Publishing Trends and Libraries

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Abstract

Just a few years ago, the death of books and their replacement by eBooks was predicted. It didn't come to pass. Likewise, there are some who are now predicting the death of the libraries. The chances are, despite rapid technological changes, libraries will survive into the foreseeable future.

1. INTRODUCTION

As a student in the late 1960s, I worked in a small, locally owned movie theater. The theater's owner used to leave his trade magazines for me to read. In those days, the industry's concern was focused on the notion that movies would soon be available via cables strung to individual houses. When that happened, the writers predicted that people would stop going to the theaters because they would be able to watch movies in their own homes, rather than venture out to the cinema. They predicted that the movie theater industry would be finished. These writers only envisioned cable and did not foresee the arrival of videocassettes, home satellite dishes, or DVD. Soon after in the 1970s, cable television swept across much of North America. Changes came to the movie theater industry, but the industry was not finished. Smaller owner-operator theaters became less common as large chains dominated the market. Following cable, videocassettes, satellite dishes, and DVD (all requiring less infrastructure than a theater) swept the world in the following decades and expanded an individual viewer's access to film. More people than ever before were able to watch movies. The concept of not being able to watch a movie after it has ended its release run through the theaters is no longer valid.

Most significantly, movie theaters are still in existence and their projectors are still showing movies on the big screen.

There are many analogies between what went before in movies and what is happening now in the world of books. At the time those trade magazine articles were written, books printed with moveable type were a technology at least 500 to 1000 years older than the concept of film or video tape. Because films were a relatively new form of human expression and less well established, they were more susceptible to changes than the long-established and elegantly simple book.

Library and book industry trade magazines in recent years have shown some of the same uncertainty about the medium of the book and its endurance. In this article I will attempt to illustrate how the book as we commonly know it as a bound, paper item will endure as 35mm movie film continues to endure, but also how it will be challenged, supplemented, and altered by innovations in printing technology and in the intellectual conception of the book. I will first discuss electronic books (eBooks) and their challenges to paper books, followed by a brief orientation summary of book printing and an exploration of the concept of book printing on-demand.

2. ELECTRONICS BOOKS (e-BOOKS)

The book trade literature from a few years ago included industry analysts' predictions that eBooks would in short order make significant inroads into the market for paper books (pBooks). pBooks would be displaced by eBooks because of the eBook's ready availability at anytime and place where there was an internet-connected computer. Consumers would be able to have what they wanted when they wanted it. This situation is the usual prescription for a change in items consumed in an increasingly fast-paced world. Had this article being written in early 2001, rather than early 2002, there might still be some evidence that this trend was advancing. However, recent events in the eBook market place strongly indicate that the time has not arrived yet for a reader migration to electronic content. This has occurred for several reasons. Before these reasons are discussed, the advantages of eBooks should be presented.

2.1 Advantages of eBooks

(a) The biggest advantage is the so-called 'everywhereness' of an eBook. A researcher in Antarctica or anyone located anywhere on Earth or in space and who has an internet connection via a satellite link or landline can access the contents of a digitised text for consultation. In a similar fashion, a student away from any research library can access that library's holdings via a computer attached to a modem.

(b) A large state or nation can reduce their reliance on multiple copies of a book and instead make available the text as an eBook.

(c) In areas where preservation problems are common and/or climate controlled conditions are difficult for a library, the eBook is generally not susceptible to damage in the same way a book may be. Of course, the server where the eBook resides and the connecting network is subject to interruptions in service for many reasons.

(d) The eBook can be made available on a CD-ROM and occupy a fraction of the space of a paper volume of the same title.

(e) The eBook either in its online or CD-ROM form may contain animations and live-action illustrations not possible in pBooks.

