

The More Things Change, the More They Stay the Same

Dan Moran

“Technology gets better every day, and that’s fine, but most of the time all you need is a stick of gum, a pocket knife, and a smile.”

—Nathan Muir (Robert Redford), *Spy Game*

With just about 20 years of experience in STM publishing, some would say I’m still somewhat new to the industry. I fell into the business in the late 1990s, at age 27, having had 15 previous jobs completely unrelated to publishing (with an M.A. in Philosophy and Religion, I had a number of minimum-wage warehouse jobs). However, I’ve now been around long enough to have seen major advances in technology that have drastically changed the logistics and parameters of the STM publishing process. In spite of those world-altering developments, though, I’ve also noticed that many aspects of the job haven’t changed at all.

When I greet new colleagues who have been hired just after graduating from college, I often astonish them when I mention that during my first year with the company, I didn’t use a computer at all. Their stunned reactions seem to pose the question: “How did you manage to *do* anything?” For these employees who were born after the Internet was reasonably prevalent in American households, it’s difficult to imagine that my desk featured pencils, markers, various stamps and ink pads, Wite-Out, piles of paper, and multiple lamps bent low over slanted wooden boards. What my desk did *not* feature was a keyboard or monitor.

These days, of course, my workplace looks completely different. A stroll through the office reveals desk after desk with nothing but computer monitors on the surfaces (and often not just one monitor but two monitors per person). Scraps of paper are nowhere to be seen, scissors and tape would take an hour to dig up, and even pens and pencils might be hard to find.

Still, when I reflect upon what’s happened in my workplace over the last two decades, I find the changes more quantitative than qualitative. As a production editor for a company that serves numerous scholarly and professional societies, my overall tasks now are much the same as they were during the Clinton administration.

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Our company receives manuscripts from peer-review departments at various organizations, and we shepherd those manuscripts through editing, typesetting, author revisions, and customer revisions, ultimately supplying the final publication product. During my decades of doing this kind of work, numerous individuals and groups have been striving to alter the logistics of various stages of the process. Sometimes the changes have been driven by the desire for greater speed, sometimes by the yearning for lower costs, and sometimes by a vague notion of “improving” the experiences of authors, publishers, or other stakeholders. Certain efficiencies have been gained, some people are happier with the newer methods, and in many cases, new problems have been introduced. Fundamentally, though, we’re still dealing with the same players, the same stages, the same ultimate goal.

For example, we want authors to see the initial typeset versions of their articles, to review edits and answer questions, and to be able to make revisions. I previously sent printed copies of typeset articles to authors, using regular mail or some expedited method if the need was urgent. Queries were handwritten on the printed pages, and the authors replied by writing out answers in addition to marking revisions in pen or pencil to printed sections of text, after which they returned these pages by mail (or, in some cases, by fax). Now, we send such typeset proofs in electronic form, by means of email, with instructions and queries embedded within the messages or the files. The authors may annotate PDFs with revisions, or they may send us descriptions of revisions in the text of emails; they may use an online portal to upload revised proofs, or they may return them as attachments. The logistics have changed considerably. Overall, though, this step of the process hasn’t much changed. If an author’s on vacation and hasn’t designated a coauthor as the next contact in line, it doesn’t much matter whether we send an email or drop off a package on a doorstep. If an author doesn’t understand—or answer—one or more queries, further contact and discussion are needed, whether by email, “snail” mail, or telephone. If an author wants to make changes that violate the style or policies of the publication, the society must be consulted, regardless of what technologies are used. Yes, electronic methods of sending author proofs have reduced some of the time that would otherwise be taken up by the delivery of hard copy, and the cost of the postage has been cut out as well (though other costs are associated with using and maintaining the necessary technologies for

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electronic methods of transmission), but this basic stage of publishing has remained in place, along with many of its problems.

The same can be said for many other stages of scientific, technologic, and medical (STM) publishing. We used to receive peer-reviewed manuscripts as typewritten pages in the mail, and now we receive them in electronic form, in many cases through online portals—but we still have to take steps to resolve questions that arise if something appears incorrect or incomplete. We used to check “blues” (the last stage before a journal prints) in the form of stapled signatures of chemical-laden, foul-smelling physical pages, and now we check them via an online application—but we still have to review the final pages just before they print. Whatever the stage of journal production, we’re doing the same things, only in a different way. The “new and improved” technologies have not changed any of the basic facts of the publishing process.

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Another aspect to keep in mind is that, at least in this business, technologies do not change suddenly but with slow periods of transition. It wasn’t as though we abandoned paper manuscripts and proofs altogether on a given day and switched to entirely electronic systems. Rather, we began to deal with electronic submissions and transmissions gradually while paper was still in use. A given technology might be tried for certain stages of publishing but not yet others. Authors were given the option to include email addresses along with their correspondence information, and for most organizations, this continued for years before the email address became a requirement. The transitions often involved strange mixtures of methods; for example, when we first began using electronic manuscripts, we received them as files on floppy disks—in effect, digital files were being sent through the mail.

It’s also important to remember that technologies do not advance at an even pace across all stakeholders involved in publishing. Just because Microsoft comes out with a new version of Word, that doesn’t mean any given author or society immediately runs out to purchase it. Societies and individuals have varying budgets and preferences and may be many years behind the cutting edge of technology. Those working in the technology industry may consider as “obsolete” anything older than a year or two, but some STM authors in developing countries may be using computers that are 15 or 20 years old, or they may have access only to

dial-up Internet services (if any). Even first-world authors with excellent funding may not have a great deal of experience with certain technologies. I’ve dealt with many authors who are likely excellent surgeons but who nevertheless can’t seem to open a PDF, much less annotate one. I also know of at least one major American medical society whose editors revised files by printing them out, marking them in pen, scanning in the pages, and returning the electronic scans to us—as recently as 2015. Everyone in this business would do well to keep alive the older methods when adopting newer ones.

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I think the only qualitative change to STM publishing brought about by technological advances is the ease of distributing text widely and quickly. That is, authors can now skip the process of official submission and peer review and simply post their articles directly online in any number of venues. The ease of self-distribution of content, along with the rise of questionable and predatory publications—the scholarly equivalent of “fake news,” facilitated by the Internet—has had an effect on our industry and may continue to exert influence. For more discerning professionals and researchers, however, I think peer-reviewed publications run by official organizations will continue to be the authoritative sources of new and relevant information.

It may be difficult to envision the technological changes to come in subsequent decades, but regardless of what they turn out to be, I think STM publishing will remain much the same in its essentials. Even if author proofs somehow become five-dimensional holograms through which one walks and revises by grabbing at the air, it won’t fundamentally be any different than marking pieces of paper with a red pencil. We know authors and researchers will continue to document their work and to want to share it with others in the field; we know societies and other professional organizations will be involved in this process; we know work will have to be edited (for readability, for accuracy, for style), revised, and put into some recognizably standard form; we know various stakeholders will need to weigh in at various points along the way; we know all of this will happen with regularity and in keeping with a certain schedule; and we know the people and vendors involved will need help and expertise to ensure all this is done. As long as rigorous standards continue to prevail and discerning audiences demand the highest-quality STM content, the basic processes of STM publishing will remain largely intact. We may not know how things will change, but we can feel reasonably sure about what will stay the same.