

# OPEN MIND

Discoveries in  
Cognitive Science

an open access  journal

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## Editorial

Richard N. Aslin, Editor

I am extremely pleased that *Open Mind* has gone from concept to reality with this inaugural issue of our first volume. It has been a long road. Nick Lindsay at MIT Press had a vision for creating an open access journal in cognitive science and shared that idea with Josh Tenenbaum and Ted Gibson. Josh and Ted's student, Steve Piantadosi, joined my lab as a post-doc and planted the seed with me. During my sabbatical at MIT, the concept was fine-tuned into the present journal.

Because *Open Mind* comes at a transitional phase in the academic publishing industry, it's worth summarizing why we chose to start yet another journal and why we chose to do it as we did. Given the proliferation of academic journals in the past decade, what is the point of adding one more into the mix? Our primary motivation was to create a high-prestige journal in the cognitive sciences that focuses on a short-report format published online using an affordable, gold Open Access model. Importantly, we follow the Creative Commons CC-BY licensing guidelines. This allows authors to fully disseminate their articles, provided that they appropriately cite the copyright holder (MIT Press). This is more efficient than depositing a pre-publication manuscript (as with NIHMS) or paying an additional fee to eliminate a delay (typically 1 year) before widespread access via a web-based download site.

We also felt it was time (beyond time, actually) to push back against two powerful forces: (1) the predatory pricing of for-profit academic publishers, and (2) the under-representation of cognitive science articles in the most highly cited general-coverage science journals. There is ample evidence that major for-profit publishers have recently bought up many academic journals from smaller publishers who had served the field well for decades. These major publishers offer professional societies, who each typically have their own journals, an income stream from a modest slice of profits from library subscriptions by universities. Most of these library subscriptions are paid for by taxpayers, either via state budgets at public universities or via overhead from federal grants and tuition at private universities. Universities in turn restrict access to these publications as stipulated by contracts with the publishers, with only registered members of a university community (e.g., faculty and students) being allowed "free" access.

The predatory pricing comes from the fact that university libraries are loath to drop high-prestige journals from their portfolio because these journals are the life-blood of academic advancement by faculty and are a key metric for estimating departmental rankings. Moreover, for-profit publishers claim to "solve" the restricted-access problem by charging authors article processing charges (APCs or generically, "page fees") to enable their article to be free to all (i.e., open access). But they typically charge the authors \$2,000 or more for this privilege despite a marginal cost of zero for enabling the PDF of that article to be accessed on a publicly available website.

For-profit publishers have offered another alternative to the highly restrictive nature of publishing in high-prestige journals by creating a plethora of new open-access journals whose reviewing standards are highly variable and whose APCs far exceed any modest profit margin. Their business model is clear—enable anyone to publish just about anything by offering a suite of journals that circumvents library subscriptions by requiring authors to pay-to-publish. Given the pressures in academia to publish and the view by some scientists that publication criteria are arbitrary, there is a ready supply of highly motivated authors willing to fill journals with their manuscripts.



The MIT Press

How can we fight back against this for-profit system of academic publishing? One model is to create “home brew” journals by enlisting volunteers to set up a “server in the garage,” conduct peer review for free (the universal standard), and perform all of the tasks of production by the authors themselves. It has been estimated that per-article charges could be reduced to \$150. The problem with this model is twofold: (1) it assumes that the average faculty member is willing to spend the time and have the expertise to produce a manuscript that is professional in appearance and devoid of errors, and (2) it is not self-sustaining without a continual influx of motivated editors who are organized sufficiently to pass on their knowledge to the next generation. This latter problem is particularly important—scientific journals are “archival.” They must remain easily accessible to be useful, and the “home brew” model requires someone to ensure that the journal is maintained in perpetuity.

A better model, in our judgment, and the one chosen for *Open Mind*, is to forsake the for-profit publishing scheme and opt for a *non-profit* one (i.e., that eliminates investor benefits). At minimum, this eliminates predatory pricing, but it also provides a professional staff who ensures that the journal production is of high quality and that the resultant documents are archival. We worked hard to negotiate with MIT Press to provide a professional product of the highest quality with a modest level of APCs so that authors are not supporting a bloated for-profit publishing industry. Of course, we would prefer that our APCs are zero, and we’re encouraged by some recent examples of universities diverting a portion of their library subscription budget to pay the APCs of their faculty. That pressure, along with countries such as the Netherlands requiring government-supported research to be published in open-access journals, will eventually turn the corner on predatory pricing.

