal teams might use in self-assessment

What does better peer review look like? Definitions, essential areas, and recommendations for better practice

Heidi Allen, Emma Boxer, Alexandra Cury, Thomas Gaston, Chris Graf, Ben Hogan, Stephanie Loh, Hannah Wakley, Michael Willis

Abstract

Aim: To define a set of standards for better peer review. Method: We set out the opinions of five groups of stakeholders in the peer review process: authors, reviewers, editors, editors-in-chief, and the general public. We then solicited case studies from people involved in peer review. We then captured practical insights into how journal teams address the problems of poor peer review.

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Disciplines
Life Sciences, Other Life Sciences, Physical Sciences and Mathematics, Other Physical Sciences and Mathematics, Medicine and Health Sciences, Other Medicine and Health Sciences, Social and Behavioral Sciences, Other Social and Behavioral Sciences
Consider Incentives and Recognition
Validation and Disambiguation

**Gain recognition with an ORCID iD**

- Add your ORCID iD when submitting your article to ensure your published work is clearly linked back to you.
- Colleagues, funders and institutions can highlight your achievements and contributions.
- Your research is easily discoverable through your ORCID record.

*Hint: To have your ORCID record update automatically each time you publish an article, simply add your ORCID iD during submission and grant permission to Crossref’s auto-update.*

Unique and persistent identifier that distinguishes a researcher from every other researcher, and connects that researcher to their research activities.

**Why?**

- Disambiguation
- Attribution, recognition and credit
- Funder compliance
Recognising Open Practice

Open Science Badges from Center for Open Science help us encourage authors to publish research with us that’s more transparent.

With badges we celebrate authors who take advantage of the new transparent choices our journals offer them, like data sharing and citation and Registered Reports.

EMPIRICAL STUDY

Contextual Richness and Word Learning: Context Enhances Comprehension but Retrieval Enhances Retention

Gesa S. E. van den Broek, Atsuko Takashima, Eliane Segers, and Ludo Verhoeven

*Behavioural Science Institute, Radboud University; †Max Planck Institute for Psycholinguistics; ‡Donders Institute for Brain, Cognition, and Behaviour, Radboud University, and §Department of Education, Utrecht University

Learning new vocabulary from context typically requires multiple encounters during which word meaning can be retrieved from memory or inferred from context. We compared the effect of memory retrieval and context inferences on short- and long-term retention in three experiments. Participants studied novel words and then practiced the words either in an uninformative context that required the retrieval of word meaning
Credit and Training for Peer Review

Should a researcher’s peer reviewing activity be taken into consideration when they are evaluated for grants, jobs or promotions?

- Yes: 80%
- No: 9%
- Don’t know: 11%

If a student or postdoc participates in peer review, should they be identified as a peer reviewer to the editor?

- Yes: 88%
- No: 5%
- Don’t know: 7%

Researchers are adequately trained in how to perform effective peer review.

- Strongly agree: 15%
- Agree: 9%
- Neutral: 19%
- Disagree: 53%
- Strongly disagree: 1%
- Don’t know: 3%
When researchers review for participating journals they can opt-in to get credit on Publons. Researchers can then claim their reviews.

By default, the content of reviews is not publicly displayed on Publons.
Guiding Principles in an Evolving Landscape

Focus on rigour, quality, ethics and integrity.

Listen, and deeply understand what motivates the communities that we serve.

Emphasise collaboration in all that we do.
Guiding Principles in an Evolving Research Publishing Landscape

Thank you