# Library Resources & Technical Services

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The Association for Library Collections & Technical Services

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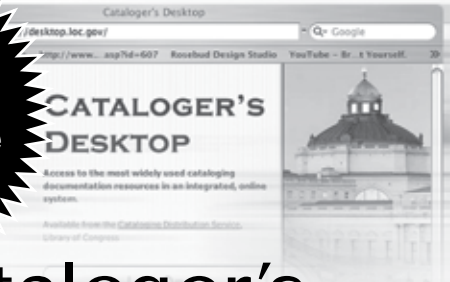



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# Guest Editorial

## Entering an Alternate Universe: Some Consequences of Implementing Recommendations of the Library of Congress Working Group on the Future of Bibliographic Control

### By Janet Swan Hill

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*This paper is derived from the keynote speech delivered to the New England Technical Services Librarians Annual Conference held in Worchester, Massachusetts, on April 4, 2008. It retains much of its original oral presentation style.*

In its final report, *On the Record*, the Library of Congress (LC) Working Group on the Future of Bibliographic Control suggested that our future depends in part on defining the bibliographic universe as reaching "beyond libraries, publishers and database producers to include creators, vendors, distributors, stores, and user communities, among others, across sectors and international boundaries."[1]

Implementation of all of the Working Group's recommendations, however, requires more than mere redefinitions. In some senses, it requires us to take up residence in an alternate universe, with new understandings, new perspectives, and new responsibilities. In this editorial I will describe what I regard as some of the important aspects of that alternate universe. In order to convey the extent of change that they represent, I will begin by describing salient features of the universe in which we have long been living.

### The Old Universe

When I entered the profession in 1970, it was taken for granted that libraries were a public good, that services that libraries offered were a public good, and that obtaining those services was a right of all the people. The fruits of using libraries—education, knowledge, information, and improving oneself—were recognized as unassailably worthy. Whatever it took to provide those things was considered reasonable.

Libraries, whether public or academic, were viewed as genteel places. We

were a part of polite society. Doing it right was important. Doing it fast was less crucial. After all, good things may take time. Doing it cheaper would be nice, but doing it on the cheap was a betrayal of what we were about. That genteel world developed around print on paper, books, journals, and literature, and all of our practices were well suited to that world. Other kinds of materials were just that—the "other stuff"—of lesser importance to us and to our users. Consequently, the other stuff got less attention, and we made what we did with it fit into the pattern of what we did for books and journals.

In our gentility, we treasured rare and valuable items, and we cared about them both as carriers of content and as artifacts. We did not lend them out, and we restricted access to them even within our own buildings. We described them with infinite care—when we could get around to it—and filed the information about them in separate catalogs or in printed finding aids. Access to the material required physical presence, and often required intermediation by a curator who watched over both the reader and the materials while they were in use. If we could not get around to describing the materials, well, there was always the curator to help the reader find them. Readers and scholars in distant places had to guess that we might have something of interest to them, had to write to us, or even come for a visit just to find out what we had. In that genteel world, we cared about serving people, and we cared about not wasting money and about not wasting time, but our perception of how much trouble, or money, or time was a waste was different from what it is today.

We know that we are part of a graying profession, and that somewhere between 30 and 40 percent of librarians are going to be retiring within the next ten years.[2] Data derived from 2005 show that one third of the professionals employed in the Association for Research Libraries (ARL) libraries are aged fifty-five or above, and indicate that "in US ARL libraries, high levels of retirements appear inevitable through 2015."[3] Although these data are only for libraries that are a part of the ARL, they are suggestive for the profession at large. The Future of Librarians in the Workforce (http://libraryworkforce.org/tiki-index.php), a project funded by the Institute for Museums and Library Services, will provide data for the whole profession.

We also know that because technical services librarians skew somewhat older than the rest of the profession, the proportion of technical services librarians that will be retiring is greater than in the rest of the field.[4] This means that one-third or more of technical services librarians currently in the workforce have been working as librarians for a really long time, and probably another third have been working for at least a moderately long time. When most of us grew up professionally, we were suffused with that traditional conviction that however long it takes to do something, and however much money, or however many people it takes to do it, the price must be borne, because it is a public good. And although most of us have learned new attitudes and outlooks, and have learned to do cost analyses and to cut corners and to live with it, the basis of what we absorbed as baby librarians has stayed with us in our core.

