Towards responsible publishing: a proposal from cOAlition S

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Towards responsible publishing: seeking input from the research community to a draft proposal from cOAlition S

cOAlition S – an international consortium of research funding and performing organisations, committed to making full and immediate Open Access a reality – is seeking input from the global research community on a proposal to establish a community-based scholarly communication system, fit for open science in the 21st century.

INTRODUCTION

“New research builds on established results from previous research. The chain, whereby new scientific discoveries are built on previously established results, can only work optimally if all research results are made openly available to the scientific community.”


In the five years that have elapsed since the publication of the Plan S principles, the move toward full and immediate Open Access (OA) has become global and irreversible. However, academic publishing practices are not keeping up with rapid advances in the way science is performed, openly disseminated, and used. This disconnect increasingly threatens the goal of universal OA for research outputs.

The COVID pandemic has illustrated the need for faster and more efficient publishing models. The traditional publishing system was simply too slow to disseminate critical and urgently needed scientific information on SARS-CoV2. In response, scholars all over the world are adopting new publishing practices to improve dissemination and peer review of new research findings. Researchers are increasingly sharing articles ahead of peer review and are starting to participate in open peer review of such author-shared articles. In addition, research institutions and researchers, such as in Latin America, have championed innovative models, referred to as “diamond” publishing, that offer scholar-led publishing services free to authors and readers.

These developments are forcing funders and other stakeholders – especially university libraries who procure publishing services on behalf of their researchers – to re-think how best to support the dissemination of research in a responsible, equitable, and sustainable way.

In this document, we propose a vision and set of principles that a future scholarly communication system should aspire to, along with a mission that enables research funders – in collaboration with other key stakeholders – to deliver on this.

For such a scholar-led system to be successful, however, it will need broad support from the research community. To understand if the proposal outlined here resonates with the community of researchers, cOAlition S with support from Research Consulting Limited in partnership with the Centre for Science and Technology Studies (CWTS) will embark on a consultative process that offers researchers the opportunity to voice their opinions and contribute to the development of a proposal that serves their needs. Further details of this consultation are provided in Section 8.

Based on the feedback we receive through this consultative process, a revised proposal will be developed for the cOAlition S funders to consider in June 2024.
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WHY SCHOLARLY COMMUNICATION NEEDS TO CHANGE

Much has been written about the problems with the current scholarly communication ecosystem, and we consider that these can be distilled into four key challenges.

2.1

THE DOMINANT PUBLISHING MODELS ARE HIGHLY INEQUITABLE.

The overwhelming majority of academic journals cover their costs through subscriptions, article processing charges (APCs), or both. As a result, researchers can find themselves unable to access relevant research findings (because of subscription paywalls) or unable to publish (because of APC barriers). We fully recognise that publishing incurs costs, but we believe that all researchers should be able to publish their work as Open Access, without author-facing charges.

2.2

THE SHARING OF RESEARCH OUTPUTS IS NEEDLESSLY DELAYED.

Research can only progress as quickly as it is shared. The current pre-publication peer review model contributes to publication delays because it requires that improvements are implemented before a “publish” decision is reached. As a result, online publication in some journals can now take longer than when articles and journals were printed and shipped through the postal service. In an era of the internet and digital technologies, a 12-month delay in releasing new knowledge into the public domain – a not uncommon timeframe whilst pre-publication peer review is undertaken – is just as detrimental to science and society as the 12-month open access publication embargo that Plan S has eliminated.

2.3

THE FULL POTENTIAL OF PEER REVIEW IS NOT REALISED.

Peer review is currently the main method to ensure quality control and context for new scientific knowledge. Unfortunately, its confidential nature often hides the efforts and insights of peer reviewers. When articles are rejected, this information is lost, and the entire process must be repeated at a different journal. At best, such repetitive and confidential reviewing processes waste the insights from earlier peer review reports; at worst, they undermine quality control and accountability of authors, peer reviewers, and editors.

Moreover, when peer review reports and editorial evaluations remain inaccessible, they cannot contribute to a better understanding of the scholarly discourse or support responsible research assessment based on intrinsic merit rather than proxies like journal names or impact factors.

