

Crystal Ball at the Crossroads: Looking to the Future in a Quickly Changing Field

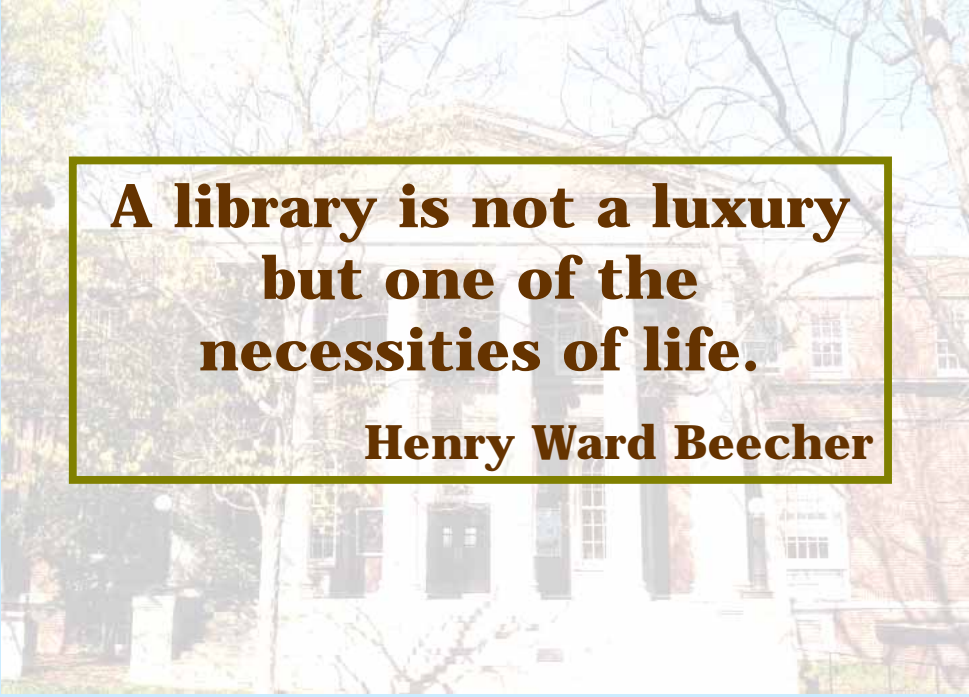
Katina Strauch

Head, Collection Development
College of Charleston, S.C.

strauchk@cofc.edu



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kstrauch@comcast.net



**A library is not a luxury
but one of the
necessities of life.**

Henry Ward Beecher

A library is not a luxury but one of the necessities of life.

What will the library of the future look like?



How should we build its collections?

But what is the likely shape of the library of the future? And how do we build collections for it?

**Since the advent
of the Internet
and electronic
publishing,**



**the academy
has changed
dramatically.**

Since the advent of the Internet and electronic publishing (see Charles Bailey's excellent Scholarly Electronic Publishing Bibliography <<http://www.press.umich.edu/jep/07-02/bailey.html>>, changes in academe have been breathtaking.



**New products,
formats and
devices are
cropping up
all the time.**



I am always running across an acronym, product, format, or device that is new and of which I have never heard.

**We're tempted to recall
the peaceful old days of
the twentieth century.**

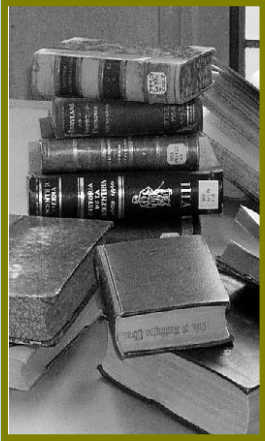


This didn't happen in the once peaceful world of academe and libraries in the 70s and 80s. But, then, that was the twentieth century.

What kinds of changes have we seen in our academic environments?

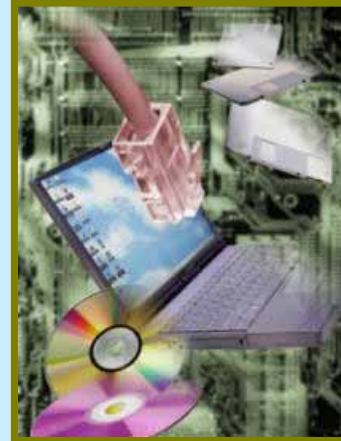


What kind of changes have we seen in our academic environments?



