I predict that within ten years, the days of wondering whether or not one's library can give access to a desired resource will be a fading memory, in much the same way that reliance on a printed card catalog is a faint and fading memory in 2011. This will certainly be good news for researchers and students – but will it be good news for the library profession? After all, to say that access will be dramatically broader and easier in the future is to say that any specific library collection, as traditionally understood, will matter dramatically less. And if the collection is no longer important, then what purpose will the library serve? What, in fact, does the word ‘library’ mean in such a scenario?

Crystal balls are notoriously unreliable, and I tend to think that we see the future more as through a kaleidoscope: we can identify many (if not all) of the component factors that will shape the future of scholarly communication, but relatively small changes in the environment can result in dramatically different configurations of those factors. Whether the world economy rebounds by 2014 or by 2018 (if at all); the degree to which academic institutions adopt open access mandates (and the degree to which they turn out to be functional mandates rather than simply expressions of institutional preference); the degree to which the publishing marketplace either diversifies or continues to consolidate – all of these factors, and many others, are wild cards and any one of them can have a significant effect on the shape of the scholarly economy.

I am also haunted by our inability to predict the impact of new technologies. Anyone paying attention should have been able to see that the World Wide Web and the laptop computer would reshape the scholarly landscape, but who could have anticipated that the iPod would reshape – not to say destroy – the music industry and give rise to the even more revolutionary smartphone? Technologies are not always used for the purposes their inventors intended (or even for purposes their inventors would approve of), nor can the knock-on effects of any new technology be predicted. While some aspects of the technological future seem clearly predictable, their meaning and impact will be obscure until they take place, and in some cases until long after they have taken place.

The recent past

I have recently taken to referring to the print era as the ‘Gutenberg Terror’, which I realize may seem like a silly exaggeration. But I don’t think it is. Imagine that you wake up tomorrow morning and find that it’s 1980 again, and you want to know...
what the annual rainfall is in the Vosges Mountains. In 1980, you would have had two choices: either travel to a library or simply let the question go unanswered. In the vast majority of cases in 1980, we simply let our questions go unanswered. Sometimes I hear academics or librarians waxing nostalgic about the good old days when students were willing to put in long hours in the library and librarians had the opportunity to assist lots of patrons with in-depth research questions. But we should be clear about this: those were not the good old days, but rather the dark ages of access to information. It may have been a time when librarians felt more needed and important, but it was a terrible time to be a person who needed information.

The current reality

The Gutenberg Terror was, of course, broken by the internet, which allowed content to move out of an environment that prevented people getting access to it (print) and into one that facilitated access (online). The impact on libraries has been severe. The library has been turned from a temple, to which patrons came as supplicants, into a storefront – one shop among many offering access to information at a price. Libraries are now competitors, rather than monopolists, in a marketplace in which the scarce resource being ‘spent’ by researchers is not money, but rather time and attention.

The internet broke the library’s monopoly by bringing about, among others, the following new realities:

- a massive drop in the unit price of documents (undermining the library’s role as an information broker)
- a tremendous increase in the ease of finding documents (undermining the library’s role as a guide)
- instant, easy and functionally free access to ready-reference information (such as the annual rainfall in the Vosges Mountains) from virtually any location (undermining the library’s roles as authoritative source, research center and broker)
- full-text searchability of documents (undermining the library’s role as a creator of indexes and proxy documents for searching purposes)
- a growing open access movement (undermining the library’s role as broker).

As I have pointed out elsewhere, these and related developments constitute a potentially existential crisis for the traditional library. The things our patrons relied on us to do for them in the past are now being done for them by others, at a much lower price in time and attention. Since the library’s patrons all have free and easy access to far more information than they can possibly use, it is the relative scarcity of their time that tends to influence most strongly their choice of supplier. Libraries, especially research libraries, tend to do an excellent job of providing access to high-quality resources, but since they do a relatively poor job of providing access in a fast and intuitive way, they are very often bypassed by busy and impatient information seekers.

There are deeper problems, however, with the library as it is currently configured. They include the following:

- The library collection is built on speculation. It is created and shaped by people who often know their disciplines quite well, but are unable to guess with real precision the exact needs of the library’s specific patrons. Thus, a collection may consist of very good books on sociology or chemistry, and yet fail to contain the specific individual titles that library patrons actually need (while at the same time including many titles that those patrons do not need).
- Traditional reference service is not scalable to the populations it is intended to serve, and it therefore succeeds only by failing. While individual librarians may have heartwarming (and genuinely helpful) interactions with a tiny fraction of the student body and faculty, it is not possible for them to extend that level of service to all the patrons who need it. For every student that gets personalized reference assistance, there are many more who need the same help but cannot get it because the service is not scalable.
- The online library catalog has two fundamental weaknesses, both of which seriously undermine its usefulness as a discovery resource: first, it is user-hostile. Very few library catalogs can be used effectively by a patron without specialized training. This suggests a problem with the catalog, but the traditional library response has always been to try to fix the patron instead. Second, the catalog is radically incomplete. A typical library catalog does a
very good job of answering the question “Does this library own a copy of this book?”, but a terrible job of answering the question “Is there such a thing as a book on Topic X?” Patrons understand this intuitively, and almost never begin their searches with a library website.

