

James F. Lynch

Postal:

Woods Hole Oceanographic Institution
MS #11
Woods Hole, Massachusetts 02543
USA

Email:

jlynch@whoi.edu

Adrian KC Lee

Postal:

Institute for Learning & Brain Sciences
(I-LABS) and Department of Speech
and Hearing Sciences
University of Washington
Portage Bay Building, Room 206
Box 357988
Seattle, Washington 98195-7988
USA

Email:

akclee@uw.edu

The Need for Speed

Tuning the publication engine

Introduction

There are two prime metrics by which authors judge journals in which they are considering publishing: quality (reputation) and speed of publication. A journal's quality and its metrics are an oft-discussed part of publishing. Articles about impact factor, full-text downloads, immediacy, shelf life, and other metrics abound. And although the discussion of quality is very important and perhaps worthy of a future *Acoustics Today* article about the publications of the Acoustical Society of America (ASA), we wish to focus here on the second, and less often discussed, topic.

When James Lynch came on as editor in chief (EIC) of the ASA and editor of *The Journal of the Acoustical Society of America (JASA)* on November 1, 2014, *JASA*'s biggest point of criticism was that it was, plainly put, slow. Certainly, there is a minimum time needed to ensure a quality review process, a point that all good journals consider beyond compromise, but *JASA* was far beyond an acceptable time. The time taken from receipt of a manuscript (MS) to first decision was, on average, 90-100 days as opposed to the 45- to 60-day turnaround that is more common for modern journals.

Clearly, some action was needed for *JASA* to stay competitive in this current publications market. Due to the mandated transition of three of our publications (*JASA*, *JASA Express Letters [JASA-EL]*, and *Proceedings of Meetings on Acoustics [POMA]*) from the Peer Xpress review software to the Editorial Manager (EM) software, which initially launched (with *POMA*) on December 15, 2014, and then with *JASA* and *JASA-EL* in September 2015, the push for more rapidity in our processes took a back burner to the critical software transition until about January 2016, when our system was considered to again be stable. At that point, publication speed resurfaced as our number one priority. The problem boiled down to identifying what was wrong and how we could fix it.

So, What's the Problem?

The first part of our task, identifying the problem areas, took a little more investigation than one might first imagine, given the many components of the peer-review and publication stream. The list of problem areas/questions we came up with had both structural and procedural components and looked like the following:

1. How slow are we compared with other journals in which ASA members publish?
2. Are we adequately and properly staffed to process the volume of MSs we handle while meeting our projected growth?
3. What parts of the publication process are in our control (i.e., via the ASA Publications Office) as opposed to control by Aries Systems (our peer-review system provider) and the American Institute of Physics Publishing (AIPP; our publisher)?
4. Looking at the parts of the process that we control, how efficient is each and what are the major roadblocks? How do we fix those roadblocks?
5. What are the delays in the parts of the process outside our control? How do we fix these?

6. How do we deal with key personnel being “away from their desks,” be it for sickness, vacation, or attendance at ASA meetings?
7. How well do we monitor the pieces of our publication process (via a dashboard and/or a calendar of events)?

First-Iteration Solutions

The answers to these questions (which are mostly persistent ones, not subject to “one-shot” solutions) came not just from internal deliberations at the ASA Publications Office and at various meetings but from another source as well: the ASA Strategic Plan. Seeing that *JASA* and ASA’s other publications needed help at a societal level, the Strategic Plan group made the improvement of ASA’s publications one of the four major thrusts of the plan. This gave us a very powerful extra boost in terms of both workforce and resources. In addition to our internal office meetings focusing on improving our journals, there were biyearly meetings of the Strategic Plan Working Group at ASA meetings and monthly conference call meetings of the publications subgroup as well. This helped provide both directional guidance and implementation of specific tasks. As a result of these efforts, we came to some “first-order” solutions, which we describe next (enumerated as above).

1. The comparison with journals that *JASA* competes with really has to be done on a technical committee (TC)-by-TC basis. This is being done at present. However, to give a “baseline” answer, Adrian KC Lee looked in detail at competitor journals in Psychological and Physiological Acoustics (P&P). His answers gave a spread of results, but it was noted that to be competitive, we needed to shoot for a window of 45-60 days (average) from MS receipt to first decision to decide whether to accept or reject a paper or invite revision. As we mentioned before, *JASA* was at about 90-100 days, so we obviously had our work cut out for us.
2. The staffing issue was perhaps the biggest blind spot in our thinking. We knew we were struggling to keep up with submissions, but until Christy Holland, ASA president at the time, suggested getting a managing editor (ME) and using the Strategic Plan as a vehicle for the initial funding, we did not see what was, in retrospect, an obvious need. Up to that point, ASA Publications worked with a minimal staff, which was good for ASA financially but was hurting our publications. When Elizabeth Bury came on board as ME on May 2, 2016, bringing with her a wealth of experience and talent, we quickly saw a huge change both

in our MS handling capacity and in the refinement of our processes. A major personnel deficiency in our organization had been remedied.