What about the wisdom of adding yet another journal to the cognitive science field? Our overriding concern was that our field’s best work was not receiving the kind of accolades it deserves. Representation of cognitive science in the top two for-profit general-coverage science journals is paltry (approximately 6–10 articles per year in each, less than 2% of all articles). Our goal was to provide a forum for work in our field that is of equivalent quality to that published in these journals. We chose a similar short-report format with extensive supplemental materials to further reduce APCs.

I’m immensely proud of the editorial board and associate editors who have joined our effort. Not only do they cover all the major sub-fields of cognitive science, but they are of the highest stature in these sub-fields (including 13 members of the National Academy of Sciences). It is also important to note that the gender composition of our editorial team is 50-50, dispelling the myth that cognitive science and other quantitative disciplines must be male-dominated.

Another important feature of our journal operation is our embrace of “blind” reviewing. Many general-coverage journals, especially in the biological sciences, reveal to the reviewers the identities of the authors. There is ample evidence that knowledge of the gender or reputation of an author leads to substantial bias in the evaluation process, independent of objective quality. No system is devoid of bias (e.g., the associate editors and I have knowledge of authors’ identities), but we are convinced that eliminating one major source of bias is superior to the alternative of doubling-down on “transparency” by publishing the identities of the reviewers. Authors need to know they are protected from reviewers’ prior opinions of their work, and reviewers need to know they can be free to express their honest opinions about a manuscript. It is our responsibility as editors to ensure that reviewers are both competent and fair in the way they express their opinions to the authors.

Like other high quality journals, our editorial process involves a “triage” stage to determine whether the manuscript has a reasonable chance of eventually being accepted for publication. This process entails a fairly rapid (typically 1 week) review by our editorial team. While this process is not perfect, it has the benefit of eliminating the multi-week delay while a full review is being conducted of a manuscript that is not likely to meet our standards, and thereby reducing the burden on reviewers. Once accepted for publication and when the production process is complete, the final article is available immediately on the journal’s web site (no need to wait for each virtual issue to be bundled before an article can be downloaded).

We have also decided, after considerable thought, to encourage but not require two aspects of recent trends in scientific publication. First, we believe it is important for our field to be concerned about the reliability and replicability of our published findings. However, we do not feel that every published article should be bound by so-called “pre-registration” guidelines. Although we recognize the bias for only positive results entering the literature, and the difficulty of removing these results if they prove to be false positives, we also recognize the value of new and unexpected findings that would never be discovered by the pre-registration model. We fully support meta-analyses of published data to serve as a counterpoint to file-drawer effects and p-hacking. Relatedly, we require authors to use the most appropriate statistical analyses, but we do not agree with the one-size-fits-all model. Sometimes a t-test is sufficient and other times a mixed model regression or machine-learning method is required. The context and goals of a study dictate appropriate analysis techniques, and the editorial team sets those standards during the review process.

Second, we urge, but do not require as a policy, the sharing of relevant raw data for every article that we publish. We provide instructions to authors for a free and easily accessible data storage system ([www.dataverse.org](http://www.dataverse.org)) to streamline the deposit of raw data, with direct links in the PDF of the published article. However, there are legitimate reasons why data may not be immediately shareable with the larger community. For example, video recordings are difficult to de-identify as the face of the participant is typically visible. If these participants come from a special sample (e.g., children with a disability) their privacy could be in jeopardy. These issues are not insurmountable (see the policies and procedures established by [www.databrary.org](http://www.databrary.org)), but they require discretion. Another example is when an author has labored long and hard to obtain funding to gather a unique set of data (e.g., from an indigenous group). That author should be buffered from immediately releasing those hard-earned data before passing them along to others who exerted no effort in gathering them. Particularly for junior faculty, they deserve a brief moratorium before their more senior (and typically well-funded) colleagues have access to their raw data.

Finally, I want to urge you, as both contributors to and consumers of the scientific literature, to think hard about why we publish our work, who our intended audience is, and how best to disseminate our findings to benefit society. The more we can communicate effectively to those who support our research infrastructure, the healthier our scholarly enterprise will become.