- Printed books are very good tools for extended linear reading; however, they are terrible tools for any kind of research that requires a text to be searched for discrete pieces of information, and such research is extremely important in an academic environment. For this reason, among others, circulation of printed materials in academic libraries has fallen dramatically since the advent of the World Wide Web. The University of Utah’s Marriott Library is typical of large North American research libraries in this regard: since 1997, the number of initial circulations per enrolled student has dropped in that library by roughly 66%.

Ten years from now

Given these realities, what is the next decade likely to hold in store for research libraries? I am prepared to make several specific predictions. Ten years from now:

1. **Patron-driven acquisition (PDA) will be the new assumption.** I have yet to meet anyone who believes that higher education funding is likely to return to pre-2008 levels in the foreseeable future (if at all). In a dramatically tighter budget environment, it becomes much more difficult to defend collection practices based on guesswork about patrons’ future needs, where more rational alternatives exist. One such alternative is patron-driven acquisition, whereby online (or even printed) resources are exposed to patrons through catalogs or other search interfaces, and access is purchased if and when interest is actively expressed by the patron. There are many PDA models currently under development, and we can expect that they will proliferate and be refined over time. While some libraries will (and should) still be building monumental collections in 2021, I am confident that the standard approach for most research libraries will be patron-driven.

2. **The smartphone will have become the ‘killer app’ for most information delivery.** I realize that may sound ridiculous. But it was not very long ago that the idea of people using phones to access the web seemed just as crazy. (Imagine the headaches caused by those tiny, backlit screens! And websites aren’t meant to be viewed on a two-by-three-inch surface!) The simple fact is that speed and convenience conquer all, or virtually all – and no device is as quickly and conveniently accessible as one’s phone. Unlike a laptop or even a tablet computer, one’s phone is almost always at hand – and even if it fails to provide a perfectly comfortable surface for extended reading, it can easily be used to find documents and transmit them to devices that do (or, increasingly, to the ‘cloud’, where the documents can then be accessed from any device). Successful libraries will have figured this out early, and taken it into account when designing services and content offerings.

3. **Most research libraries’ print acquisitions will be created at point of need, either inside the library or elsewhere, and many will never be added to a permanent collection.** One of the perhaps ironic benefits of a largely online information environment is the opportunity that it gives publishers and libraries to create physical, printed documents in much more effective and efficient ways. The idea of the print run no longer makes any sense in a world that contains devices like the Espresso Book Machine and wholesale-level services like Lightning Source. The technology now exists for libraries to become hybrid bookstores that offer patrons the choice between purchasing a quickly and cheaply printed book at a bargain price, or requesting that the library print one up for borrowing purposes (later to be added to the collection). That technology is currently expensive and awkward, but will not remain so if demand for such services grows.

4. **Collecting behavior will be trifurcated.** There exists already a real separation between two general types of collecting in research libraries:

   - **The Big Collection.** This is a collection designed to act as a sort of monument to Western civilization, a more-or-less comprehensive record of the intellectual patrimony. Such libraries exist in the capitals of large, wealthy countries (the Library of Congress, the British Library, etc.) and on the campuses of exceptionally well-funded research universities (Harvard, Princeton, Oxford, Cambridge, etc.).
The Small Collection. This is a collection designed primarily to serve the immediate needs of students and researchers attached to the sponsoring institution, while also serving a much more limited function as a permanent repository of intellectually and culturally important documents (usually in the form of ‘special collections’ materials – manuscripts, rare books and realia with some kind of connection to the institution or region).

Most research libraries fit into this category. I propose that in the near future, we will increasingly see a third type of collection: the Conduit Collection, one whose core consists of shared access to large, publicly-available e-book collections such as the Google Books and Hathi Trust corpus, complemented by just-in-time purchase of e-books and journal articles and on-demand printing of physical books as needed.

We will search documents, not proxies. The practice of creating proxy documents (such as traditional catalog records) to enable the search for relevant books and articles is an artifact of the print era, when the only way to effectively interrogate the content of a book was to read the whole thing. In the era of online access, full-text searchability is a given, and this is already having a seismic impact on the way in which people discover documents. Metadata of various kinds remains important to a degree, especially for non-text-based documents like photographs, but its importance for text documents has fallen dramatically and will continue to do so.