2.4

THE COUPLING OF EDITORIAL GATEKEEPING WITH ACADEMIC CAREER INCENTIVES IS DAMAGING SCIENCE.

The rejection-resubmission cycle and the coupling of editorial gatekeeping with academic career incentives have led to idealising journal selectivity. High rejection rates and requests for substantial revisions unnecessarily burden scientists, particularly early career researchers, who spend a significant fraction of their effort on article publication.

The current state of publishing thus threatens the well-being and persistence of the next generation of scientists in academic research.

We believe the solution to these problems is a scholar-led communication ecosystem, as described below.
SCOPE

In this document, we focus on scholarly communications that disseminate research articles (including the underlying research data) and associated content-related elements (such as peer review reports, author responses, editorial decisions/assessments, etc.). Other research outputs, such as monographs, are important, but they are out of the current scope. In this context, the concept of Open Science covers all disciplines, as defined by the UNESCO Recommendation on Open Science.

VISION

Our vision is a community-based scholarly communication system fit for open science in the 21st century. This system empowers scholars to share the full range of their research outputs and to participate in new quality control mechanisms and evaluation standards for these outputs. This approach will ensure rapid, transparent dissemination of high-quality scientific knowledge.

Research is a social endeavour that produces and scrutinises research results to create trusted knowledge for the benefit of society. Because this social process of dissemination and discourse thrives on the largest possible participation and knowledge exchange, research funding and performing organisations promote the concept of “open science”: research and society are best served if research results are shared openly and as early as possible.

However, these “open science” aspirations are constrained by prevailing business models and incentive structures that value just a static snapshot of the research process, the final peer-reviewed publication.

Scholars should be able to choose when and where they communicate their work, driven by the desire to accelerate research and to expose their work to feedback and re-use. Such a scholar-led approach to communicating new findings better reflects the research process and opens opportunities for feedback and assessment along the way.

Scholar-led communication is defined here as those publishing initiatives where all content-related elements (e.g. primary research articles, peer reviews, editorial decisions, scientific correspondence, etc.) are controlled by, and responsive to, the scholarly community.

Under this approach, researchers face no charges for reading or publishing, keep ownership of their outputs, and have the right to share them freely.
## PRINCIPLES

The following principles support the vision outlined above:

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<th>Principle 1</th>
<th>Principle 2</th>
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<td><strong>AUTHORS ARE RESPONSIBLE FOR THE DISSEMINATION OF THEIR FINDINGS.</strong></td>
<td><strong>ALL SCHOLARLY OUTPUTS ARE SHARED IMMEDIATELY AND OPENLY.</strong></td>
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<td>Authors – and not third-party suppliers, such as publishers - should decide when and where to publish, including versions before and after peer review and the associated peer review reports. Service-related elements (copyediting, typesetting, submission systems, hosting, formal quality checks) can be outsourced.</td>
<td>Researchers share scholarly outputs openly, allowing others to adapt, reuse, and build upon these results, at no cost to themselves. This principle supports the overarching ambition of Plan S to provide full and immediate OA but is extended to include all scholarly outputs, such as preprints and peer review reports.</td>
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<th>Principle 3</th>
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<td><strong>QUALITY CONTROL PROCESSES ARE COMMUNITY-BASED AND OPEN, TO ENSURE TRUSTWORTHINESS OF RESEARCH FINDINGS.</strong></td>
<td><strong>ALL SCHOLARLY OUTPUTS ARE ELIGIBLE FOR CONSIDERATION IN RESEARCH ASSESSMENT.</strong></td>
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<td>Academic communities set quality standards and monitor them through acknowledged quality control processes. Third-party service providers may supply tools that facilitate quality controls by the academic community, including technical checks, peer review, and editorial assessments, if appropriate, but do not set the rules for the process. The outcomes of these processes, including peer review reports, are published to enable open quality control, signal trust, and allow further scrutiny.</td>
<td>All scholarly contributions are considered in research assessment. Their value is determined by the relevant research communities. This approach will form the basis of a more complete assessment of the qualitative contribution of individual articles than that afforded by derivative proxies such as journal names and impact factors.</td>
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<th>Principle 5</th>
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<td><strong>STAKEHOLDERS COMMIT TO SUPPORTING THE SUSTAINABILITY AND DIVERSITY OF THE SCHOLAR-LED PUBLISHING ECOSYSTEM.</strong></td>
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<td>Stakeholders, including research funders, researchers, and service providers, agree to use their resources – money, expertise, and services – to drive development and adoption of community-based publishing. Moreover, in supporting and refining scholar-led initiatives in an open dialogue with all scholarly communities, funders and other stakeholders commit to respecting bibliodiversity, disciplinary differences, and the specificity of epistemic traditions.</td>
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A scholar-led communication system is not a new idea. We simply seek to expand and build on existing good practices. The Annex describes a concrete working example, referred to as Publish – Review – Curate (PRC).