**We no longer build
book collections.**

**We build computer
networks.**



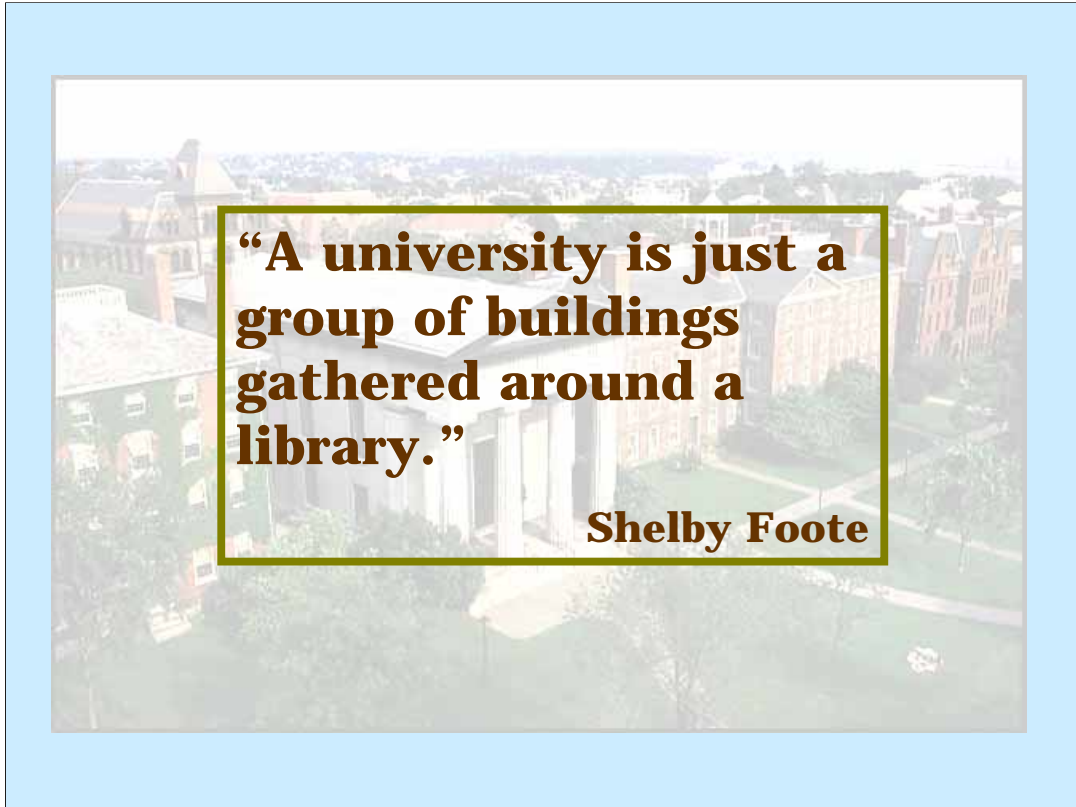
First and most important for collection developers – **“We no longer build book collections. We build computer networks”**.

The 21st century: monks & fur coats, lost control & new power.



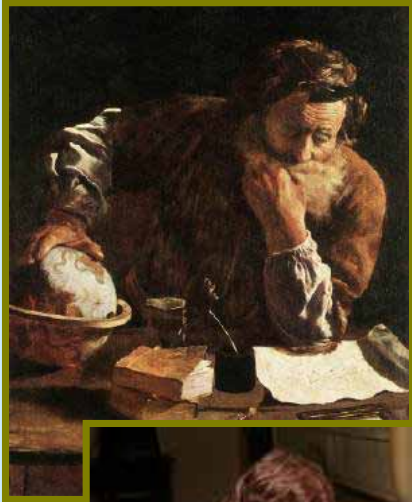
A couple of cases in point. A psychology professor said to me the other day, “Now I know how the monks must have felt when the printing press was invented”. Second one: I was wondering if I needed to pay the huge fee to store my mother's fur coat. Her neighbor told me that she never paid the storage price. She just put the fur in her closet. My husband thought differently. He decided to search this on the Internet (Google). He presented me with chapter and verse (in many cases with footnotes) outlining why this wasn't a good idea. I thought to myself: “fifteen years ago, I would have had to ask a reference librarian or a dry cleaner this question, now the ‘answer’ (assuming it is correct) is available instantly to anyone who will take the time to look for it”.

The first case illustrates the fact that **we feel that we are losing control**. The second illustrates the **new power that we all have as end users - and the degree to which Google is THE source of all wisdom**.



“A university is just a group of buildings gathered around a library.”
Shelby Foote

A university is just a group of buildings gathered around a library.



Scholarship once involved poring over physical materials that were, for the most part, anchored to a particular physical space.



Scholarship was once a contemplative exercise that involved poring through books, journals, microfilm, microfiche, making notecards, going to far-away libraries and filling out call slips for materials that could not leave the building.

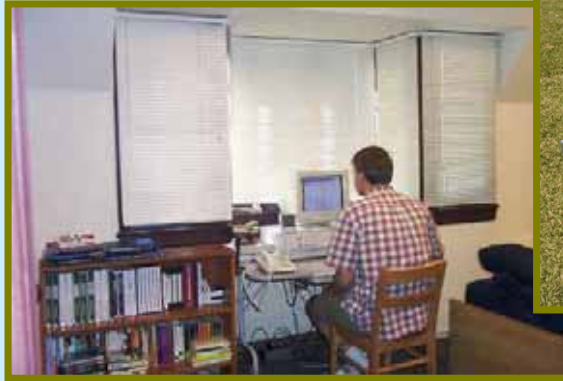


Where before research and education were relegated to specific physical spaces, now almost anyone can access large bodies of information over the Internet...