2.2 Reasons of Non-Success of eBooks

If all these advantages accrue to eBooks, then why are they not more successful? In the last quarter of 2001, several major eBook producers have declared bankruptcy, scaled back development and staffing, or closed their eBook operations. Included in this group are enterprises that target libraries (netLibrary and Questia) and those that focused on direct to consumer sales (AOL Time Warner's iPublish.com electronic book-publishing division and Bertelsmann AG's Random House Trade Group e-book unit). In spite of predictions in the late 1990s forecasting eBooks dominance, the market never materialised among consumers. Librarians were more interested in acquiring eBooks either title by title or in bulk buying of thousands of titles, but librarians often found their students were unwilling to utilize eBooks. This resistance is in strong contrast to students' overwhelming preference for full-text journal articles in electronic form and the same students' increasing unwillingness to consult paper journals. The obvious difference in the two formats is that generally books have many more pages than an article. Student can either read an article online or can afford to print the article to read in paper form. The book's length often precludes these options, unless individual chapters were identified and either read or printed.

It is difficult to determine if eBooks will never be successful or if it is just the current implementation of the user interface to the eBook contents that discouraged users. With the development of new interface hardware that is more 'book-like' will eBooks return to the market as a force? Where an eBook contents are fractured and have a brevity in common with a journal article in works such

as encyclopedias, handbooks, dictionaries, and other reference items, the eBook's continued success seems more certain.

What the recent evolution of the eBook seems to suggest is that readers want information with as little delay as possible, but that they want it in a form that is familiar to them and similar to how they currently use a book-length treatment of information. This notion segues nicely into the topic of books on-demand and how the increase in prevalence of this technology will impact libraries. Before on-demand books are discussed, a lightning fast review of the history of printing is presented and provides background for understanding on-demand book production.

3. EVOLUTION OF PRINTING

It is interesting that the librarian is the outsider among the authors in this issue. Reading the technical articles in this issue, it is easy to be struck by how little most librarians, this author included, know about the technology used to produce books, arguably our profession's oldest and most basic continuing tool. Librarians select and order books, these volumes arrive, and we process them. The book as an object made by pressing an inked object with relief (three-dimensional type) onto a substrate, usually paper, is perhaps the oldest form of mass-communication.

Moveable type fashioned from molded clay was developed in China in the 9th century and the earliest known printed book, the *Diamond Sutra*, is thought to have been printed in 868. Relief printing was also accomplished with type individually carved from wood or soft metal. The first moveable cast metal type is attributed to Gutenberg in the mid-15th century in Germany. Following Gutenberg, metal type printing progressed from a block of handset type placed character-by-character in a galley tray to entire molded metal sheets of type that could print an entire page or pages of paper. The nature of type, however, remained little changed for 150 years from the early 1700s

to the late 1800s. In that time, the means to press the substrate paper to the type advanced from a single sheet flatbed platen press to curved stereotype print plates in the late 19th century. The advent of mass communication, in the form of newspapers, pushed printing technology rapidly forward. *The Times* of London was able to print 12,000 pages of copies per hour by the early 1800s on a press coupled to a steam engine. The legibility of type progressed with improved printing mechanisms. As information transmission via print on paper became a commodity readily available to the common person little, however, had changed in the fundamental mechanics of printing from Gutenberg's time. In 1886, with the development of mechanical typesetting, composition of the printed page was advanced by increasing the speed and scalability of the operation and by reducing costs. Similar typesetting mechanisms dominate much of commercial printing, relying on relief printing, into the present. The cast metal as the impression medium for the substrate was complemented with new technologies using molded rubber and chemically or laser etched plastic and metal printing plates. Printing moved to include both the direct pressing of the image onto the substrate and the transfer (offset) of the image to a carrier which in turn applied the image to the paper substrate (offset printing is the dominant printing means today).

Early printing applications later developed into some of the first data transfer and storage applications used by the emerging computing industry. The synergies between printing and computing are continuous throughout the 20th century and to the present. In current computer-to-plate applications, the printing plate is etched by laser guided by composition instructions created in PostScript (tm) or similar applications. Beyond the inked plate in its various forms are digital production methods using laser printers that more close resemble electrostatic printing in photocopies in transferring print to a page. These means have no reliance on the relief elements used since the molded clay press elements.

4. ROLE OF LIBRARIES

Libraries came into being first to preserve scarce hand-written texts. Later with the development of printing technologies, the library's mission expanded to include the housing, usually for public good, of copies of printed matter generated at some point in production by a printing press. The preceding presents a quick orientation for the layperson to the evolution of printing. The technology may be said to serve as a library's reason to exist.