3. Identifying “which parts of the publication process we control” is important because we can most easily upgrade and make these steps more efficient. The main parts of the initial submission process in our direct control are the quality control (QC) of a submitted MS, the assignment of an associate editor (AE), the inviting of reviewers, the monitoring of the review process, and the decision after receipt of the reviews. The sum of these times, namely, the “receipt-to-first decision” time, is an important speed metric for journals, as previously mentioned. After a decision is made, assuming it is for revision rather than for immediate acceptance (rare) or rejection (which we try to keep at the 50% level, typical of technical journals), the process time becomes a bit more individual and can depend on the author’s response. There are timelines for revisions (60 days for the first revision and 45 days for subsequent ones), and we have plans to streamline these latter parts of the process, but our primary focus so far has been on the first decision. The parts of the process outside our direct control, such as the submission through the EM peer-review system and the production and publishing through AIPP, also have some direct interaction with us, and we discuss how we have worked to improve those pieces of the process as well.
4. The breakdown of the publication stream into components was worked on by the Publications Office in Hyannis, MA, and by the Strategic Plan group. At the Salt Lake City ASA meeting, Adrian KC Lee introduced a “flow diagram” of the process (**Figure 1**) that has proven to be extremely useful. The rest of this point, which is perhaps the “meat” of this article, explains how we improved each piece.

The first step, initial QC of a received MS, is performed by Manuscript Manager Kelly Quigley. Under our old system, most corrections were performed at the initial submission stage, and as a result, two-thirds of the MSs received were sent back for correction before they were even entered into the system for assignment to an AE. This system was revised in March 2016 so that only the essential items for a proper review are requested. After this was done, the number of MSs returned decreased to about one-third and almost four days (on average) were trimmed from the length of time to the first decision.

The second piece of the process, assigning an AE, was one that took a little more work to address. Traditionally, AEs were invited/requested (not “assigned” per se) to handle a MS by the MS manager. The assignment of an AE was based on the Physics and Astronomy Classification Scheme (PACS) numbers and keywords that an author attached to the MS. However, due to the increasing technical diversity and specialization of JASA over the years, getting “just the right AE” became harder for a nontechnical person simply using codes and keywords. This caused a relatively high number of “declines” by AEs and thus delays until an appropriate AE could be found.

A solution to this, which has been implemented over the last year, is to have a coordinating editor (CE) from each TC recommend appropriate AEs from his/her TC and then have the EIC/ME look over the recommendations, taking into account the workload of AEs, and then start the editor invitation process. So far, 10 of ASA’s 13 TCs have joined this program, with the rest due to sign on soon. There has been a considerable (~11 days faster on average) speedup of the time to AE acceptance due to this program.

The next step is the time it takes an AE to invite reviewers. We ask our AEs to start inviting reviewers (or reject a submission) within a week of agreeing to handle a MS as an editor. Thanks to our new ME keeping track of this more carefully, our average time for the first reviewer invitation came down from six days to three days.

Although the review process is “out of our hands” in some ways, we do keep close watch on the time in review and send reminders and other communications to the editors, both automatically through the EM system and personally via the ME. Our increased attention and communication has resulted in an average review time of 39 days as opposed to 51 days previously. This is well within our expected bounds (30 days for review, with 14 “grace days”). We feel we can improve this even further and are considering various possibilities.

Once the reviews are complete, we ask for an AE’s decision within seven days. Before our ME and CEs came onboard, the average time for this was eight days.

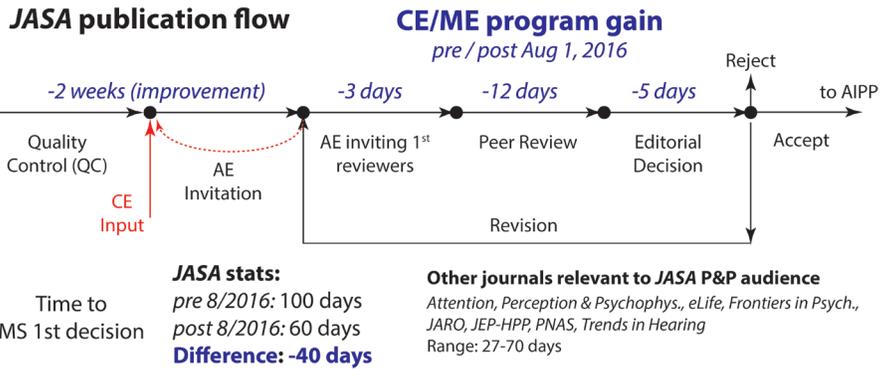


Figure 1. Flow diagram of the publication processes of The Journal of the Acoustical Society of America (JASA) for manuscript (MS) submissions that undergo review, along with time to first decision of some other journals relevant to the Psychological and Physiological Acoustics (P&P) audience. **Red arrow**, new role of the coordinating editor (CE); **blue text**, time gained (averages) since the inception of the CE/managing editor (ME) program. Time frames compared are from September 15, 2015, to July 31, 2016 (pre-CE) to August 1, 2016, to November 10, 2016 (post-CE). The flow diagram was first presented at the Acoustical Society of America (ASA) meeting in Salt Lake City by Adrian KC Lee. JARO, Journal of the Association for Research in Otolaryngology; JEP-HPP, Journal of Experimental Psychology: Human Perception and Performance; PNAS, Proceedings of the National Academy of Sciences of the United States of America; AIPP, American Institute of Physics Publishing; AE, associate editor.