Those of us who entered the profession in the late 1960s and early 1970s entered at the time of the Great Society.[5] Education, information, and libraries were considered critical factors in improving society, in providing the means for individuals to improve themselves and to improve their lot in life. Libraries and educational institutions experienced a tremendous influx of funding. New positions were created, and there was a period of years in which library schools could barely keep up with the demand for librarians. In this atmosphere, we developed as professionals, expecting that it was universally understood that what we were doing was worth whatever it cost; believing that if we could only figure out the right arguments to make, or if we could only make those arguments often enough, or with enough passion, eventually someone would recognize the rightness of our position, and somehow they would find the money for us to do it.

Unfortunately, the Great Society was never fully realized, and the pie of funding that libraries and other educational institutions briefly enjoyed began to dwindle. Libraries began to get a smaller piece of the pie overall, and internally within libraries, technical services' piece was proportionally even smaller. And so, we librarians took up a kind of double life—a schizophrenic approach to the real world. We still believed in the value of our work and in its standing as a public good. We still believed that the information and services we were providing were what people needed and that if it took time, it took time. If it took money, it took money. If it took people, it took people. But at the same time we began to understand that we were not going to have the same amount of time, money, and people that we used to, and that we needed to figure out ways to accomplish what had to be done with less in the way of resources.

Fortunately, at about this time, automation really took hold in libraries. Automated circulation systems entered our sphere in the 1960s, starting with some fairly unsophisticated mechanisms. One such system was the "McBee" cards: edge-punched cards recording data about library materials. A wire pin was inserted through a data-specific hole in a deck of cards, and those cards in which the hole had been notched to indicate presence of the data element dropped out of the pack. These systems gradually got fancier, faster, more broadly functional, more reliable, and more universally utilized. Automation expanded into other library functions. The MARC format was developed in the 1960s, and published for use in 1967, as were the *Anglo-American Cataloguing Rules (AACR)*.[6] OCLC was incorporated in the

same year, and we began to use automation for cataloging operations in a really big way.

It got easier and easier to find preexisting catalog cards for the materials we put in our collections, and the delivery of cards got faster. We began to wrestle with questions about whether the cards we got from the LC—whether we ordered them directly or got them through some other vendor—could be used in our catalogs as is, or whether the time-honored cataloging practices that we had developed locally were so important to us that we needed to continue them. Soon we wondered about the cards from our bibliographic utilities that were derived from records that had been contributed by member libraries, and we learned to disdain the work of our peers, and not to trust it.

Time passed. Automation was introduced to more and more facets of our work: acquisitions, serials control, authority control, the public catalog. Library vendors began to operate increasingly online. The profile of our personnel shifted to encompass a majority of support staff and a minority of librarians. Our concentration on hit rates, on throughput rates, on streamlining, and on having work done at the least skilled level possible contributed to our administrators more and more seeing technical services work as a kind of manufacture instead of as a professional endeavor.

Increasingly, we were pressed to make do with fewer resources, and so we learned more about cutting corners, doing without, and providing less. We made the most we could out of library automation. All the savings we could realize through these stratagems were important because at last we began to recognize that books and journals are not the only kinds of information resources that were worth having, nor the only kinds of things in which our users are interested. As the light dawned, we started to recognize that providing access to this other stuff in information ghettos such as separate catalogs and separate databases was a bad thing and poor service. Next, as we finally acknowledged our obligations to nonbook materials such as photos and maps and video recordings, people began inventing new kinds of materials, and we began collecting them, and we began having to figure out how to catalog them. Because we did not have as much money or staff as we used to, library automation was our salvation. By using it well we managed to accomplish much more than we had in the past, even while utilizing far less in the way of personnel resources.

## Harbingers of the Alternate Universe

And so we come to the near present. For some time, we had collectively realized that the world of bibliographic control was getting out of hand. Not only were we collecting physical materials, we were collecting virtual things; people now had a choice for how to search for information, and they were increasingly opting for the Internet. Fewer and fewer librarians were going into technical services, and the proportion of librarians that understood anything at all about cataloging was increasingly minuscule. It was becoming obvious to just about everyone that Universal Bibliographic Control, that holy grail of past decades in which everything that any library might want to collect would be cataloged with a single approach, was never going to happen.