For a community-based communication system to thrive and grow, it needs support. We recognise that we cannot change the current publishing system overnight, nor can one stakeholder change it on their own. We need researchers, service providers, funders, and institutions to work together if we want to put scholarship at the centre of scholarly communication.

Researchers will need to take a more active role in the dissemination of their research outputs. They will gain the freedom to share their research findings at various stages of maturity – before, during, and after peer review. But they will also take on the responsibility to contribute more openly to peer review such that this scholarly dialogue can benefit the whole community and not just an editorial decision.

Service providers will need to tailor their services to support and augment scholarly contributions rather than control or withhold them from view.

Finally, research funders and institutions will need to encourage and reward practices that are aligned with the principles in this proposal, and they can do this in several ways. First, they can incentivise researchers to participate in a scholar-led communication system through their research funding and assessment policies and practices. Second, they can provide financial support for infrastructure and services that align with scholar-led systems. And third, they can use their convening power to bring together other key stakeholders, namely researchers, institutions, scholarly societies, and service providers.

The potential future adoption of the proposed strategy by members of cOAlition S is subject to the decision process of the cOAlition and its individual members, which will take place after the consultation. Even if cOAlition S funders adopted the proposed strategy and refined it through public consultation, existing (and emerging) OA business models – such as APC-based fully OA publishing, Subscribe to Open (S2O), etc. – will continue to be supported by cOAlition S for some time. However, we expect that funders supporting this strategy will, over time, increase their spend with service providers that offer services that align with these principles and reduce their spend with those that do not. Similarly, supportive funders would replace the use of journal metrics in the assessment of researchers with assessment practices that take advantage of the complete scholarly record the new communication system would make available.

Table 1, below, provides a menu of options for actions that funders and institutions could take to support participation of researchers and service providers in the proposed system. We have arranged these actions into three different levels of stringency (Levels 1 –3) to illustrate that implementation of this strategy enjoys considerable flexibility.

For example, cOAlition S or individual funders could adopt Level 1 actions early on and adopt next level actions later, if appropriate, in a phased approach. Funders could also engage in these actions collaboratively with other stakeholders. It may, for example, make sense to follow the lead of initiatives like CoARA that are already focusing on reforming research assessment.
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<th>Activity</th>
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<tr>
<td>Research funding and assessment policies and practices</td>
<td>Encourage scholar-led communication; specifically, support scholars to retain sufficient copyright to their work, promote publication of research outputs before peer review and participation in open, post-publication peer review.</td>
<td>Reward applicants for posting preprints, open peer review reports, and open data by explicitly including those practices in the assessment of researchers; instruct assessors that journal names, impact factors, and number of journal articles will play no role in researcher assessment.</td>
<td>Remove journal metrics and journal names from application materials.</td>
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<td>Financial support</td>
<td>Pay transparent fees and/or award grants to platforms that perform services aligned with the principles of a scholar-led communication system (e.g. preprint servers and peer review and curation services); financially support diamond publishing models and infrastructure for a scholar-led communication system.</td>
<td>Commit to increasing funding to scholar-led services by decreasing, over time, funding to traditional publishing models, for example, by phasing out agreements that include hybrid or subscription journals.</td>
<td>Make payments contingent on the public availability of relevant scholarly or service products such as peer review reports and curation reports.</td>
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<td>Convening power</td>
<td>Bring together other key stakeholders to discuss their role in this new strategy and determine the optimum way of implementing a scholar-led communications ecosystem.</td>
<td>Form coalitions with other stakeholders – institutions, scientific societies – to develop and support a scholar-led communication ecosystem.</td>
<td>Together with other stakeholders, form a global community of scholar-led communication supporters/infrastructure providers/advocates; move from an open access community to a global scholar-led communication community.</td>
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Table 1: Activities funders and institutions could take to support the establishment of a scholar-led communications ecosystem
The Plan S initiative has enabled more research to be made available as Open Access than ever before. However, in the main, this has been delivered through business models – such as Read and Publish agreements and APCs – which are highly inequitable. Moreover, the current practice of pre-publication peer review needlessly delays the sharing of research outputs, and as long as peer review reports and editorial evaluations remain inaccessible, they cannot support responsible research assessment.

