

The Cost of Knowledge

By Nikolas Karalis, MSc Student Medical Neurosciences

In January 2012, Timothy Gowers, a distinguished British mathematician and recipient of the Fields Medal, published on his blog his decision not to submit manuscripts, review articles or do editorial work for journals published by the publishing company Elsevier. His proposal for a website where academics could publicly declare their unwillingness to contribute to Elsevier journals was followed by the creation of 'The Cost of Knowledge' website by Tyler Nelson. 'The Cost of Knowledge' acts as a central point of the ongoing boycott and online petition. At the moment, more than 10,000 scholars from various fields have joined the cause.

The original statement of this campaign was signed by 34 mathematicians, stating that Elsevier was targeted as a particularly egregious example of everything that is wrong with the current system of commercial publication. The hope of the boycott is that it will help spur positive changes in the whole scholarly publishing industry. The profit margin of Elsevier in 2010 was 36 % with \$ 3,14 billion in revenue and is characteristic of the high profit margin in the publishing

industry that comes as a result of the low publishing costs and very high prices to read scientific publications.

Some of the main arguments against Elsevier's publishing practice are the high prices charged for access to publications and the bundling of subscriptions that result in a situation where the selection of journals becomes extremely expensive for libraries. The subscription to each of these journals can cost universities up to €20.000 per year, a cost that the publishers claim is necessary to sustain a high-quality peer review process; however, this is provided voluntarily by the academics. Another important argument has been the position of Elsevier in supporting the Research Works Act (RWA), a proposed legislation in the USA that would not allow government agencies to require free access to publicly funded research.

Recently, the Wellcome Trust, the second largest non-governmental funder of medical research in the world and one of the main supporters of open access, has taken the decision to force the academics it funds to make their work freely available and publish it in open access journals. Furthermore, Wellcome Trust is

in the final stages of launching an open access high calibre scientific journal called eLife, in cooperation with the Max Planck Society and the Howard Hughes Medical Institute. According to Sir Mark Walport, director of Wellcome Trust, the new journal will compete directly with journals like Nature and Science and its articles will be freely available online as soon as they are published. This follows the paradigm of the PLoS group that publishes many open-access journals, including PLoS ONE, which is currently by volume the largest scientific journal in the world.

Only time will tell whether this movement, dubbed the 'academic spring' by the press, will achieve its goals, which are critical for the future of science, but the first steps seem fruitful and promising.

Further Reading:

- Gower's original blog entry: <http://gowers.wordpress.com/2012/01/21/elsevier-my-part-in-its-downfall/>
- The cost of knowledge - <http://thecostofknowledge.com>
- Wellcome Trust - <http://www.wellcome.ac.uk/>

Interesting Links about Open Access & Knowledge Part 1

Name	Description	Website
Coursera	Free high quality courses from top universities	https://www.coursera.org/
Create Change	Educational initiative to change the way of publishing/scholarly communication	www.createchange.org
Directory of Open Access Journals (DOAJ)	Directory of over 7600 open access journals up to now	http://www.doaj.org/
Educational Freeware	Learning games, software, and websites for science and others	http://www.educational-freeware.com/category-Science.aspx
Free Science	More than 2000 free scientific books	http://www.freescience.info/
Open Access: Opportunities and Challenges - a Handbook -	Joint publication of the European Commission and the German Commission for UNESCO	http://www.unesco.de/openaccess.html?L=1
Open Access Week	A global event helping to make Open Access a new norm in scholarship and research	http://www.openaccessweek.org/
open-access.net	Information platform about open access	http://open-access.net/de_en/
OpenEEG	Free software for do-it-yourself EEG devices	http://openeeg.sourceforge.net/doc/
Open Knowledge Foundation - OpenEEG siehe wiki	Community to promote open knowledge around the world, with working groups you can actively participate in	http://okfn.org
OpenSpending	Tracks government and corporate financial transaction across the world	http://openspending.org/