RESPONSE FROM THE LONDON MATHEMATICAL SOCIETY:

The London Mathematical Society[1] is the leading learned society for research mathematicians in the UK. The major source of revenue to the Society (70%) comes from the sales of its distinguished list of peer reviewed journals. Any change to the current publishing model of subscription sales will directly affect the income to the Society and its work.

We have long been concerned about the threat to our Society from the implementation of open access policies which seek to reduce the level of library sales by making the content of journals available to readers through alternative routes.

Our publishing income is used to support a wide range of grant schemes including conferences, joint research activities, collaborative meetings and visits. The Society is particularly concerned with providing help for mathematicians (including research students) at an early stage in their careers. At a time when other funding agencies are cutting back on their contributions it is imperative that the LMS remains able to provide support.

What the Society already does in terms of open access:

In order to provide our readers with a 'mixed economy' of access to the journals, the Society provides the following open access options:

a) Free universal online access to the society-owned journals for *the first six months* of the publication of content, thereafter moving behind the subscription wall. This is known as a 'reverse moving wall'. We will review this policy regularly as funders develop new policies on embargo periods for green open access.

b) Through our publishing distributors, we agree to provide free access or access at a greatly reduced fee to *low income countries*. Currently, the offer is available to established not-for-profit educational institutions from qualifying countries based on country incomes as established by the World Bank Report 2006.

c) Since 2008 we have offered a *paid open access* option for all our journals, where an author can opt to have the APC paid by his or her funder in return for free universal online access to their paper. To date only one paper has been published in this form, which gives some evidence for the low interest in paid open access publishing among mathematicians. In order to accommodate the recent RCUK policy, we offer an option of using the CC-BY licence to authors, although we would prefer to adopt the CC-BY-NC option, the previous default licence.

d) Since the launch of the *math arXiv[2]*, we have permitted authors to upload one or more versions of their paper up to the version accepted for publication by the Society. This is not a condition imposed on our authors, i.e. they are free to place preprints on the arXiv or not and many prefer not to do so. We are willing to extend this permission to repositories run by funders or to university repositories, although we question the value of such narrow repositories when the arXiv is already available.

---

[1] The London Mathematical Society, http://www.lms.ac.uk/, is the UK's learned society for mathematics with an international membership. The Society's main activities include publishing journals and books, providing grants to support mathematics and organising scientific meetings and lectures. The Society is also involved in policy and strategic work to support mathematics and the mathematics research community. This work includes engaging with government and policymakers on mathematics education and research, participating in international mathematical initiatives and promoting the discipline.

[2] http://arxiv.org/new/math.html

In providing this 'green' access, we are aware that it poses a long term threat to the financial health of the journals. Where a paper has been freely available on the arXiv for some months prior to publication, we have some tentative evidence that the published version is less frequently downloaded than a paper that is not available on the arXiv. Libraries now have access to individual journal download metrics and they consider the price-per-download when choosing which journals to cancel, seeing this metric as an indication of how widely the journal is read by the users of the library. Because downloads of the arXiv version of papers are free, they do not recognise the value of counting the number of downloads from the arXiv. Our highest quality journals are those with most papers available to be read on the arXiv and these are most vulnerable to cancellation by librarians using the price-per-download metric.

e) We are considering the launch of a purely *open access journal*, a decision to be made this year.

Addressing the range of concerns given in the enquiry notice:

1. RISKS FOR LEARNED SOCIETIES

The major risk to us, as a learned society, is that the implementation of RCUK's policy will unbalance our mixed economy of the options described above, and hence damage our ability to support UK mathematics. RCUK's policy, as stated in July, promoted gold open access as the preferred option and, in the event it was not available, then the second option would be to accept publication in journals under their green open access criterion. This was in line with the Finch report and we were content with this policy to the extent that it gave us a basis on which to transition our existing journals from library sales to APC funds. We have heard reports since that RCUK now want to make both options equally viable and that authors need not apply for APC funds if the journals permit green open access. While our UK members would be happy not to have to engage with their new university fund distributors, it provides no long term transition to an economically viable open access model for our journals.

Furthermore, setting the green and gold options to be equivalent will encourage UK mathematicians not to apply for funds because they come from a subject in which many journals already adopt liberal (green) access policies. Mathematics has found to its cost that where there is no need for expensive equipment and little funds available to it from the research councils, there is less regard for the importance of the subject. This position will be further exacerbated by a misconception[3] that mathematics publishing is costless because you can find freely-available next-to-final versions on the math arXiv, and therefore mathematics journals are less important in comparison with more costly journal publishing in the other sciences who do not already offer free access policies.