But now pretty much anyone - be it scholar or student or layperson - can access large bodies of information over the Internet that were never before available.

**... and they can
do it almost
anywhere.**



And they can do this from almost anywhere creating a boon to scholars everywhere and a rise of naysayers who decry the end of what we once knew and loved.

Most of our end users are now “Millennials,” some of whom have never known a world without URLs and personal computers.



What's the end user like these days? Who are we serving?

I work in a medium-sized academic library with 500 faculty, 9,000 undergraduate students, and 1,000 graduate students. We give 5-6 masters degrees and no PhDs. We used to be a commuter campus of largely South Carolinians. We are now a residential campus diversifying our student body beyond South Carolina.

The student now is no longer like we were as students twenty or thirty years ago. As Carol Toris, Ashlee Clevenger, and I report in a forthcoming article: “... Today's typical undergraduate student, somewhere between the ages of 19 and 24, was born during the 1980s and is considered to be part of Generation Y, which also is known as the Net Generation, the Digital Generation, or the Echo Boom Generation. These individuals, perhaps most commonly referred to as *the Millennials* include anyone born between 1980 and 2001, (Strauss & Howe, 1992). As such, they have peopled our universities since about 1998, and much has been written about their networked, interactive, multimedia-oriented culture. They now are being followed by Generation Z, considered by some to be the youngest of the Millennial generation. These are the true digital natives in that they have been surrounded by digital technology all of their lives. They have never known a world without URLs and personal computers. ...”



However, the contemporary college library serves a wide population of “nontraditional” students, as well.

This is the current student but I submit that this is a broad generalization. Here are some other “customers” at my library – people who use the library regularly, and most of whom are enrolled in classes as students. **Ileana** (my daughter) is 23. She is in medical school. She doesn't have to come to the library to use it. She has a laptop and she accesses much through Google and her college's WebPages. She visits the physical library very rarely. If she has a question, **she never asks a librarian** (except her mother). (The drop in reference use statistics reflects this and is not uncommon.) She asks a professor or a fellow student. She uses computers but she also uses printed books and journals.

- Dawnelle is in her 60s. Her husband died ten years ago and she promised him as he was dying that she would finally get her bachelor's degree. So Dawnelle got a full time job to support herself and went back to school part-time. She will finally finish her degree in December. She has majored in sociology. She is thinking about going to library school. She uses the computer all the time. She does all her work online but she does not have a home computer. She comes in to the library to use the computers and printers.

- Chelsey is 24. She is a freshman. She has four part time jobs in order to pay her way through college. She is applying for grants and awards. She is majoring in early childhood education. Most of her work is done in the schools where she is working. She does not use the computer that frequently except when she has to check her email. She does not own a personal computer.

- Andrew is 29. He is a boating captain and could make more money that way than spending time in school. But he has recently decided that he will go back to school for the degree. He is majoring in business. He knows how to use a computer and uses it quite adeptly. He owns a laptop but prefers to use the library computers since they are always serviced and printing is free.

- Gene is 55. He is a retired archivist. He has his PhD in architecture. He is world famous and widely published. He also speaks regularly and periodically teaches classes as an adjunct professor. He has requirements in terms of classic works as well as recent articles. He is at home with microfilm. He wants to keep reading, publishing, and researching even though he is retired. He is very computer literate. He has a laptop, a scanner, a digital camera, and all sorts of equipment but he uses the library computers and his laptop.

- I could go on and on. These are all REAL people needing access to information and in need of MY LIBRARY's resources. But their needs are all different. We have these people as well as the Millennials or whatever you want to call them. I think it's safe to say that we have to serve the Millennials as well as these other user groups, or customers.

**The library of today
is increasingly
better equipped to
meet the needs of
its diverse group of
patrons.**



Happily, the library of today – be it the printed materials or the interconnected environment of the Internet and email - is much more able than it has ever been to satisfy the needs of this diverse group of patrons/customers.



The library is now a collaborative group environment in which information is alive and dynamic.



So what's the new library like

Whereas the picture of the library used to be typified by print books and journals and rows of book stacks, the library today is more of a collaborative and group environment. This is not to say that students do not work individually. But often they are working on banks of computer terminals staring at screens of information, WebPages, databases, search engine interfaces, iPods, podcasts, etc.¹ **Information is no longer static, it is very much alive and dynamic.**

Nowadays, the library must meet new needs². More and more patrons are aware of the library and its resources. Information has moved to the top of the list as a resource.

