

## THE MEGA JOURNALS ARE COMING!

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Mega-journals were one of the major and hot topics at the 3rd Conference on Open Access Scholarly Publishing, held in Tallinn September 21st–23rd 2011. Videos are available from <http://river-valley.tv/conferences/coasp-2011>

The impression gained from the talks at the conference is that Mega-journals are coming to stay, and they will have a disruptive influence on STM publishing in the coming years.

### **What is a mega-journal, how is it different from other journals and how will it influence the publishing industry?**

A mega journal is – as the name says – large, i.e. it will accept any number of articles. It also covers a broad spectrum of scientific disciplines and sub-disciplines, generally within the STM fields. Most mega-journals seem to aim at publishing all science that is “good enough” instead of looking for articles that are important or could have a large audience. Here they differ from traditional journals, both OA and TA, which seeks to increase the Impact Factor (IF) of the journal. They also publish continuously and strive to implement processes that keep down the time from submission to publication.

### **PLoS ONE**

The first – and so far only really giant mega-journal – is PLoS ONE. Currently, PLoS ONE publishes about 70 articles a day, and the number is steadily increasing. Other publishers have established or are about to establish journals modeled on PLoS ONE. PLoS ONE published 1,231 articles in 2007, 2,723 in 2008, 4,310 in 2009, 6,784 in 2010 and estimates more than 14,000 articles to be published in 2011. This exponential growth has already resulted in PLoS ONE publishing 1.6 percent of the total annual volume of PubMed (which indexes most STM publications). This growth cannot go on, because that would mean PLoS ONE in only a few years will be the only journal left ...

What mechanisms have allowed PLoS ONE to grow to this size, and so quickly? There are many factors contributing to this. One is that PLoS ONE is all electronic, all internet, all OA. There is no paper edition to restrict size, and it has optimal conditions for dissemination of its content. (PLoS ONE is not actually a journal in the traditional sense; it is a database of articles.)

Criteria for getting published is possibly the major

reason: Articles in PLoS ONE goes through peer review, but they only ask if this is sound science, i.e. is it scientifically rigorous and is it well written. No-one asks about importance (and possible benefits to the journal's IF) or the size of the audience, PLoS ONE will publish anything that deserves to be published. This means that e.g. negative results can be published in PLoS ONE just as easily as ground-breaking scientific results.

One thing this will achieve is that the average number of reviewers going through a manuscript before it finally is published somewhere, will go down. If you send a manuscript to PLoS ONE and it is accepted, it will be published there, is it rejected it probably should not be published at all. Ranking of importance etc. is done post-publication. Articles also should not go back and forth between authors and reviewers for improvements etc. Reviewers are asked if the manuscript is sound enough to be published as it is, and should say yes or no. This saves time (working hours) for both parties and calendar time from submission to publication for all, including the readers/users.

### **Scientific Reports**

Nature Publishing Group has launched Scientific Reports. Nature is one of the journals where it is very is to be rejected, less than 10 percent of submissions result in a published article. Other Nature journals also have high rejection rates. But most rejected articles have gone through peer review. Until now these rejected articles have only contributed to the cost of operating Nature and other journals. With Scientific Reports, Nature and other Nature journals can suggest Scientific Reports as an alternative for rejected but publishable manuscripts; if the author agrees the manuscript will come already peer reviewed and the process in Scientific Reports can be quick and simple. Again, both peer-review resources and time can be saved. And rejected manuscripts will start contributing to the income side, not only the cost side, of the accounts. This makes it possible for Scientific Reports to be able to offer low Article Processing Charges in their competing for manuscripts against other OA journals.

### **The impact of mega-journals**

What will the impact of these mega-journals be? For one thing, they will publish a large portion of the available manuscripts in the STM fields. That means

they will create a lack of manuscripts for existing journals, forcing them either to lower their quality standards or to cease publication. Only specialized, high IF journals will be able to prosper along the mega-journals. And they will dramatically increase the proportion of OA articles, many of the manuscripts they attract would otherwise go to TA journals. Mega-journals will never attain high IF, they will have IFs but middling – anything big enough has to get a middle IF. Thus, high IF journals may still compete with the mega-journals. Another effect of mega journals is that because of their broad coverage they will be seen as multidisciplinary, meaning that the present practice of “field normalizing” the IF to be able to compare authors or research groups across different (sub-)disciplines will be impossible. (Thanks to David Lawrence of Linköping University Press for pointing this out to me.) And when much science is published in mega-journals, it will all have roughly the same IF. May we hope that mega-journals will mean an end to the meaningless IF fetishism we see today? Mega journals taking over a large part of the manuscripts going to TA journals today means that they could seriously erode the basis of many TA journals. (This is also a threat to “traditional” OA journals.) They could easily be the first real new medium in scientific publishing since the Journal des Scavans and the Philosophical transactions saw the light of day some 350 years ago, and they could mean just as profound changes to scientific communications as the invention of scientific journals made then.

My guess is that during the next few years (3–7 years) mega-journals will take over a major part of STM publishing, large numbers of current journals will cease publication and OA will be the norm in the STM field. This could also mean a weakening of the importance of “Big deals”, because that won’t be where the content is. It will be interesting to see if competition among mega-journals will keep APCs at the lower end of the scale ...

#### **Current mega-journals:**

PLoS ONE (PLOS)

<http://www.plosone.org/home.action>

Scientific Reports (Nature Publishing Group)

<http://www.nature.com/srep/index.html>

Open Biology (The Royal Society)

<http://rsob.royalsocietypublishing.org/>

BMJ Open (BMJ Group)

<http://bmjopen.bmj.com/>

SAGE Open (SAGE Publications)

<http://sgo.sagepub.com>

G3: Genes, Genomes, Genetics (The Genetics Society of America)

<http://www.g3journal.org/>



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