2. INTERNATIONAL ISSUES

Some years ago a study showed Mathematics was second only to the Earth-and-space sciences in the number of international collaborations; we believe the number of international collaborations has, if anything, grown since then. We do not know how to advise a UK-based author on the question of how they deal with international co-authors who have different criteria for the value of publishing work in a journal that does not comply with RCUK's policy. Worse, there is no clear guidance to authors at different universities within the UK, working under the same grant, who have to apply to their own university for funds. Which university foots the bill? These questions have been raised several times by our authors and members as RCUK policy has developed, but no answer has been provided. By devolving responsibility for payment to individual universities it exacerbates the problem rather than alleviates it because universities will have their own interpretation of the policy. We already have a journal policy for multiple-authored papers which is to make the corresponding author solely

---

[3] Providing high quality peer review and support for the editors and authors inevitably incurs costs. Rather than pay our editors, we provide administrative and secretarial support and we also provide a high quality copy-editing and proofing service which is particularly appreciated by authors for whom English is not their first language.

responsible for handling all matters with his co-authors and university. As a publisher, this is the only practical solution but it does not help mathematicians who have been given no useful guidance by RCUK.

3. EMBARGO PERIODS

Our view is that we have gone far enough in our free access policy and we do not and would not permit reuse of post-acceptance versions of the article, even after a long embargo period of several years. Furthermore, we question the inferred claim of RCUK to have rights to the benefits gained through peer review of the papers, i.e. the added value between the writing of a first draft and the final acceptance of a paper; peer review is a particularly lengthy process for mathematicians. The majority of our referees are not resident in the UK and, while we do not pay them for refereeing, it is certain that RCUK does not pay them either. We pay considerable sums for the administrative costs of the peer review process; these are not negligible when the aim is to provide an efficient and fair route for authors, referees and editors. We are also concerned that the shifts in interpretation by RCUK of a policy that was intended to conform with the Finch report are a first indication of an intention to move further in the direction of requiring final published versions of papers to be available after an embargo period. We recognise that, in letting pre-acceptance versions be freely available for so long, we have somewhat undermined the argument that there is value in what the Society brings to the peer review process because we have allowed that material to go free. This would be to misunderstand the good intentions to find a reasonable compromise between our mission to disseminate mathematics while using money from publishing to benefit the other charitable activities of the Society.

Therefore we hold that it is our choice to permit access via the arXiv because it complies with the wishes of mathematicians, it is not RCUK's right to demand access or to force us to move the access policy further down the chain of versions beyond free voluntary access by the authors to post pre-acceptance versions on the arXiv.

4. ARRANGEMENTS FOR APC FUNDS

This is the least-developed aspect of the RCUK policy and one we have most concern about. The passing of responsibility from RCUK to universities without the formation of a proper implementation plan is already causing confusion for mathematicians. For the reasons described above, we are concerned that mathematicians will not bother to apply for APC support funds because there are enough green open access alternatives available to them. As a society, the financial health of our journals is dependent on mathematicians seeking to take the gold option route where possible and we encourage them to do that but it is understandable that they do not want to spend many hours applying for limited funds through a chaotic system which is currently being run on a first-come first served basis. So far, the passing of responsibility by RCUK to the universities and the arbitrary assignment of limited funds has caused different universities to adopt different strategies and different interpretations of the policy. We will leave it to the universities to report on the problems and real costs of implementing RCUK's policy. What we hear from mathematicians is that they have no idea what is going on and this is a major deterrent to applying for funds which will skew the apparent demand from mathematicians.

There is a further issue regarding RCUK support funds; RCUK policy states explicitly that their support fund should only be used for APCs for articles on research "resulting from research council funding". Since most UK mathematicians hold no such funding, most will be ineligible for support.

Conclusion:

Only 17% of our published authors are based in the UK. However, as a UK society, we would do our best to publish our members' papers if their funding body imposes conditions that we are unwilling to meet. We have noted the Institute of Historical Research's[4] reaction to RCUK policy but have instead taken the approach that we will offer whatever aid we can to enable British authors to continue publishing in our journals. Doing the best for our authors to work with the policy, gives the impression

---

[4] http://scholarlykitchen.sspnet.org/tag/institute-of-historical-research/

that we agree with it, but this is not the case. If our members had ever been consulted during the setting up of the policy, they would certainly have said that there is no call for the move to the version of open access publishing dictated by RCUK.

Mathematicians have developed their own, fully international solution to the access question with the math arXiv. Posting on the arXiv is a voluntary process and more in keeping with the principle that it is the authors' choice what to do with their paper.

What is valued in our journals is the peer review process and the validation of research that, in many cases, has already been read on the arXiv. Free and immediate access on the arXiv to early versions of the work does nothing to help our society's financial model but it is a voluntary, international, compromise which we are happy to take part in provided the rest of the structure is not destroyed through misguided evangelical policies.