



Independent post-publication peer review in Grassroots Journals

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The scientific publishing system is dysfunctional and harms science. It is expensive, provides bad service, and blocks access to articles and metadata. Unfortunately the system is hard to change due to the central role publishing plays in the scientific reward system, from getting hired and finding funding for projects to university rankings. This gives scientists strong incentives to publish in journals with high impact factors and it gives journals a strong incentive to focus on articles that will be cited a lot, which are not necessarily the articles that contribute most to scientific progress.

The scientific publishing industry has a revenue of about 10 billion dollar and publishes 5 million scientific articles. An average article thus costs 2000\$. The profit margin of scientific publisher Elsevier of between 30 and 50 percent signals a lack of competition. In the subscription system a publisher has a monopoly for readers due to copyrights, while authors looking for the highest impact journal have little choice.

Open Access publishing improves the situation for the reader, but its market share is small and the most reputable Open Access journals start asking high publication fees. Because it takes a long time to build up a reputation, competition is still limited, the number of journals small and prices high. If such Open Access journals would dominate, scientists from less wealthy countries and institutions would be limited in their ability to contribute to science.

We can break the power of publishers by doing the quality assessment of scientific articles ourselves. My proposal is independent post-publication peer review in Grassroots Journals. The homogenisation community has started the first Grassroots Journal on statistical homogenisation.

<https://homogenisation.grassroots.is>

A grassroots journal collects, assess, categorises and ranks all articles relevant for a specific topic/community. It thus gives a better access the scientific literature.

It differs from a traditional journal in that it does not publish the articles itself. Authors thus do not have to submit their manuscripts to the journal. Thus, the problem is avoided that it is hard for a new journal to build up a good reputation.

The more accepted this new quality assurance method becomes, the less important it will be where a study has been published. This will hopefully stimulate a healthy competition between journals. Grassroots journals would also make it easier to publish non-traditional formats, for example interactive lab notebooks, analysis software, software frameworks, datasets and data collections.