1. Faye B. Steuer, "Reading in the Undergraduate Psychology Curriculum", Teaching of Psychology 23.4 (1996): 226-30.
2. David Kohl, "Resource Sharing in a Changing Ohio Environment", Library Trends 45.3 (Winter 1997): 435-48.

More people are accessing the library remotely.

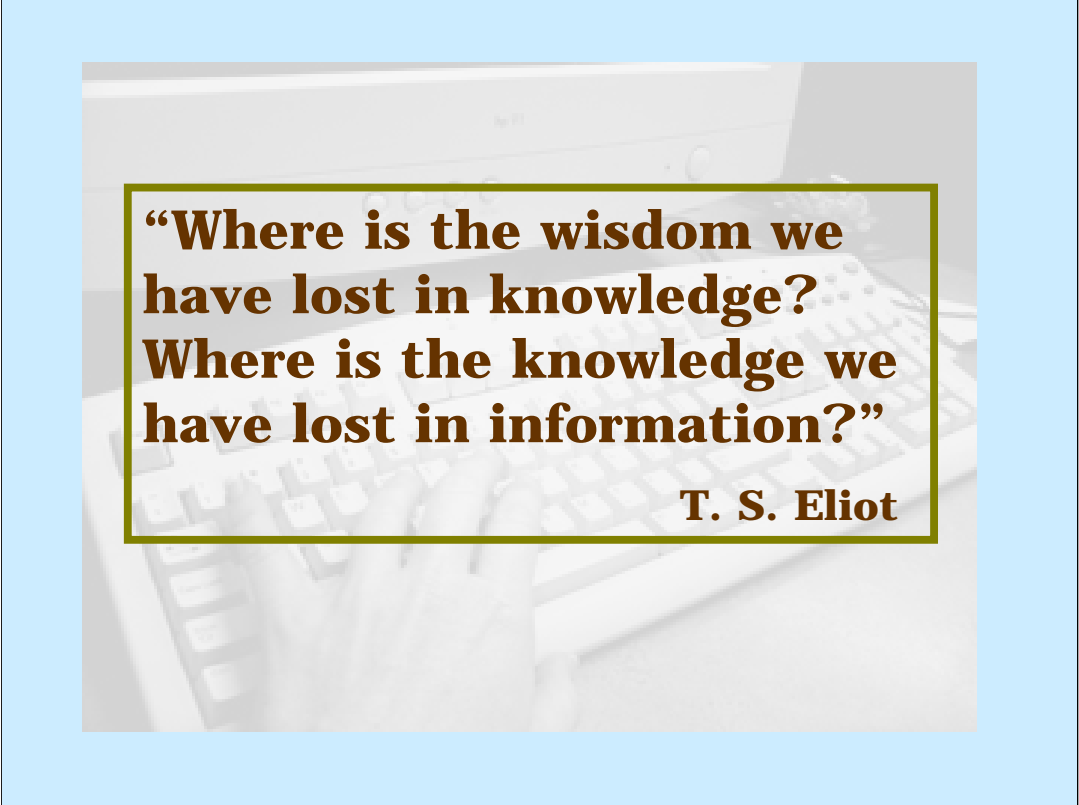
When people do enter the physical library, most of what they're seeking is online.



More people are “visiting” the library virtually. We are collecting much online through databases that are being offered by publishers and vendors and aggregators. These databases can be accessed remotely by our authorized users or in person by **whoever** enters the library. This is already impacting the spatial design of the library³. (At the College of Charleston, we have just built a new library. We now have 15 meeting rooms, 235 computer terminals, and compact shelving. And we are planning to expand even more). On the whole, the library is still the physical location/entity that people (especially undergraduates) go to locate what they are seeking, even when most of what they are seeking is online. Students like the silence and scholarliness of the place. They like, as one said recently, “being surrounded by books”. “I feel cultured when I am in the library”⁴.

3. Geoffrey T. Freeman, “The Library as Place: Changes in Learning Patterns, Collections, Technology, and Use”, Library as Place: Rethinking Roles, Rethinking Space. Washington, D.C.: Council on Library and Information Resources, 2005. 6 June 2006 <<http://www.clir.org/PUBS/reports/pub129/pub129.pdf>>

4. Anonymous student, personal communication (2006).



**“Where is the wisdom we
have lost in knowledge?
Where is the knowledge we
have lost in information?”**

T. S. Eliot

Where is the wisdom we have lost in knowledge? Where is the knowledge we have lost in information?

Information has exploded. My library used to have access to 3,645 print titles.



Now we have access to 28,863 unique electronic journals, 218 databases, and 3,245 print titles.