The proposal presented here seeks to rectify these issues, through the development and support of a scholar-led communications ecosystem. This approach builds on and expands good practices that already exist and is fully aligned with the recent conclusions from both the Council of the European Union and UNESCO.

The overarching aims of this consultation are to:

- determine to what extent the vision, mission and principles set out in the draft proposal serve the needs of the research community – including researchers who are funded by cOAlition S funders and those who are not
- understand how the “Towards Responsible Publishing” proposal might be modified or refined to ensure it resonates with the needs and aspirations of the research community and consequently garners broader support and adoption
- identify any showstoppers or unintended consequences in the draft proposal and propose proactive measures to mitigate them, ensuring successful implementation
- ascertain whether (and, if so, to what extent) the existing scholarly communication infrastructure can support this proposal; if it cannot, identify areas where research funders and others should best direct their funding to strengthen the infrastructure

The consultation will run from November 2023 until April 2024. Details of how the research community can contribute to this can be found at: www.coalition-s.org/towards-responsible-publishing

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To illustrate how a scholar-led communication system can (and already does) work in practice and supports the principles of Open Science, we highlight the Publish, Review, Curate (PRC) model, which we find particularly promising. This model distinguishes three core functions of scholarly communication – publication, peer review, and curation – to ensure full and immediate sharing of scholarly outputs. We focus here on the characteristics of an editor-based PRC model. But cOAlition S is mindful of the plurality of existing community-based efforts, including disciplinary differences, and is open to supporting a scholar-led ecosystem broadly with the expectation that gradual convergence may happen over time.

**STEP 1: AUTHORS DECIDE WHEN TO PUBLISH THEIR UNREVIEWED PUBLICATIONS.**

Unreviewed publications (a.k.a. preprints) are hosted on dedicated platforms (such as institutional and subject-based repositories and preprint servers) after formal guideline checks (such as authorship criteria, plagiarism, data availability, language, ethical approval, guidelines, etc.) have been undertaken. No costs for providing this service are passed to authors. Preprints are made available under an open licence, such as CC BY. Readers are given the opportunity to comment on these unreviewed publications informally and openly.

**STEP 2: AUTHORS DECIDE WHEN TO EXPOSE THEIR WORK FOR FORMAL REVIEW.**

At some point, potentially after receiving (and responding to) some informal feedback, the authors will expose their work for a full review by submitting it to a high-quality reviewing process managed by practising scholars. The costs of providing this service will not fall on the author.

The purpose of the reviewing process is to help the author improve the paper and to enable readers to put the work into context of the published literature.

Peer Review Editors then provide an editor’s evaluation or summary of the reviewing process, but do not make any recommendation as to whether the article is suitable for publication.

Reviews (signed or not), author responses, revised articles, and evaluations resulting from this process are openly shared.

**STEP 3: CURATION EDITORS SELECT ARTICLES FOR PUBLICATION.**

Among other roles, curation editors decide which peer-reviewed papers to include in the (overlay) journals or platforms they edit. Selection criteria may include, for example, perceived quality, originality, or thematic cohesion of sets of papers. The roles of peer review editors and curation editors are incompatible.