Op Ed-The Book Library as the Cultural Citadel of Knowledge

Richard Abel
while engaged several years ago in research for my book The Gutenberg Revolution I had occasion to to seek a copy of a 17th Century book via inter-library loan through my local public library. This request proved to be a protracted and difficult search for the ILL librarian. A microfiche copy was finally located in the holdings of the American Antiquarian Society.

Needless to say, I was greatly relieved to receive this fiche set and immediately turned to the microfiche readers held by that library. The library I use, the Beaver-ton Public Library, is among the largest and best equipped libraries in the state, so I had no concern as to my ability to dig out the material I was seeking. Unable to seat the fiche so I might read then I sought the help of a reference librarian. He too could not seat the fiche so called in a second reference librarian. She tried unsuccessfully and then upon examining the fiche more closely discovered that it was a fiche made in the early days of microfiche technology. Most of the readers geared to these early efforts had long since been discarded in favor of a more up-to-date technologies, for which the library held readers.

Shortly after this fiasco with this once highly lauded technology I had a somewhat parallel experience with a digitally stored contemporary highly lauded computer-based data-storage technology. This time attributable to a new “platform,” the technology of which was incapable of “reading” the material at hand. To make a long story short, I sought out software and computers which might untangle this case of apparent obsolescence. All to no avail. So the concept I was trying to verify had to be ignored — to what disadvantage to readers I do not know.

Then while working on another book I sent to the editor sections of text as I completed them. I worked well ahead of schedule to get the completed text into the hands of the editor before my ancient computer finally gave up the ghost. Soon after having dispatched the final sections of the piece I was advised that the final sections had been lost in a crash of the editor’s computer.

Shortly after the last of these debacles the first results of testing the learning outcomes of conventional printed books as opposed to eBooks emerged. Not surprising to those of us long accustomed to and with the printed book it was found that content comprehension was roughly 25% less in the case of the eBooks. The generality of readers of eBooks simply failed to intellectually register roughly a quarter of the content of the eBook in contrast to readers of the printed book version.

By way of contrast to this dismal sequence of technical failures, I had acquired in the same time-frame something of the order of 600 printed books and another 350 journal articles through ILL. All came through in good order and well served my research purposes.

This disparity in outcomes between the five hundred year old technology of black ink on white paper and the current “high tech” products now so highly lauded by not simply the IT crowd but a painfully large number of librarians was quite startling. Upon further reflection it became a sharp object lesson in what means of learning to which a serious student must resort.

From their introduction it had appeared to the serious observer that eBooks would largely serve an audience of casual readers — those who provide the audience for “airport” literature or “vacation” light reading or the enormous array of fictions always on the market. So such an outcome was not a surprise. But for the reader of serious knowledge writing such an outcome is simply not an option. Any writing possessed of any substantial knowledge content by its very nature and the inherent slipperyness of language requires of the reader the maximization of content comprehension and retention.

But surprisingly, a significant number of librarians serving presumably serious audiences have jumped on the eBook as the new high-tech means of knowledge storage and dissemination. One sees article after article likening the eBook to Gutenberg’s invention of the the printed book and even asserting that the eBook will in good time replace the printed book as the means to these ends so admirably served by the printed book for half a millennium.

The reader of a certain age may still recall the unalloyed enthusiasm with which the microfilm/fiche technology or books on computer disc/tape were hailed by a substantial group of academic and research librarians in the not-too-distant past. I particularly recall the head of technical processes at one of the major U.S. universities and responsible for one of the largest acquisitions budgets in the country telling me that he planned to devote some large fraction of that budget to the acquisition of microfilm/fiche. To that end he had purchased a large number of reading devices arrayed in the main library lobby (much like the array of computer terminals now installed in libraries). As history now confirms that proved a very unwise bet.

Why after the successive debacles of microfilm/microfiche, computer books, and computer crashes of work in progress the library community is so supportive of eBooks? It seems to stem from a couple of intellectual problems related to assessing and understanding the place of the library and the role of books in their knowledge dissemination and storage functions in the cultural nexus. One I suggest is the consequence of the undoubted technological achievement by the library profession of the storage and retrieval of massive data collections (book catalogs and book circulation systems). Secondly, is the common and continuing failure to distinguish between the information and knowledge and therefore the delivery vehicles appropriate to each.

In the 1960s and 1970s a number of organizations, both public and private, sought to formulate a cheaper way to maintain bibliographic control of the rapidly increasing number of literary outputs, both books and the diffuse body of journal articles. Books presented the then greatest problem in light of the enormous numbers published over a period of centuries and the increasing number of titles published yearly. And even more compellingly, journal articles were routinely made obsolete in large measure for any but historical purposes by being incorporated into knowledge concepts as the authors of books amalgamated and synthesized them into larger more encompassing hypotheses — most notably in Advances in ... or Research in ... So, the problem of bibliographic control of the journal literature at that early date was less prominent than that of the enormous number of books held by libraries of repute.

It must be pointed out to present-day computer users that the problem of the length of an entry in any field was severely restricted, quite unlike the expansive fields now available. Consequently, author and title entries had initially to be abbreviated, often close to incoherence. Until this problem inherent to early day computers was solved portions of data-bases were of little value due to illegibility. (The Abel Co. programmers were the first, I believe, to solve this problem inherent to the main frames of the time using the dollar sign as a field delimiter, thereby creating a fully legible entry in every case.)