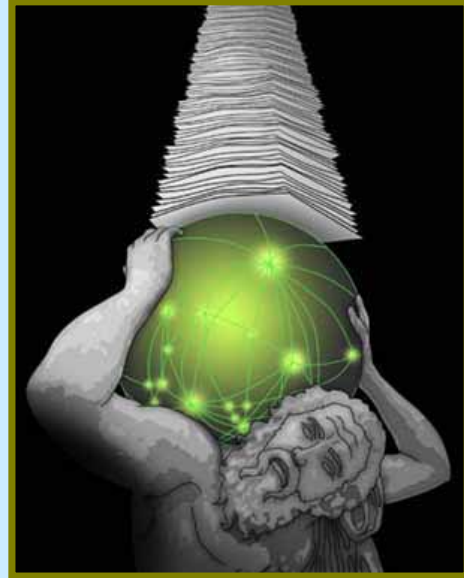
Changes in information/content

The changes in information and content and how it is being delivered, accessed, packaged, and sold and by whom or what are extraordinary. Print is gone as the only format of delivery. We now deliver electronically in multiple formats and from multiple platforms. We lease information rather than purchasing it. Our patrons prefer search engines (Google) to our OPAC⁵, we are using more federated searching to link patrons to the data/information that they need. (I am deliberately not listing formats that are available as they are changing so rapidly. Is Margaret doing this?) As well, information is being “sliced and diced” in creative ways by entrepreneurs and aggregators and even librarians!

Information has exploded. My library used to have access to 3,245 print titles. Now we have access to 28,863 unique electronic journals and 218 databases. We also have intricate files of license agreements and ERM policies.

5. Kathleen Born and Lee C. Van Orsdel, “Journals in the Time of Google: While the Struggle Over Open Access Plays Out, Librarians, Vendors, and Publishers Continue to Trade Within a Market Dominated by All Things Electronic”, Library Journal 131.7 (2006): 39-45.

As the proliferation of Internet and electronic resources continues, collection development is more necessary now than ever before.



Changes in collection development

What we once called collection development has disappeared. The scholar who went through reams of print magazines and book reviews to be sure to locate the materials that had to be in the library for future scholars has morphed into the new subject webmaster or webliographer or some other new moniker. But collection development is necessary now more than ever. According to Wikipedia, there are over 81 million websites in the world with registered domains. And supposedly Google states that they are indexing 4,285,199,774 distinct web pages⁶. But not every page is indexed by the Google search engine, and web sites are made up of multiple pages. And according to the Internet Archive, the average life of a webpage is 77 days⁷. Gosh! Sounds like job security for those of us who are attempting to locate and maintain reliable information.

6. Wikipedia citation.

7. "FAQs", Internet Archive, 16 July 2006 <<http://www.archive.org/about/faqs.php>>

Remembering the library's origins:

→ the library as an archive

→ maintenance of print titles.



With all the changes, there is still need for libraries and librarians. But there are some changes that are taking place that need to be moderated. As professionals we need to be circumspect.

FIRST, **The library is an archive.** If libraries do not preserve the printed or electronic record of humanity, who will? It's one thing to follow fads and trends, it's quite another to ignore a fundamental role that libraries have played since they first began. Too many of us are saying, "some other library will preserve this. We don't need to worry about it. We are not a research library". Partnering with nearby or like-minded institutions to preserve what is important is necessary. The institutional repository movement must continue and gain steam. But we have to make a conscious decision. And **local material that is not held in other locations** must be of special collecting priority.

**If we discard print titles,
we'll regret it.**

→ reliability

→ availability



**Libraries must and
will archive.
Outsourcing is good,
but archiving onsite
is better.**

And we should NOT discard print titles owned for titles in electronic format unless we have ironclad agreements with other libraries.

Prediction: If we do this, we will regret it. Besides the fact that we have paid for the titles (this is especially relevant in state-supported institutions), we all know that print is available all the time (when electricity goes down).

A related issue is the location of the archive. Where should it reside? Who owns the archive? Vicky Reich's CLOCKSS and LOCKSS initiative keeps the archive at the library and advocates making lots of copies of the material (Lots of Copies Keeps Stuff Safe)⁸, while the Portico initiative is "outsourcing" archiving to a third party⁹.

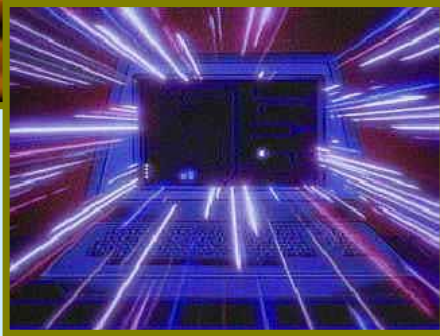
Prediction: Libraries must and will continue to archive. Together we can assure that humanity's record survives for posterity. Outsourcing is good, but archiving onsite is better.

8. Margaret Landesman, "ATG Interview with Victoria Reich, Director (and founder) of the LOCKSS Program", *Against the Grain* 14.6 (Dec. 2002/ Jan. 2003): 64-6.

9. Eileen Fenton, Interview with Cris Ferguson. *Against the Grain* 18.2 (2006): 54-7



Back files and back years will continue to be digitized.



