



# Free and Fair Open Access Journals: Flipping, Fostering, Founding

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*Communicated by Harriet Pollatsek*

*Note: The opinions expressed here are not necessarily those of Notices.*

**ABSTRACT.** We make a case for free fair open access journals, which can be obtained by flipping existing journals, fostering volunteer-based journals, or founding new journals.

There is widespread and longstanding dissatisfaction with the current state of scholarly publishing. Space constraints here preclude full discussion—I recommend the online forum <https://gitlab.io> as the best entry point for those interested in more information and action. Recent developments in internet-based publishing technology, and increased emphasis on open access by research funders, give some cause for optimism.

Perhaps the most frequently voiced criticism is the high and rapidly rising cost of journal subscriptions. The consolidation of journal publishing in the last few decades has led to dominance by a few publishers such as Elsevier and Springer, who have exerted their power in a dysfunctional market. There is no true price competition because journal articles are not substitutable for one another, and there is little incentive to compete on quality (“repu-

tation” and quality of editorial and journal processes are definitely not the same thing). Even when libraries want to cut a subscription, the pricing of bundles (so-called “Big Deals”) by the large publishers often makes it pointless. The historical overview [1] explains well how we got into the current highly suboptimal situation.

Even though more and more money is being spent, those without subscriptions are still denied access. For various good reasons, including public funders wanting more impact of the research they fund and authors wanting

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These are usually funded by author publication charges (APCs) on the order of several hundred to several thousand US dollars/euros per article. Examples in mathe-

matics include Cambridge University Press's *Forum of Mathematics* and the American Mathematical Society's *Proceedings of the American Mathematical Society, Series B* and *Transactions of the American Mathematical Society, Series B*. Publishers such as Elsevier and Springer are fond of the per-article open access model ("hybrid journals"), where APCs are often \$3000 or more, and even for fully OA journals their APCs are usually well over \$1000. The mathematics journals above charge closer to the latter figure, but this is still considerably more than the proper price of commercial production, usually estimated at less than \$500 per article (an upper bound on the charges of several new full-service commercial publishers such as Ubiquity Press).

Gold OA with direct author charges may work in highly funded disciplines where the publication charge is a small fraction of the grant funding needed to do the research in the first place, but is opposed by researchers in many less expensive disciplines, including mathematics: for example, in a 2016 survey of 1000 mathematicians [2], about a quarter of respondents opposed author charges in principle, no matter what their level. Furthermore there has been a recent cooling of enthusiasm by funders for the Gold model. It does not exert any downward pressure on prices, and it is wasteful of public money. There is still no good incentive for publishers to compete genuinely on quality—they simply run down the accumulated "capital"

of reputation developed by the research community.

### *A third [model] exists: journals controlled by the scholarly community.*

The Diamond model can be seen as wasteful of the time of highly skilled researchers, sustainability can be a problem, and innovation can be difficult owing to lack of resources. For example, websites of such journals are often very basic, with no thought of mobile-phone-friendly articles. Mathematics is relatively well endowed with such journals. Examples surviving for over two decades include *Theory and Application of Categories*, *Electronic Journal of Combinatorics*, *New York Journal of Mathematics*, and *Electronic Journal of Differential Equations*. Robert Rosebrugh's description [3] gives a good idea of what is involved.

A third way exists: journals controlled by the scholarly community, with publishers competing on price and service, and with the relatively low production costs gladly paid for by libraries. This has been formalized recently via the Fair Open Access Principles, and is the main focus of this article.

#### **The Fair Open Access Principles are:**

- 1) The journal has a transparent ownership structure, and is controlled by and responsive to the scholarly community.
- 2) Authors of articles in the journal retain copyright.
- 3) All articles are published open access and an explicit open access license is used.
- 4) Submission and publication is not conditional in any way on the payment of a fee from the author or their employing institution, or on membership of an institution or society.
- 5) Any fees paid on behalf of the journal to publishers are low, transparent, and in proportion to the work carried out.

For clarification and explanation of the reasoning behind these principles, see: [www.fairopenaccess.org](http://www.fairopenaccess.org).

Diamond open access journals often fail to satisfy the second half of (3), and sometimes fail (2) and/or (1). Subscription-reallocation schemes such as high energy physics' SCOAP3 do not address (1) or (5) properly, and have led so far to payments to publishers such as Elsevier and Springer of more than twice the basic market rate per article. Principle 1 is key—once ownership of a journal is ceded to a for-profit publisher, there is little chance of a good overall outcome.

Wholesale conversion of the journal system to the Fair OA model can occur via a combination of three main approaches. *Flipping* refers to converting an existing journal from subscription to Fair Open Access. Another way involves *fostering* the existing volunteer-based journals by adding money for extra support services. Finally, we can *found* new Fair OA journals, which can make use of modern tools to operate efficiently. All three approaches have been used recently in mathematics, as we now show by examples.

The editorial board of *Journal of Algebraic Combinatorics* resigned en masse in 2017 and set up the journal (under the name *Algebraic Combinatorics*) at Centre Mersenne ([algebraic-combinatorics.org](http://algebraic-combinatorics.org)). Funding has been provided by Foundation Compositio Mathematica and French and German library organizations. Note the change in name of the journal, which is typical with flipping. A journal represents a community, is a brand, and is also a legal entity. The first two are typically determined by the composition of the editorial board and the papers published in the journal, while the third typically is under control of the publisher. The survey [2] showed that peer review quality and editorial board research record are seen as massively more important than the identity of the publisher. The outcome of mathematics journal defections from commercial publishers is very positive: the old journal usually ceases to publish within a few years, and the new one's reputation increases [4].