For some years, people had been writing papers and commissioning reports that said that we had to change. We had conferences to talk about the need for change and the directions we needed to go, and proceedings were published.[7] But for the most part, we wrote the reports, and we read them, and we forwarded them to our administrators (or they forwarded them to us), and we took little action.

Then came 2006. Early in that year, LC announced its decision to no longer create or maintain series authority records for the materials it cataloged. And we fainted—figuratively speaking. And then we picked ourselves up off the floor and started throwing punches.

It must be noted that LC was not the only library that had been reacting to changes in its environment and trying to figure out how to move forward. Many of our own libraries had been doing soul-searching and making painful decisions to cease or cut back on work that we had once considered essential. Although we worried that it would lead to patrons being satisfied with less because they did not know enough to know what would be possible if only money were limitless, we kept cutting because we did not have any other choice.

Of course, when my library decided that it could no longer keep up with new headings lists in the face of massive and unpredictable database loads, or when some other library decided to cut back on something else, the impact of our decisions was scarcely felt beyond our own walls. But when LC decides to change anything in the way it handles bibliographic control, it affects all of us.

LC's response to the uproar about series was to delay implementation of the decision by a month; to conclude that it had blundered in how it had made and communicated its decision; and to form the LC Working Group on the Future of Bibliographic Control. The group's Web site (www.loc.gov/bibliographic-future) contains the charge, membership, interim report, and much more. That group of sixteen members and two consultants met for the first time in November 2006. It labored for a year, and delivered a draft report to the LC and to the nation via a live Web cast (that few people actually saw live because of the highest demand that LC had ever experienced for a Web cast) in November 2007. The final report, called *On the Record*, which took into account 135 single-spaced pages of comment on the draft,

was delivered to LC on January 8, 2008, and put up on the Web the next day.

The recommendations of the Working Group were many and they were clustered into five areas:

- Increase the Efficiency of Bibliographic Record Production and Maintenance.
- Enhance Access to Rare, Unique, and Other Special Hidden Materials.
- Position our Technology for the Future.
- Position Our Community for the Future.
- Strengthen the Library and Information Science Profession.

Most recommendations were not controversial or particularly radical, at least in concept.[8] The combination of the recommendations, however, if we act on them, takes us from our accustomed universe and into the alternate universe of this editorial's title. This new universe will require substantial change in the way we view ourselves, our libraries, our collections, our finding tools, our work, and our obligations to each other—and it will require us to make changes in how we make decisions about where to put our efforts. Operating in this new universe calls for us to recognize and act on five major concepts.

## Concepts for the Alternate Universe

**Recognize the importance of all types of information resources in all formats.** We are far removed from the world in which print materials and books and journals were what really mattered. Everything matters now, and we have to figure out how to provide control and access for it all. Books, journals, newspapers, prints, photographs, microforms, archival materials, maps, globes, audio, video, realia, data files, software, Web sites, digital images—all of it. Our definition of "mainstream" has to change because it is all mainstream now. No longer is it going to be enough for a cataloging department to have only people who can handle traditional materials. No longer can we allow our workflows to put the weird stuff aside until we are in the mood for it, or until the one person who knows how to handle it comes back from vacation. No longer can we afford to have the weird stuff handled by people who are isolated from the rest of the library, and who may make decisions based on what they think is best for their particular narrow specialized audience without regard to the impact it has on the whole. For that matter, no longer can we think of it as weird stuff. Either that, or, we need to begin regarding "weird" as a term of endearment.

If you have read *On the Record*, you will have noted that it has an entire section devoted to providing access to material that has long been neglected, that is, rare, unique, and special materials that may be held by only one, or only a few libraries. Earlier I mentioned our historical approach to such materials. We took great care over their description—when we had the time—and we restricted physical access to them. By allowing backlogs to build, and by filing records in separate catalogs or databases, we also restricted intellectual access to the materials, although we did not consciously think of it that way. Because we regarded the items as artifacts, we thought that providing access on-site was entirely sufficient. Serious scholars would find out about the collection through their colleagues or through the grapevine, or occasionally through published finding aids and articles, and they would come to visit the collection in person, where guidance by a curator was considered entirely appropriate and adequate.