All print content, books and journals, will be available online by 2075.

Another related issue - Back runs of old print journals and other materials will continue to be digitized. It started as the current year and now it's as far back as possible.

Prediction: Backruns and back years will continue to be digitized. **I'll make the wild prediction that everything in print – books and journals – will be available online by 2075.** This only intensifies the urgency of archiving initiatives, cooperation, and planning.

Whether or not to mourn print:

→ it's not dead yet!

→ changes in
collection development
policies favor
electronic formats

→ print is the most
stable archiving
method



2) We have all heard the familiar mantra that the library of the future won't have books. That print is dead. Everything is available in electronic format. **Print is not yet dead** for either books or journals. All information is not yet electronic. Last year my library added \$60,000 worth of databases and journals (continuing annual expenditures). We have changed our collection development policy to say that we prefer electronic to print formats. However, in looking for electronic versus print, we found that 49% of the titles were NOT available in electronic format at all! **Contrary to popular opinion, a lot of material (particularly in the humanities and social sciences), is still being published only in print.**

I submit that the printed record is currently (August 2006) the most stable method of archiving. Though it is improving, the electronic record is unstable and unreliable in many cases. And, let's face it, electronic access encourages the use of paper. How many people like to read on a computer screen?

Prediction: Print will survive long after we are all in heaven. We all prefer electronic delivery and search capabilities, but we will continue to print what we want to read, study, and digest.

People like the remote access to information that e-books provide. As their acceptance grows, they will be further integrated into approval plans.



E-content is on the rise!

A word about eBooks. eBooks - As much as we might dislike their interface and lack of critical mass, publishers and aggregators keep pushing them on us.

Prediction: The eBook has found and will continue to find growing acceptance as the critical mass grows. People like remote access to information and eBooks provide remote access to information. But eBooks are not good as yet for linear reading. How many people read boring scholarly books in a linear fashion? That is why academic publishers rely on libraries to buy their books.

As acceptance of eBooks grows, they will be integrated into Approval Plans so that books can be acquired regardless of format¹⁰.

Another prediction: We will see more eContent (eBook, ejournal or something else) being delivered every which way as the years go by. In fact, I was recently reading an interview that Peter Shepherd did for the upcoming September issue of *Against the Grain* with Michael Mabe (the new CEO of the STM publishers association). Michael says: "It may well be that we will see 'database journals', that is to say, databases with editorial boards and editors performing for data the gatekeeping role (registration, validation, etc.) currently only seen for journals". Gosh again! How much staff would I need to keep up with this?

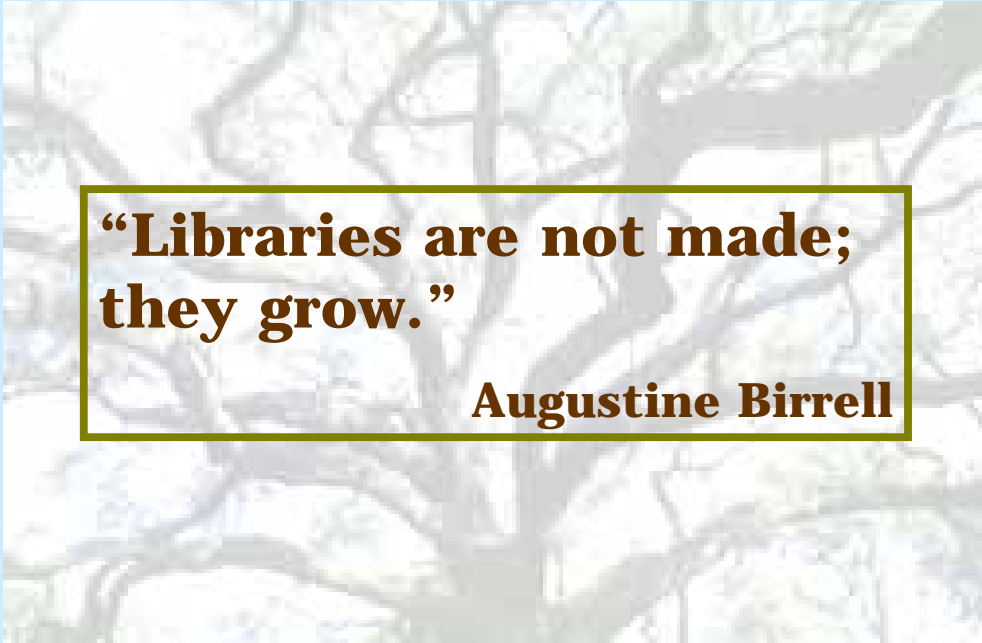
10. Lucia Snowhill, "E-books and Their Future in Academic Libraries: An Overview", *D-Lib Magazine* 7.7/8 (2001) 5 June 2006
<<http://www.dlib.org/dlib/july01/snowhill/07snowhill.html>>



Increases in spending on electronic formats will continue. Conversely, we will spend less and less on print acquisition.