Library services will become difficult to distinguish from other educational services. To the degree that research libraries succeed – as they must – at integrating themselves into the daily life and academic tasks of the student body and faculty, they will at the same time become more transparent. This will be both good (patrons shouldn’t have to hack their way past a lot of library branding to get to their resources) and bad (it’s hard for the library to get credit for that which it is not seen to do).

Collections as such will still exist, but their (general) marginality will be increasingly freely acknowledged. In 2021, most research libraries will still house more-or-less permanent agglomerations of documents (both physical and virtual) that we generally recognize as ‘collections’, but the day-to-day significance of these collections will generally be seen as minimal. Most real-time information needs will be met by recourse to a constant flow of information, not to a static and preselected stockpile of information. Patrons will no longer be limited in their tools by the ability of librarians to anticipate their research needs.

Stumbling blocks

While not everyone will feel that the reality outlined above represents a utopia for librarians, it should be clear that it would constitute a huge step forward for researchers in just about every meaningful way: in terms of breadth, speed and flexibility of access to information resources. However, such a future is not guaranteed. Several obvious stumbling blocks exist, among them the following:

- sclerotic librarians. Librarians who, through no fault of their own, joined the profession at a time when librarianship meant the stewarding of printed books (or, through some fault of their own, joined the profession more recently without noticing that that day had passed), or who have spent decades mastering skills that suddenly seem irrelevant, or who simply and honestly feel that an online information environment has less to offer than the print-based environment in terms of intellectual rigor, have the capacity to slow down the library’s progress. However, they do not have the power to stop it unless they are abetted in that endeavor by fainthearted leaders.

- fainthearted leaders. Library leaders who say “I would love to make necessary changes to my library’s structure and policies; unfortunately, I can’t get my librarians or staff to go along with such changes”, are not in fact leaders, regardless of their titles. It is very difficult to tell librarians and staff that their roles and functions are changing in substantial ways; it is difficult to eliminate old programs and to institute new ones. But that is the work of leadership, and its difficulty is the reason library leaders are generally well paid. Those who are in such positions cannot afford to shirk those duties.

- legacy accreditation structures. To the degree that academic institutions continue being accredited based on outmoded concepts of what constitutes effective library service, libraries will have difficulty gaining institutional support for radically new service models. This is particularly
true in terms of collections; where a library owns, say, two million printed volumes and 500,000 e-books, but provides full-text access to another two million public-domain e-books and offers patron-driven access to another unpurchased one million titles, what is the size of its ‘collection’, and how should the collection be represented to university accreditors?

- (justifiably) fainthearted publishers. As library acquisitions continue moving inexorably away from speculation-based collection-building and towards patron-driven models, the publishing marketplace will inevitably become more efficient. In the print environment, libraries had no choice but to buy many more books than their patrons actually needed (because that was the only possible way of ensuring, however imperfectly, that the books their patrons did need would be on the shelves when the patrons came looking for them). A marketplace that succeeds at selling only those books and articles that are actually wanted will generate significantly less income for publishers. Publishers know this instinctively – hence, for example, the punitive prices set by journal publishers for individual articles. Since the publishing of copyrighted materials is a monopoly right, reluctant publishers have considerable power to slow down the progress of more efficient access models.

- customer-focused competitors. Libraries (at least individual ones) truly do face the possibility of extinction. One of the most serious threats comes in the form of competing service providers that focus more on improving their services than they do on improving their users. Academic libraries are in a difficult position, because they have an educational mission as well as a service mission, and must find a constructive balance between ‘giving the people what they want’ and helping them become more effective researchers. This puts libraries at a disadvantage when competition arises from actors in the marketplace who achieve their usage goals by maximizing ease of use. It’s not fair, but it is a troublesome reality, and as market-based providers of high-quality information continue to make their services easier to use, libraries run the risk of being pushed further to the margins of their patrons’ research experience.

Conclusion

Although it will never be perfect, there is every reason to believe that the future is quite bright for those who have traditionally relied on library collections for access to the resources they need in order to do their scholarly work. It is much more unsettled for libraries and their collections, and it seems highly likely that the very idea of the ‘collection’ will be overhauled if not obviated over the next ten years, in favor of more dynamic access to a virtually unlimited flow of information products. Such an environment will require libraries, if they are to survive, to rethink their collecting and service strategies in radical and possibly scary ways, and to do so sooner than later.

References


Article ©Rick Anderson

Rick Anderson
Associate Dean
J Willard Marriott Library
University of Utah
295 S 1500 E Salt Lake City
UT 84112-0860, USA
E-mail: rick.anderson@utah.edu

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