The initial purpose and development of bibliographic utilities was such that libraries thought that contributing records for their rare or unique materials was a largely useless exercise, since the number of libraries that could benefit from using the copy ranged from very few to zero. With the growth of bibliographic utilities, however, and their transformation from just being sources of copy to being public sources of information about the existence and location of materials, and with the availability of local catalogs on the Internet, the old reasons for not paying attention to cataloging our rare, unique, and special materials no longer apply. Even the issues of restrictions on lending, and requiring carefully monitored physical access to the materials are becoming less important as we digitize rare objects (or parts of them, such as decorative spines or marginalia) and as we make images available through our central discovery tools. And so, we have reached the point where it is time actually to take action on our "hidden collections." As the Working Group report says, it is time to "Make the Discovery of Rare, Unique, and other Special Hidden Materials a High Priority."[9]

The report goes on to suggest some additional efforts that will require significant separation from past practice. These include directions to "adopt as a guiding principle that some level of access must be provided to all materials as a first step to comprehensive access," to "Allow for different cataloging levels," and to "establish cataloging practices that are practicable and flexible, and that reflect the needs of users and the reality of limited resources."[10]

These instructions are nothing we have not thought of before, and perhaps even espoused, but, taken all in all, we have done very little about them. Accomplishing these things will require a major change in mindset at individual libraries, as well as a shift in priorities, and concomitant changes in processes that will enable us to provide appropriate access to ordinary materials while at last providing sufficient access to things for which we have not previously felt ourselves to be responsible.

**Recognition that a single set of rules, a single mechanism, a single type of discovery tool cannot accomplish everything that needs to be accomplished.** When I first started cataloging in 1970, and for decades afterward, there was a single primary set of rules to be followed (if you consider the combination of descriptive, subject, classification, and markup standards to be a "single set"). There was a single mechanism for doing the cataloging, although the mechanism itself changed over time. There was a single type of discovery tool: a local catalog. Even if you were, as I was, a cataloger of something other than books, you were very likely still using the same rules, processes, and discovery tools as everybody else.

This held true for a long time, but again, time passes. Our belief that a single set of rules, or sets of rules derived from the holy scripture that was *AACR* (and its revisions) was adequate for all types of materials weakened over time, but even with the first serious departures from it—such as the development of the Dublin Core metadata standard—we could still manage to think of our approaches as essentially unitary.[11] In larger libraries, it was still possible for most catalogers to be good at only one sort of cataloging, and to leave dealing with newer formats to more recent library school graduates.

Alas, no more. At some point we adopted a new word—metadata—probably partly in recognition that, to many people, the word "cataloging" was inextricably linked to *AACR2* and books and other physical objects. We started recognizing that some kinds of materials were never going to be cataloged according to *AACR2*, or coded in MARC, or even interfiled with all other entries in our finding tool. We learned about Encoded Archival Description (EAD), and moved on from there. We started digitizing objects and describing them in separate databases, to which we linked as best we could. We bought huge databases of digital images, and added to them from our own collections, but we stored the images and the descriptions somewhere outside the single catalog filing system. We made the various metadata schema speak to each other (more or less) with crosswalks. And as you have noticed, we began speaking a new dialect.

It was the digital materials—whether obtained from the Internet, created locally, or purchased in databases—that pushed us to the edge of our old universe. Now we must realize that in order to provide access to the information that our users need, we have to be good at more than one kind of cataloging. We have to be able to recognize and retain awareness of the principles that these methods have in common, while dealing with the differences in materials in practice. Maybe those who are close to retirement age can resist for a few more precious months or years, but everyone else has little choice but to enter the wormhole that leads to the alternate universe.

**Recognition that entities other than libraries can, want to, and will contribute to the information-finding construct.** The need and ability to accept and utilize the work of others permeates the report of the LC Working Group. Ever since the early days of bibliographic networks when libraries developed lists of whose copy they would accept and whose they would not, and when libraries did studies and published numerous papers about how much copy was acceptable, and what kinds of libraries produced it, we have paid close attention to how much better *our* work is than the work of others, and taken on faith that *our* way of doing things, and *our* standards are not only superior, but are essential to accomplishing our goals.

If we got data from some nonlibrary entity such as a materials vendor, for example, we subjected it to intense scrutiny and often simply redid it. In more recent years we have scorned the attempts of nonlibrarians attempting to create subject access in places like YouTube, Flickr, or Pandora. We have marveled at how dreadful and bewildering retrieval can be through Google or other Web search engines, and scoffed at the ineffectiveness and deceit of "relevance ranking."

