

(given the publication venue), include more details about your specific results and your main techniques, and include many searchable keywords and phrases. This can help ensure the robustness of the search, retrieval, and citation afterlife of your article; you can even update the abstract of your article's final arXiv revision.

Asking around, you will get lots of opinions about abstracts. Since writing an abstract is an art form, critically reading many of them—both within and outside of your specialty—can help you to discover your own style.

ACKNOWLEDGMENT. The author would like to thank Aileen Fyfe for helpful discussions about the history of publishing at the Royal Society.

References

- [1] *A Focus on Mathematics: Knowledge Management in Mathematics—140 Years of Information on World-Wide Literature*, FIZ Karlsruhe brochure, Bernd Wegner (ed.), 2008. <https://www.zentralblatt-math.org/year-of-mathematics/year-of-mathematics.pdf>
- [2] *Philosophical Transactions: 350 Years of Publishing at the Royal Society (1665–2015), exhibition catalogue for 350 Years of Scientific Publishing*, Royal Society, curated by Julie McDougall-Waters, Noah Moxham, and Aileen Fyfe, 2015. <https://royalsociety.org/~media/publishing350/publishing350-exhibition-catalogue.pdf>
- [3] Aileen Fyfe, *Where did the practice of abstracts come from?*, blog post from *The History of the Scientific Journal project*, July 8, 2021. <https://arts.st-andrews.ac.uk/philosophicaltransactions/where-did-the-practice-of-abstracts-come-from/>
- [4] Aileen Fyfe and Anna Gielas, *Introduction: Editorship and the editing of scientific journals, 1750–1950*, *Centaurus* 62 (2020), no. 1, 5–20.
- [5] Noah Moxham and Aileen Fyfe, *The Royal Society and the prehistory of peer review, 1665–1965*, *The Historical Journal* 61 (2018), no. 4, 863–889.



Asher Auel

Credits

Photo of Asher Auel taken by Joe Rabinoff, July 2015.

What Happens to Your Paper, After It Is Submitted?

Chuck Weibel

If you are early in your career, and are just submitting a paper, you might find the process unnecessarily slow. For example, you may want to update your CV as soon as possible with the magical adjective “*Accepted*.” This is especially true if you are applying for jobs, or up for promotion, when you want your CV to be as strong as possible.

Once you’ve submitted your paper, the process may seem mysterious. I would like to draw back the curtain a bit and explain the steps your paper will likely go through.

The corresponding editor. The first step is matching your submission with an editor; this step varies from journal to journal. It is automatic if you have submitted your paper directly to an editor; other websites will ask for your preference of editor, defaulting to having an Editor-in-Chief select the editor. Either way, all your correspondence should be with that editor.

Most journals now use an editorial system such as *Editorial Manager* (e.g., most Elsevier and Springer journals) or *Editflow* (e.g., journals operated by societies like the AMS, CMS, and European societies). If possible, your communication with the editor should go through such a system. Avoid using a publisher’s “send-a-message” website to contact editors if possible, as it usually delays your getting a useful response.

Quick decisions. The first thing your editor does is make a “quick” decision as to whether your paper is appropriate for their journal. This can happen immediately if the editor is enough of an expert in your field that they can decide quickly and directly. (Your choice of editor matters here!)

If not, the editor usually asks an expert for their quick opinion. In this case, the quickness of the opinion depends on the expert and their free time. The “quick opinion” can take two weeks or so, but during the pandemic this has sometimes taken slightly longer.

If the quick opinion is negative, most journals will send you a rejection within a couple of weeks. Again, this varies with the journal; some journals require a consensus decision by the entire Board, which happens once a month, and other journals require a two-week reflection period, when all editors can voice their opinions, before rejection.

If your paper survives this first obstacle, it is ready to be technically evaluated, i.e., sent to a referee. Some journals use two or even three referees.

Chuck Weibel is a distinguished professor at Rutgers University. His email address is weibel@math.rutgers.edu.

DOI: <https://dx.doi.org/10.1090/noti2368>

Referee(s). Often, the editor gets suggestions of referees from their quick opinion experts; if they know the field well enough, they pick a referee (or referees) directly. They then ask if the person is willing to referee the paper. Hopefully the answer is yes, and the refereeing can commence right away. This is the usual scenario. But often a chosen referee has already agreed to many other refereeing jobs and declines; the editor has to ask someone else. Sometimes a referee will agree to begin refereeing, but not start until finishing another refereeing job. In rare cases, the person asked to referee is incommunicado, due to changes in email or personal factors. In this case, it is normal for the editor to ask another expert to referee (and sometimes the editor receives two or more reports on the same paper). It is the editor's job to navigate this and get your paper refereed. In my experience, the first scenario occurs about 2/3 of the time, a delay in starting to referee occurs about 1/3 of the time, and the nightmare scenario occurs about 1% of the time.

Pinging for news: do not panic. The amount of time a referee needs to write a report about your paper varies enormously. One factor is the length of your paper; another is the amount of checking that you have "left to the reader." A third major factor is the amount of free time the referee has, especially during the academic year when classes absorb a lot of free time (especially online classes). During the present pandemic, another factor is the distraction of caring for children and other family members. It isn't helpful to demand updates before six months have passed.

It is OK, and a good idea, to ask the corresponding editor at about the six-month point if there is any news about your paper. This might serve as a reminder to the referee to finish their report, especially if they are stuck on a point you didn't explain clearly enough.

When I submitted my first paper, I had a woefully bad understanding of the process and didn't ask about the status of my paper for 12 months. When I finally did, the editor discovered that the referee was not doing math any more. The editor quickly chose another referee, a referee who had read my paper, and my paper was accepted within a month of my inquiry. Can you imagine what would have happened if I hadn't asked?

Revisions. It is rare these days for a referee to not find any problems with the submitted version of a paper. Problems range from typos to unclear passages, substantial errors, and even missing attributions you may not be aware of. Let's assume the referee report calls for revisions. When revising your paper, please remember that the referee is trying to help your paper. It is easy (and human) to think the referee is ignorant about a point they want clarified, but if the expert referee has problems with it then so will many readers. Please try hard to clarify these points so the referee will be satisfied, explaining why you don't follow a suggestion of the referee if that is the case. This can significantly cut down the time needed to evaluate your revisions.

As often as not, the referee's second report (on your revised version) will ask for further clarification, often of things you added to the revised version. Stay calm! This process converges quite rapidly, and a paper reaching this stage is almost always accepted in the end.

Post acceptance logistics. Once your paper is accepted, you may add the magical word "Accepted" to your CV.

Now the publisher's production team takes over from the editor. In most cases you will be asked to upload your source files to a website, and sign a *Consent to Publish form* (for some publishers, it is a Copyright transfer agreement). Shortly after that, you'll receive "galley proofs" of your paper; they probably contain minor changes due to layout, macros or style. Check carefully! Thankfully, the widespread use of latex has reduced the occurrence of garbled math to a rare occurrence, but you should still check the math. Here you are in control; return the galleys as soon as you can to prevent delays.

Online publication. The time between acceptance and publication, called the journal's "backlog," is published annually in the November issue of the *Notices of the AMS*. There are actually two publication dates tracked by the AMS: posting online (which usually happens within three months of Acceptance), and publication in print (which can be over a year from Acceptance). When your article is posted online, it receives a "doi" (Digital Object Identifier). This can be added to your CV while you await the formal published information such as volume and page numbers.



Chuck Weibel

Credits

Photo of Chuck Weibel is courtesy of Chuck Weibel.