Soon very large numbers of book titles were input by the various organizations then attacking the problem. The ongoing problem of new titles was resolved when the Library of Congress introduced the first functional versions of the MARC system. The next step was the conversion by software of library collections, large and small, using the cataloging data-bases already keyboarded.

continued on page 55

Op Ed — The Book Library as the Cultural Citadel of Knowledge by Richard Abel (Aged Independent Learner) <reabel@q.com>

The reader of a certain age may still recall the unalloyed enthusiasm with which the microfilm/fiche technology or books on computer disc/tape were hailed by a substantial group of academic and research librarians in the not-too-distant past. I particularly recall the head of technical processes at one of the major U.S. universities and responsible for one of the largest acquisitions budgets in the country telling me that he planned to devote some large fraction of that budget to the acquisition of microfilm/fiche. To that end he had purchased a large number of reading devices arrayed in the main library lobby (much like the array of computer terminals now installed in libraries). As history now confirms that proved a very unwise bet.

Why after the successive debacles of microfilm/microfiche, computer books, and computer crashes of work in progress the library community is so supportive of eBooks? It seems to stem from a couple of intellectual problems related to assessing and understanding the place of the library and the role of books in their knowledge dissemination and storage functions in the cultural nexus. One I suggest is the consequence of the undoubted technological achievement by the library profession of the storage and retrieval of massive data collections (book catalogs and book circulation systems). Secondly, is the common and continuing failure to distinguish between the information and knowledge and therefore the delivery vehicles appropriate to each.

In the 1960s and 1970s a number of organizations, both public and private, sought to formulate a cheaper way to maintain bibliographic control of the rapidly increasing number of literary outputs, both books and the diffuse body of journal articles. Books presented the then greatest problem in light of the enormous numbers published over a period of centuries and the increasing number of titles published yearly. And even more compellingly, journal articles were routinely made obsolete in large measure for any but historical purposes by being incorporated into knowledge concepts as the authors of books amalgamated and synthesized them into larger more encompassing hypotheses — most notably in Advances in ... or Research in ... So, the problem of bibliographic control of the journal literature at that early date was less prominent than that of the enormous number of books held by libraries of repute.

It must be pointed out to present-day computer users that the problem of the length of an entry in any field was severely restricted, quite unlike the expansive fields now available. Consequently, author and title entries had initially to be abbreviated, often close to incoherence. Until this problem inherent to early day computers was solved portions of data-bases were of little value due to illegibility. (The Abel Co. programmers were the first, I believe, to solve this problem inherent to the main frames of the time using the dollar sign as a field delimiter, thereby creating a fully legible entry in every case.)

Soon very large numbers of book titles were input by the various organizations then attacking the problem. The ongoing problem of new titles was resolved when the Library of Congress introduced the first functional versions of the MARC system. The next step was the conversion by software of library collections, large and small, using the cataloging data-bases already keyboarded.

continued on page 55
Once the catalog data-base for a given library was in place in digital form circulation systems to control the flow of books into and out of the collection was an obvious and not too difficult a programming problem.

To make a long story short, libraries had been among the leaders in the field of computer applications to non-numeric practical undertakings. The library profession deserves kudos for the leading role it took in this class of applications in computer usage.

I submit that the profession has as a result of this early high-tech achievement a bias in favor of every new high-tech introduction, particularly strongly aroused when the technology involves a cheap book.

In my judgment, the graver problem arises out of the continuing confusion in meaning between information and knowledge. This is an intellectual error easily made by those working in the tradition of the book, which was once the principal means of conveying information and knowledge. This is intellectual error easily made by those working in the tradition of the book, which was once the principal means of conveying both information data (encyclopædias, dictionaries, and such like tools devoted to dealing in facts or factual constructs) and knowledge concepts (writings seeking to offer, support, and articulate the syntheses of the available factual data in some body of subject matter to make it understandable to a cadre of those interested in the subject). Today factual information or data is largely conveyed in journals or on-line substitutes for journals. One of the decisive characteristics of information or data is that it is in time consumed or synthesized into one or more knowledge concepts. At such a point the information loses all specific identity, save as it may be employed in later syntheses, usually of an historic kind. The exponential growth in research and the publication of the results thereof has led to an exponential growth in the journal (print and on-line) literature. The bibliographic control of this body of writings has now been substantially completed. But while up in computer data-bases it remains factual data possessed of a limited lifetime before being synthesized with other data points into a knowledge concept.

The printed book has for a half a millennium been the bearer of knowledge concepts. This for the obvious fact that knowledge concepts are formulated out of masses of factual data. The gathering together of these masses of data and the intellectual relating and organizing thereof require long expository exercises, extending well beyond the limitations of the journal. But additionally, these various concepts synthesized must then be integrated with other, often a significant number, concepts employed in the writing to convey some larger body of knowledge. One might add here that the recent arrival (from the eighteenth century) of long and complex fictions, contained in novels also demands the generous proportions of the printed book to contain the complexity of the stories told. In short both knowledge concepts and complex fictions require books.

Given these brief delineations the question then comes down to the uses of both species of writings and the efficiency of both in conveying their contents to readers for whatever purposes they seek to fulfill. In the context of libraries it seems evident that the place of the computer in the public spaces may be quite useful to library users in digging out information of interest but is no substitute for the book collection for purposes of learning. (I leave aside the widespread use of such computer arrays for wasting time in game-playing and other non-academic exercises.)

But this service of public access to the Internet should in no wise move resources from book purchases for their support. Printed books remain the most efficient and enduring means of conveying knowledge concepts. It is to the collections of printed books that all serious users look to judge the merits of a library because it is likely to be the best and most efficient institution to serve their needs. eBooks can never fulfill this role save for the most ephemeral and lightweight writings of current popular interest. This is hardly a suitable criterion for acquisition for any library of repute.

So, in closing, the question to be resolved by today’s scholarly librarians: Am I contributing to the citadel of knowledge by looking to diverting resources from the the dependable, enduring, efficient printed book in favor of providing the latest passing high technology liable to all the long-term hazards exemplified by previous high technology enthusiasms?