In the printing industry, the constant struggle is for the balance of quality, speed, and cost. Most of the library market is still concerned with paper items. In these materials, physical quality is measured in highly legible type and faithful illustration reproduction. Most of these items are the product of large print runs from offset presses with fixed costs that discourage small print runs because of the difficulty in amortizing costs. Materials that are unusual, in lesser demand, or that require very high reproduction quality for w and detailed scientific illustrations are generally involved in small print runs. The authors of these materials may face difficulty in finding publishers because of low expected sales volumes or because of the requirements involved with tolerances and standards not usually applied to more mass market runs for the library and commercial sectors. Most of the articles in this issue discuss technologies that are attempting to master the three variables of quality, speed, and cost to bring a product to market that is of reasonable quality produced with the lowest overhead and sold at a cost to assure return to the author, publisher, and printer.

What does this struggle means for the librarians and the library market? The focus here will be on the production of books, rather than more serial-like materials. Book production is in state of great flux due to factors related to profit. University presses, once heavily subsidised by their parent institutions and also once the producers of the more obscure, scholarly monographs, are increasingly offering more mass-market materials directed to the public, in order for the press to be minimally profitable. Books in recent times, printed on offset presses, have print runs generally greater than 1000 copies; these volumes are stored in warehouses, and must freighted to the seller's or buyer's location. As product marketing in all commercial sectors is targeted more to narrow niche market segments, the cost involved in the overhead for the traditional production and distribution are becoming less tenable for other than a successfully selling book. Many of the books, which libraries wish to acquire, are not commercially successful in terms of sales. What developments in the printing technology may favour the types of materials libraries will continue to require to provide a good collection for their readers?

5. LIBRARIES' REQUIREMENT

As mentioned earlier, a means of circumventing paper book production is arising with eBooks available via the internet, CD-ROM, and DVD. Some of these means offer the reader animation and interaction that are unavailable in the traditional paper book, however user acceptance of these means as a distribution method for large amount of information is still modest. But eBooks illustrate that lower overhead costs are the key to making information more accessible and affordable.

6. PUBLISHER'S STRATEGY

To wonder about the next step in book production, one should examine where in process the costs accumulate. Thirty to fifty percent of a book's costs are related to either distribution, inventory maintenance, or inventory risk (i.e., the book does not sell well). To be profitable in many markets (low-volume scholarly monographs, text books, rapidly changing subject matter), publishers are developing on-demand publishing strategies and technologies. The fundamental assumption of on-demand printing is a short time frame between order and delivery for small production runs of an item. This arrangement addresses:

♦ Costs associated with inventory—overhead and taxation in many countries

♦ Turnaround—brief after the composition and layout stages

♦ Risk—no more product is produced than will be sold

♦ Obsolescence—no large printed base that cannot be revised other than by errata sheets, and

♦ Delivery—distributed printing technology will bring the printing on-site for many venues by combining finishing (collation and binding) with printing at a site.

When on-demand printing delivers a high-quality product, the savings for publishers and the degree to which they are willing to assume more risk in publishing potentially low-volume titles is very promising. It is important to realise that on-demand printing is not coming, but that it is here now and is making deep inroads into many printed materials. The successful move into monograph publishing is occurring as this article is being written. The final obstacles being spanned are quality colour illustration reproduction and reliable finishing operations contiguous to the print process. Short run, on-demand is not meant to replace traditional long run, offset printing, but is an expression of the needs of the market base for printed materials. Libraries are one part of that market for some of the materials acquired. New publishers will enter the market, but established publishers who respond to the innovations will have the advantage of a market reputation and an in-place sales and production operation. On-demand publishing is discussed in depth elsewhere in this issue and will not be examined further here. The remainder of the article will discuss the likely impacts on libraries when on-demand materials become a common part of the workflow.