However, we have been very successful, thanks to our staffing changes, to having this fall to three days.

Once the first decision has been made, the author is given 60 days for the first revision, as mentioned. Our average number to get an “R1” resubmission is actually 48 days, well within our current expectations. We are planning on examining the revision process for possible improvement in the future and are encouraging authors to return their revisions as fast as possible.

At this point, there is one more item to discuss with regard to the processing steps we “own.” Specifically, we have not talked about the variance in time of the processes. Without adding another full statistical discussion, let us just say that the variances have also come down substantially and, particularly, the “long tails” of the time distributions for the processes, which represent unduly delayed MSs. Elimination of excessive delays in any part of the process is especially important because such delays lead to unhappy authors who may be lost as future authors and also tend to spread negative publicity. We would rather keep our authors and have them attract others to our journal!

5. As mentioned before, our peer-review system provider, Aries Systems, Inc., and our publisher, AIPP, provide pieces of the process that we do not directly control. However, we still interact with these vendors significantly, and in ways we very much do control. With both Aries

Systems and AIPP, we interact via the formatting of the articles that get submitted and published. One significant area that has been problematic and has resulted in author delays both in presubmission and in publication is the format of LaTeX files. There are a variety of compilers and formats available to LaTeX users, but only a subset of these will work with the EM submission system and the AIPP production system. A LaTeX template existed for *JASA* a decade ago, but it is long since obsolete and needs to be replaced. A temporary replacement was made available last year, but it needs major revision to suit modern needs. To eliminate this obstacle to our authors, ASA Publications has contracted with Texnology, Inc., a well-regarded vendor, to provide a complete and up-to-date template for *JASA*, followed by *JASA-EL*.

6. One problem that also “flew under the radar” for a while was the gaps in our staffing that occurred due to sickness, vacations, and (necessary) attendance by Publications Office personnel at the biyearly ASA meetings. Our staffing now is at the “just adequate” level (excepting any new initiatives), and loss of even one staff member for a week or more has a noticeable impact on our operations. Complaints about slowness increased during these periods. To deal with this, two solutions were implemented. First, a “backup/handoff” plan was developed, written up, and formally distributed to all Publications Office personnel. This plan made sure that an absence of one key person could be covered by other staff, at least for a short time. For longer absences or multiple absences (such as meetings), a vendor was contracted for coverage. This plan has worked well in the two or three instances we have needed it (since last Fall) and will be further refined in the coming months.
7. A last piece of making sure that we are timely is to have good monitoring of our processes via what is usually known as a “dashboard.” This monitors the key metrics of journal performance, with speed being one of those. To date, we have assembled pieces of such a dashboard but have not completed it as an integrated entity. That is slated for Spring 2017 and hopefully will be done before this article is published.

To conclude this article, we fall back to a more conversational mode. First, we acknowledge that this material is probably a bit dry for many readers: it is a detail-oriented publications piece. For that, all we can ask is forgiveness because it is the nature of the beast.

Second, we note that this discussion has been a bit candid about our inner workings as a publications team and about *JASA* as a journal. That is quite intentional; we are proud to be a WYSIWYG (What You See Is What You Get) shop. This candidness allows us to address the third point more effectively: soliciting your input. Now that you know in detail what we do, it is possible that you know of some better ways to approach things. If so, we would very much like to hear from you! We also pride ourselves on being open to input and (constructive) criticism, and if you have such, please send it to us. The best contact address is our Managing Editor Liz Bury whose ASA email is lbury@acousticalsociety.org. Input sent via her address will be both thanked and considered.

In the last analysis, our authors are the key components of our journals (and any others). Without them, we don't exist, and so their having a good experience dealing with the publishing process is crucial. We are committed to this, and we hope this article shows our commitment.

Biosketches



James Lynch obtained his BS in physics from the Stevens Institute of Technology (Hoboken, NJ) in 1972 and his PhD in physics from the University of Texas at Austin in 1978. He is currently a scientist emeritus at the Woods Hole Oceanographic Institution. Dr. Lynch is a Fellow of the Acoustical Society of America (ASA) and of IEEE and is the current editor in chief of ASA publications.



Adrian KC Lee obtained his BEng (electrical) from The University of New South Wales (Sydney, NSW, Australia) in 2002 and his ScD from the Harvard-MIT Division of Health Sciences and Technology in 2007. He is currently an associate professor in the Department of Speech and Hearing Sciences and the Institute for Learning & Brain Sciences at the University of Washington (Seattle). He has received Young Investigator Program Awards from the Department of Defense and the Pathway to Independence Award from the National Institutes of Health.