3) Okay. We are purchasing more and more in electronic formats. The last statistic I saw was 35% of budgets are going to electronic resources. (And I just finished my annual report. At the College of Charleston we are spending 57% of our current materials budget on electronic resources! And this does not count state purchases out of a totally different budget.) I believe that this will increase but I also believe that collection development librarians and library administrators must decide what portion of their budgets will be devoted to electronic resources. We will purchase in electronic format if possible and if we are able to negotiate continuing access.

Prediction: We will continue to collect, lease electronic formats and less and less will be devoted to the acquisition of print resources.



**“Libraries are not made;
they grow.”**

Augustine Birrell

Libraries are not made,they grow.



In order to compete with popular search engines like Google, the MARC record must adapt and improve.

The MARC record, or some form of enhanced metadata “cataloging,” will survive. Librarians and information professionals value a record touched by human intelligence.



4) Acquisition/collection development departments, with the aid of vendors and aggregators, can now download 90% of the catalog records for books at the time of order. Inspired by Amazon.com and Google, these departments want to do one stop shopping with an advanced selection system. We must work to assure the description of electronic content, through standards, metadata, federated searching. The current thinking seems to be that since the bib record was designed to help the reader find print information, with current search engines like Google and word to word searching, we don't need costly MARC and expensive human serials indexing¹¹.

11. Roy Tennant, “A Bibliographic Metadata Infrastructure for the Twenty-first Century”, Library Hi Tech 22.2 (June 2004): 175-81.



Consortia can be the library's important allies in lobbying for important changes and acquiring more electronic content. The big deal won't die. It will change and "osmose."

5) Consortia are important allies in allowing libraries to acquire more electronic content. And Consortia can extend beyond purchasing entities. Consortia can lobby for changes in the marketplace, for consistency in license agreements, for customization of holdings, and many other changes.

Prediction: The big deal will not die. It will change and "osmose".

Competition in the market will help us to meet our end user's needs, as well as our own.



Libraries will expand services and collections to remain viable.

6) We will continue to see more and more competition on the part of vendors, publishers, aggregators, and libraries. Competition is our ally. Like good salespeople, these players will offer many attractive alternatives. It is our job as collection development librarians to realize this and to lobby for and select the option(s) that best meet our needs and the needs of our end users. There is no question but that the need for more information about end users is needed as they have become more sophisticated and demanding. Collection developers are in a position to work with faculty and colleagues to facilitate this type of collaboration and research.

Prediction 1: Libraries will compete. They will change and expand services and collections to remain viable in the networked twenty-first century world. Collection development will become more of a focused and needed and respected activity. Perhaps reference librarians will become collection developers?

Prediction 2: As there is more competition, pricing and licensing will become less difficult. I hope.

7) In the future, books, articles, journals and eContent will be assembled and formatted on demand with the end user, library, and/or publisher choosing the format. Libraries must change their workflows to facilitate access in this manner. They must become more like “stores” in the marketplace of information Both Starbucks and FedEx Kinko’s have taken on (and continue to expand) in many of the activities that libraries should consider offering.

Prediction: Libraries will become more savvy in the consumer marketplace. Collection developers must be at the forefront of this convergence.

**Libraries must
become more
savvy in the
consumer
marketplace.**



**Collection
developers must
lead the way!**



8) In the future local library collections will continue to be digitized and accessed over the Internet. Currently, rare books and special collections departments are driving this activity.

Prediction and hope: Collection development librarians must expand their roles into these activities.

Library collections will continue to be available on the Internet.



Collection development librarians must be involved!

9) Publishers will continue to offer their baskets of goods individually to libraries. In the electronic environment, we don't need vendors to deliver actual print products.



New types of aggregators will continue to enter the marketplace so that we don't have to buy direct from every publisher.

This will only become a headache for acquisitions and collection development librarians.

Prediction: New breeds of aggregators will continue to enter the marketplace so that we do not have to buy direct from every publisher. Making content accessible by publisher groups is confusing. Federated and broadcast searching will make this a headache for the acquisitions and collection developers, but not for the majority of the library users.

Or MAYBE Elsevier or Amazon or Google or BioMedCentral or Starbucks will swallow the world and provide access to everything.

Prediction: As long as there is competition, there will be mergers and acquisitions and new players entering the marketplace.



