

Why Don't More University Presses Publish Mathematics Books?

David Tranah

Suppose you were a company dedicated to publishing works of scholarship and education that were too specialized or novel for commercial publishers. Wouldn't you be interested in an academic discipline that is well defined, robust, undertaken everywhere (often in English!), and represents a profitable business worth perhaps \$50 million annually? Mathematics is just such a business, so of all the university presses, some 150 worldwide, why do only Princeton, Imperial College, Oxford, and Cambridge have substantial programs of publishing academic books in mathematics? Chicago did once have a rather nice series; why no longer? Johns Hopkins does publish a few "trade" mathematics titles; why not more academic ones? Why doesn't Harvard? Why doesn't MIT complement its outstanding computer science list with something comparable in mathematics? Why don't university presses that publish math journals also publish math books? Should mathematicians care that they don't, and could they do anything about it?

In examining these questions, I shall do the traditional thing, namely look at some broader issues affecting academic book publishing and see what they may mean for mathematics.

About two-thirds of all university presses are based in North America: mostly the United States, but ten more exist in Canada, and both Oxford and Cambridge have a substantial U.S. presence. Cambridge was established in 1534 with the right to publish "all manner of books", so nothing was excluded in principle, though Cambridge needed only 118 years to bring out its first book in mathematics!

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By contrast, most U.S. university presses were established, in part, to cater to the local population, perhaps academic, perhaps geographic. Apart from forays into natural history or environmental issues, there was no reason that they should publish in science, let alone mathematics.

This reason is compounded by the fact that scientists and mathematicians are much less inclined to write books than their counterparts in the humanities and social sciences (HSS). To a great extent, therefore, in the buyer's market that is HSS publishing, acquisition editors (that is, the people who build programs) benefit from this difference: there is a never-ending stream of manuscripts landing in their inboxes. On the other hand, acquisition editors operating in science and mathematics usually build a list by identifying topics and authors (often with the assistance of academic series editors) and then hunting for, cajoling, persuading people to contribute to it. It is easier to graze rather than hunt, and, just as in nature, the publishing ecosystem can support more grazers than hunters: that is, more HSS than science editors.

A further reason has to do with the ability to reach the market. A mathematics book has global appeal, and for the last seventy years, the language in which mathematics has been conducted, at least at graduate level, is English. There is very little mathematics publishing that is of purely local interest. Dually, if you cannot sell your mathematics book everywhere in the world, then you are missing a considerable fraction of its audience. I estimate that North America represents now probably only about 35 percent of the world market for advanced mathematics books, whereas the comparable figures in literature or philosophy are nearer 50 percent. A science publisher has to have global reach, therefore, not only for sales but also for acquisition. University presses whose existence

could originally have been justified by parochial arguments and whose continued existence is guaranteed by the ability to sell books merely to U.S. universities, academics, and “the educated reader” just may not have had the wherewithal to handle content (print or electronic) of global appeal that requires global attention; and they may have lacked the resources to invest in the infrastructure that would have enabled them to reach the global market. (Interestingly, the same argument applied in the seventeenth century: according to McKitterick’s *History of Cambridge University Press*, there was never any question of Newton’s *Principia* being published at Cambridge. Distribution to its intended audience demanded resources greater than were available in 1687 to the university press.)

A fourth reason is that, especially in mathematics, the main learned societies have seized the baton of scholarly publishing. SIAM has been publishing books since the early 1970s; the MAA since the early 1920s; and the AMS since 1905 (with a major expansion in the 1990s): it has a longer history of book publishing than most university presses! (All these societies have formed sales and distribution partnerships outside North America.)

Mathematics publishing is therefore a mature business. Most players, whether commercial or nonprofit, are well established. Without an edge, how can university presses that do not have an existing presence enter the fray and successfully compete with those players? Why should they when there’s plenty of low-hanging fruit elsewhere and when their business is tuned to a different sort of publishing? Just from these considerations one can see why most university presses do not publish much mathematics. And in my opinion they *need* not, since the natural space they could have occupied has been populated by learned societies.

But will this always be the case? Maybe not. Can we predict the future by examining the past?

Many publishing houses began as printers or booksellers; those that have lasted have adapted and seen that what started out as niche activities—namely working with authors to create a written document and then persuading people to buy it—ultimately become the core, with retail, typesetting, printing, warehousing, and distribution being arranged through third parties.

A bigger development for many publishers, especially in science, has been the migration from book to journal publishing (often on behalf of learned societies), with books being a small, albeit highly visible, side issue. (In fact, many publishers keep books separate from journals as the businesses are so different, and it’s not at all uncommon for a publisher to have a strong journal list in an area and yet publish no books in it.) The implications of this development have been profound. For example, about fifteen years ago we started

to see journal publishers build online versions of journals, complementing the print. Journal users gradually switched to accessing papers online rather than going to the library. This switch did not happen overnight, and it was enabled by huge and continued investment and experiment, paid for by journal subscription, or in some instances by venture capital, and by reducing costs elsewhere. Some publishers built their own systems for delivering electronic journals; others bought services from platform providers such as High Wire. Digital archivers such as JSTOR appeared. The infrastructure set up for delivering journal content naturally was extended to books—complementary to e-book formats such as Kindle. It’s only a matter of time before users start to prefer the Web as the way of accessing research monographs, reference books, and advanced textbooks. What will this mean for academic publishers whose businesses have been built on producing printed books and distributing them?

Publishers will have to reexamine their core activities and even to decide what an academic book is. It certainly won’t be the simple thing it is now. Will it be a print-on-demand physical product, an e-book, an online book? Will it be locally sourced or downloaded? Will it be printed by Amazon for the publisher at the point of sale? Will it be “as supplied by author”, or will it benefit from peer review and editing? Will editing be part of the publishing process, or will it be crowd sourced? Will it be authored or will it be a Wiki? Will it be flat or enhanced? All these considerations have implications for the existing infrastructures of book publishing—publishers will need to build a whole new IT infrastructure if they are to compete with Amazon, which might perhaps repeat what happened 150 years ago, and expand from bookseller and occasional book printer to publisher.

If the sales and marketing functions were to go the way of printing, warehousing, and distribution, would the only remaining aspect of publishing, editorial service, be enough to maintain a business? And if not, will that also disappear and businesses like Lulu, or repositories, become accepted places to publish one’s books?

I like to think not, and not just because I am an editor. Academic publishing may fragment further because of the transition to digital, with the remaining core activities occupying micro-niches such as quality control, archiving, online delivery, usability, information retrieval, document enhancement, or whatever services customers regard as worth paying for in order that next-generation book publishers can survive. Businesses built around these activities will be much smaller and will need much more specific skills, ones that add value to authors’ words. Such businesses sound a lot like university presses!