7. IMPACT ON LIBRARIES

The impact on libraries of on-demand materials will be varied and both enhancing and difficult. Libraries will be enhanced by the gradual elimination of concept of the out-of-print (OP) item. Currently with short print-runs to lower inventory risk, a book may only be available for eight months to a year. If awareness of the item or budgetary limits prevents the purchase, the library bears the risk of being unable to acquire the book and add it to the collection. With on-demand printing, after the initial print runs (likely to be produced on offset presses), the book contents are easily stored by the publisher and are ready for reproduction on-demand. The costs associated with on-demand publication are generally modest when the book is produced with a perfect-type paper binding. These costs savings may or may not be passed to the library purchaser. Generally, the pluses for libraries of on-demand printing center on the disappearance of the OP items and the potential for cost-savings for libraries.

8. CHALLENGES FOR LIBRARIES

What are the potential challenges for which the library should be alerted? The basic idea of what makes a book may begin to blur. If content is stored in electronic form and is accessible among publishers, why should a book be a monograph? Content may exist piecemeal, ready to be assembled with any other content available. Professors have long done this with course packets bringing together photocopied articles, chapters, personal notations, etc. If content is freed from the paper page, why not assemble it in customized assemblages to suit a reader or end users' purposes.

Libraries in their current conception are designed around most holdings having a static, permanent nature. A book once printed has a fixed content and that book is to have a single International Standard Book Number (ISBN) identifying that content form. For other end users of information the idea of static concept is unimportant and may even be undesirable. Users of scientific and technological literature will be happy with dynamic, up dating of content. A library's interest in fixed content to describe for a MARC cataloging record or similar metadata will have to bend to the variable content model of on-demand printing. Adopting cataloging records for inclusion in an online catalog may require more rigorous evaluation of the record versus the item in hand. Determining slightly changed or updated

content will be impossible in most cases unless the publisher provides that information as a version or edition statement.

9. ADVANTAGES AND DISADVANTAGES OF ON-DEMAND PRINTING

With books on-demand and falling prices for the technologies involved, books will become more accessible and readily produced. As book production can become less ponderous, some of the quality control elements in the process may also be dampened in the rush to print. The authoritative nature of books may become less certain, because the pre-publication and pre-press reviews may be less thorough. If there is a mistake, it is easily fixed even in mid-production of a digital press run. Books may suffer from some of the same quality control problems of documents mounted on the world wide web. In today's book publishing environment, vanity press publications are carefully examined before inclusion in a library collection. As on-demand printing becomes more readily available, similar often unreviewed and shallowly edited publications may become more prevalent. Here again, innovative and established publishers of note will be able to capitalize on their historical authority to bring quality content to market.

10. CONCLUSION

If there is a rapid expanding of the number of publishing operations, the work of a bibliographer and/or acquisition librarian will be more involved in identifying works and acquiring them. Most new markets experience a profusion of producers in the early stages, followed by a gradual reduction in the numbers of players through attrition and consolidation. Initially, there may be a barrage of content from different producers, but this will likely narrow as librarians identify the most reliable participants in the market.

Much time is spent on the historical production methods of books in education of librarians. An examination of my own library, finds shelf after shelf of works concerned with the history of book production prior to the 1850s, and usually prior to 1700. Few librarians are trained or become knowledgeably familiar with the current and developing printing technologies that are fundamental to their work. The consequences of this lack of awareness are difficult to gauge. As book-printing technologies continue to change at a faster and faster rate, it is incumbent upon librarians to understand the printing methodologies (in physical and electronic form) and the market forces that determine how information is published. With this understanding, librarians will be able to either influence these trends or, at minimum, use this knowledge to select the material formats that best suit the constraints of their budgets and needs of their library's users.

Just as the prognosticators' in my employer's trade magazines 40 years ago predicted the death of the movie theater industry, prognosticators are currently predicting the death of the library. Until recently, the same voices were predicting the death of the book, but the reversal of fortune of the eBook industry has quieted those calls. The book and the library will survive into the foreseeable future, but both will experience continued and rapid changes. The historical interplay between the book and the library will continue and will be subjected to change at an increasingly rapid rate in their coexistence. This shouldn't be news to anyone. The same interplay between technology and human institutions is occurring throughout the industrial and information-based society.

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