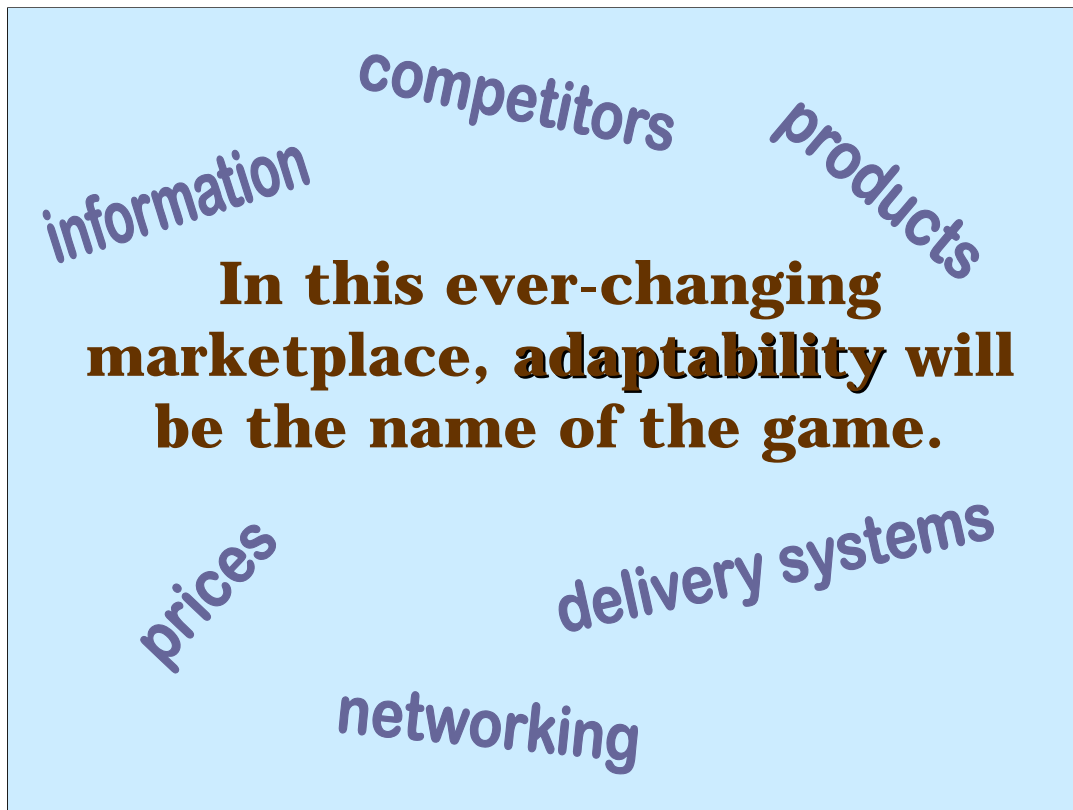
Not everyone's a techie.

**There will continue to
be a place for print.**

10) The mantra, “Older people don’t like digital. It’s all a generation thing” does not hold up. It’s a matter of convenience! To be networked, everyone has to have a computer and it has to be upgraded, serviced, defragged, etc., etc.

Prediction: As long as all this is necessary, the computer market will not be able to maximize customers. Not everyone is a techie. Until and unless computers become as simple (and as cheap!) to use as print, there will still be those who will migrate to print.

An aside - I gave this paper to several colleagues to read and critique. Interestingly, I got different reactions to this point. From a librarian, “Baloney. The industry has not topped out and never will”. From a faculty member: “Amen. I am tired of all these upgrades. I can’t keep up with them”. I stand by my prediction.



11) How can we predict pricing when products keep changing? There are more and more products. There are more and more formats. There are more and more networking possibilities. There are more and more searching options. There are more and more competitors for libraries. There are more and more new words, acronyms, and delivery systems to learn! Information is everywhere! And is being delivered every which way! Our once orderly marketplace is in chaos.

Prediction: We will adapt. Already we are developing new methods and alliances to counteract and control and take charge of the marketplace in which we operate.



As end users gain input in the selection process, the library's collection development operation expands from a few people to a community effort.

So What's Coming Next? Will There Be Libraries in the Future?

It's all on Google, right? Like I said earlier, the good news is that libraries have access to more resources than we have ever had access to before. We can give end users access to an array of resources. No longer is it necessary to get a grant to visit the world's largest research library in order to access the world's knowledge. Consortia purchases have resulted in libraries finding that they are obtaining materials desired by patrons that were never selected by libraries. As David Kohl pointed out in his article regarding OhioLink several years ago, end users want access to everything so they can pick and choose exactly what they want to access. This gives them much data that they can access. Thus, the library's collection development operation moves from a selection of materials by one or two persons to a rich environment of all kinds of resources chosen from among free and priced resources.

**The success of
libraries will
depend on our
ability to adapt
and compete
with a new set
of services**

**Libraries will
continue to
grow and
thrive!**



In this interconnected world, the success of libraries as institutions will depend on our ability to adapt to and, yes, compete, with a whole new set of services.

Prediction: Libraries will continue to grow and thrive. People like them and are willing to support them. Students like to study in the library. Libraries are quiet, contemplative places. Long may they survive!

Katina Strauch

Head, Collection Development,
College of Charleston, SC

strauchk@cofc.edu