Another recent example is the major linguistics journal *Lingua*, whose board defected from Elsevier in 2015 and founded *Glossa*, currently published by Ubiquity Press. However to my knowledge *J. Algebraic Combinatorics* is the only journal in mathematics that has taken this route. Several others have successfully declared independence from their commercial publisher [5], but all continued with a subscription model rather than OA.

The Free Journal Network ([freejournals.org](http://freejournals.org)) aims to nurture an ecosystem of existing independent open access journals. This involves setting up a way for them to share information, best practices, and logistical support while preserving their independence. It also provides a higher profile for the journals and assists in improving their offerings (for example, listing in DOAJ, assigning DOIs). The Directory of Open Access Journals ([doaj.org](http://doaj.org)) has reasonably strict requirements for membership, which rule out obviously substandard or predatory journals. However it does not require Principles 1, 4, or 5. Some well-known open access mathematics journals are not (yet) members of DOAJ, and membership in the latter will likely become a requirement for FJN membership from 2019.

Recent examples of scholar-founded journals complying with the Fair Open Access Principles and where publishing is outsourced include *Discrete Analysis* (from 2016, using Scholastica), *Epijournal de Géométrie Algébrique* (from 2017, using Episciences), and *Annales Henri Lebesgue* (from 2018, using Mersenne). These all run on a low cost model, involving small subsidies from academic institutions, charitable donations, and volunteer work. Two use the “arXiv overlay” idea, making article submission almost trivial.

All three methods are important in advancing the cause of Fair Open Access and have different advantages. Flipping generates substantial publicity and puts direct pressure on the large commercial publishers to yield market power. It has a big payoff, if the reputation and skills developed by the old journal can be transferred to the new one. Fostering existing reputable volunteer-based journals is a way of quickly creating a sustainable alternative to the large commercial publishers. Founding new journals allows the community to set up journals that satisfy all the Fair Open Access Principles by design and that may include many other innovations in editorial policy, website design, etc.

Of course, each method has its associated negatives. Flipping may be considered to be confrontational, and involves many perceived risks for the editors. Fostering already existing journals and founding new ones present a much less immediate challenge to the power of the legacy journals. For new journals, gaining reputation can be a long process.

Some people express concern that new non-commercial journals will not be able to assure long-term access to the results they contain. It is important to note that this problem can also occur with large commercial publishers. For example, back-issues of Springer’s *K-Theory* disappeared for years (see <https://gitlab.com/publishing-reform/discussion/issues/22>). More positively, organizations like LOCKSS are designed to preserve journal

articles, and as mentioned above, Diamond OA journals have already existed stably for 25 years. Because papers are open access, they may be freely shared, copied, and collected, which makes losing them less likely than losing subscription content.

Flipping to Fair Open Access has not been tried in an organized manner on a large scale until recently. The new organizations LingOA, MathOA, PsyOA, and the overarching Fair OA Alliance have been set up to facilitate conversion of journals, by finding funding, giving legal and logistical advice, and acting as an intermediary between editorial boards and publishers. The main visible success to date in mathematics is *Algebraic Combinatorics*, but intensive work is continuing.

Existing Fair OA journals have not been organized until very recently, and this work is still in its early stages—the Free Journal Network was begun officially in February 2018. At time of writing it has 16 member journals in mathematics, including several of the scholar-run journals mentioned above.

To my knowledge there has been no large-scale attempt to start new journals conforming to the Fair Open Access Principles. Of course, lack of funding may be an issue, although in mathematics at least, such journals can be run on very low budgets: essentially zero if volunteer time by editors and basic IT support by universities are not counted, and well under \$100 per article otherwise, at least with the modern trend not to provide major copyediting.

If the journal publication system were designed from scratch by the research community, it would presumably conform closely to the Fair Open Access Principles. Getting from where we are now to a much superior system will be much easier with substantial community support. I urge all readers to make clear their support for the Fair Open Access Principles.

## References:

- [1] S. BURANYI, Is the staggeringly profitable business of scientific publishing bad for science? *The Guardian*, 27 June 2017. <https://www.theguardian.com/science/2017/jun/27/profitable-business-scientific-publishing-bad-for-science>
- [2] C. NEYLON, D. M. ROBERTS and M. C. WILSON. Results of a Worldwide Survey of Mathematicians on Journal Reform. *European Mathematical Society Newsletter*, March 2017, 46–49. [www.ems-ph.org/journals/allissues.php?issn=1027-488X](http://www.ems-ph.org/journals/allissues.php?issn=1027-488X).
- [3] R. ROSEBRUGH. Experience with a free electronic journal: Theory and Applications of Categories. *Notices Amer. Math. Soc.* January 2013, 97–99. [dx.doi.org/10.1090/noti930](https://dx.doi.org/10.1090/noti930).
- [4] M. C. WILSON. “What happens to journals that break away?” Blog post October 8, 2016. <https://mcw.blogs.auckland.ac.nz/2016/10/08/what-happens-to-journals-that-break-away>.
- [5] Open Access Directory: “Journal declarations of independence.” Accessed 8 March 2018. [oad.simmons.edu/oadwiki/Journal\\_declarations\\_of\\_independence](http://oad.simmons.edu/oadwiki/Journal_declarations_of_independence).

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**Mark C. Wilson** received a PhD in mathematics from University of Wisconsin–Madison. His research interests involve analytic combinatorics, social choice theory, and network science. He is a founding board member of MathOA and signatory of the Elsevier boycott. Once scientific publishing utopia is reached, he will concentrate more on his research, singing, and foreign languages.

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