

9. GYA

The **Global Young Academy** (GYA) gives a voice to young researchers, bringing a unique global, interdisciplinary, and inclusive perspective guided by evidence and reason to produce a sustainable vision for the future.

The **Global Young Academy** is an academy of 200 early- to mid-career researchers, carefully selected for research excellence as well as the impact and significance of their work for society, and it channels the energy and inspiration of a new generation of science leaders. The GYA has a strong presence on six continents with a global impact on science and society.

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Global Young Academy response to the consultation on the Report *The Future of Scholarly Publishing and Scholarly Communication*

Answer to question 1: **"In practice, how do you imagine the vision of an ideal state of scholarly communication put forward by the expert group and, more specifically, your role as an actor in that future system? You may depart from the suggested vision, if you think necessary/you disagree."**

- *Vision of an ideal state of scholarly communication:*

We would like to see no fees to publish for authors and no fees to read immediately for readers. In this model, publishers would receive funding directly from research agencies and research institutions through a transparent pricing system. We recognise that in many research areas, a sustainable model for scholarly publication will incur some charges, e.g. for the long-term archival on a platform. Any business model for scholarly publication should have primary design criteria to support good Open Science and not set wrong incentives.

We also welcome the role of peer-review to guarantee quality of publications, and foster the use of open peer review where feasible; and promote fair recognition for authors' contributions and reviewers' work. We endorse the desire, expressed in the report, to highlight the quality of work over the specific venues of publication.

There is no generally valid approach to evaluation, it always needs to relate to a specific set of goals, and the purpose of institutions and roles within can widely differ. Moreover, the strength of a team arises from complementary skills and expertise, while evaluation metrics tend to focus solely on individuals, and foster a monoculture rather than diversity. Neglecting the interaction of individuals within teams and how they make valuable contributions is one of the most important shortcomings of current common practice of research evaluation. Another is lack of transparency and widely varying standards even in the same discipline across research organisations.

The key function of peer review is to examine the rigour and novelty of the work; trying to conflate this with its relevance or importance gives rise to many problems. Some journals tend to favour spectacular findings over rigorous research, and researchers are incentivised to deliver the former. Rigour and an assessment of outcomes need to be separated clearly. In particular, peer review needs to assess whether:

- the adopted methodology is adequate,
- conclusions are justified and supported by the presented data,
- results are presented accurately and in sufficient detail.

In fact, peer review provides a meaningful qualitative assessment and should not be hidden, nor should the content and the effort put into proper peer-review. Any reader would profit far more from published review reports than from a binary accept/reject decision and everyone submitting a solid peer-review would benefit from some kind of recognition for their work for the system that is essential to advancing human knowledge. A key reason for the widespread failure of peer review is that good review requires time and effort, and the flood of publications arising from pressure to publish more` has an adverse effect (as does the lack of recognition of peer-review work). An efficient system of scholarly publication needs to focus on quality rather than quantity, and rather than more publications, we need higher-quality publications.

Author-pays-charge models can be expected to be seriously damaging to scholarly research (cost, quality, fairness, etc.). They discriminate against authors lacking access to funds and makes authors vulnerable to control within institutional hierarchies. Moreover, though the effect may not be so vivid in stronger research ecosystems like Europe, the rise APC-driven open access our colleagues in the developing world report a flood of predatory journals that are playing havoc with research quality and integrity in those countries. Less experienced researchers are often fooled while unscrupulous academics intentionally take advantage of these. In many institutions too many faculty members have already published in these venues for someone in the administration or policy rung to start to reverse the tide.

Freedom to read must not come at the cost of freedom to publish. Actors need to pull together to support publications venues that provide dual-open access (for both readers and authors) and long-term stability. Among the many ways forward, more green open access in the model of arxiv [et al.] and wherever possible consortia like SCOAP3 that use existing funds to “sponsor” open access should be taken as serious examples for wider replication. However, in terms of funding models, it is important not to impose, rather to guide an evolution, allowing subtle differences between communication modes in different subject areas to be accommodated.

The key question is how to get communication back into scholarly publishing rather than abusing it as a means of research evaluation and prestige indicator. This is a key systemic issue given that research can only unfold its value to society once it has been communicated well (e.g. all details to repeat study, needed references, etc.) and can be taken further by others. There are currently no guiding principles for research articles that would correspond to the FAIR principles for research data. These would need to be developed and ideally put under an overarching set of principles to aid adoption (and reduce confusion). “Open Debate” is to be a core ingredient of “Open Science”. Artificial intelligence can be a support tool (both for helping in the creation of new results and its evaluation in the peer-review), but one should never be allowed to delegate responsibility for decisions over quality of research outputs to algorithms.

- *Role of Young Researchers in the future system:*

We see our community as key-steward in the design, monitoring and steering of publication along with the other key actors and independent of their senior colleagues. ECRs need to be equal partners to other key actors like funding agencies. Young researchers are among the primary challengers of existing models of publication, though they now stand to be most damaged by the mismatch between innovative publication avenues and traditional ones. They have invented new models of scholarly communications, such as preprints; and can act as role models for the next generation of researchers.

Answer to question 2.: **"What would you as an actor concretely need to do – and/or not do, to get us from where we are now to the state of affairs described in the vision put forward by the expert group? Critically, what would other stakeholders have to do – and/or not do?"**

Generally, we endorse the suggestions put forward in the OSPP-REC document of 2018.

Policies should set out a flexible and supportive framework in which innovative solutions can emerge. Researchers have repeatedly demonstrated their creativity and know-how in developing technology for implementing new models for research communication. Emerging communities can in particular set the scene for new trends. ECRs can and should be in the forefront of innovation and experimentation with novel ideas in this area. However, scholarly communication has been taken hostage by research evaluation, and this in particular stands in the way of adopting new approaches of making use of technology. In particular, we are currently trapped into a model of countable outputs, which as has been pointed out by the recent high-level expert reports, is inadequate and damaging to research.

More important than providing new incentives is to stop prevalent incentives that are counterproductive to effective scholarly communication. Researchers should be supported in disengaging with the competition for publications and citations, and in transitioning to a quality-first research ecosystem. Engaging with PhD students on the future of scholarly research could prove particularly effective, and providing them with appropriately trained mentors could provide them with a wider range of options/views than their own supervisor(s). All too frequently, they are pushed into bad practice by more senior researchers. With its funding instruments, the EC should follow the Wellcome Trust in requiring commitment of institutions to good practices of research assessment, as e.g. laid out in the San Francisco Declaration on Research Assessment or the Leiden Manifesto. These should also be made mandatory for receiving public grants.

Response authored by Martin Dominik, Moritz Riede, Abdullah Shams Bin Tariq, Koen Vermeir and Sabina Leonelli on behalf of the GYA, 29 March 2019.