Then along comes a report from a group of information professionals, most of whom are librarians whose careers started in cataloging, suggesting ways in which we may be able to improve our ability to provide service, including letting other people fiddle with our records. Anathema! But think. Haven't some of us already been adding table of contents information from vendors? Haven't some of us linked to or included publishers' blurbs in our catalogs? These things may not have seemed threatening because wholesale supplying of tables of contents and including blurbs is service that we were never able to provide in the past, and work that we did not regard as our responsibility—so we did not see it as trespassing on our territory. But it is a start along the path of expanding the sources of information that we incorporate into our finding tools.

In fact, it is how the recommendations in *On the Record* start—with "1.1.1 Make Use of More Bibliographic Data Available Earlier in the Supply Chain."[12] The report recommends to LC and the whole bibliographic community that they accept bibliographic data from publishers and foreign libraries even if it is not done exactly as we like; that LC work with publishers participating in the Cataloging in Publication (CIP) program, and require them to provide descriptive cataloging in good form, and that libraries then use that data; that libraries use descriptive cataloging provided by materials vendors; and that ways to harvest data mechanically be actively sought.

Those recommendations all have to do with utilizing data supplied by entities that form an accepted part of the bibliographic control apparatus. Some of the recommendations from *On the Record* go farther afield. For instance,

there is a recommendation to find ways to link reviews and ratings to bibliographic records, and even to develop a capability to link to user-generated data on the Internet (such as through Amazon, LibraryThing, and Wikipedia). As foreign as this may seem at first, if we pause to consider the reality of our situation, we may see that we can use all the help we can get. If we can get publishers and vendors—and even users—to supply data that is at least acceptable, perhaps then we can spend more of our time getting to the materials we have never been able to tackle before.

And isn't it just a little amusing for those of us who have chosen to be catalogers and have seen how few of our librarian colleagues choose to follow the same path, to see that there are people outside of libraries who find what we do to be not just necessary, but fun? Isn't it amusing to discover that there are ordinary people out in the world who actually want to create subject data and add it to our records, who are discovering the value of controlled vocabulary all on their own and devising their own little thesauri?

**Recognition that all of us are a part of the whole, and that it is an interdependent relationship, not the relationship of an all-powerful mothership to a lot of smaller shuttlecraft.** You remember that I have talked about libraries and what they do as being a public good. We have lived for a century or so believing that not just we, but other people also recognized them as a public good—specifically that Congress recognized the services of LC to all the nation's libraries as being a Good Thing, an unassailable thing, a thing that they would always fund, a thing that we could rely on.

So much did we rely on it that through using LC cataloging, guidance, and leadership, we gradually gave away our independence. If our local practices did not jibe with LC's because it was too costly to keep changing LC's records, we changed our practices instead. As the amount of copy we could find through bibliographic networks or other sources increased from 50 percent to 70 percent to 90 percent and above, we decreased our local workforce, and leaned on LC and on the other members of our networks. Maybe we should have taken the staff we saved by using copy, and put it to handling materials that we had not paid much attention to before—such as government publications, maps, special collections, scores, audio recordings, and archives, but for the most part we did not. The realization that we should have done so has come a few decades too late.

To the extent that any of us contributed copy to our networks, we were sharing the combined burden of cataloging. To the extent that we set up processes to wait for someone else to catalog things, we were like mistletoe—putting on a pretty show, but parasites nevertheless.

Some libraries did perceive that there were advantages to sharing in the responsibility to provide high-quality cataloging and authority control to the national database, at first through CONSER (Cooperative Online Serials Program), then NACO (Name Authority Cooperative Program), SACO (Subject Authority Cooperative Program), and PCC (Program for Cooperative Cataloging). Those advantages were largely intangible, and included things like status, knowledge, training, and job skills, as well as the warm feeling that came from knowing we were doing the right thing, but only a small segment of the community of libraries either could participate in such efforts, or chose to.

It is tempting to answer a call to share in the burden of creating the national database by saying, "But wait! We simply don't have the staff to help out!" and to believe that that is an adequate answer. We may not have the staff now, but we used to. Over time, that staff disappeared. It disappeared to budget cuts. It disappeared to be reallocated elsewhere in the library as libraries assumed more kinds of functions in the sphere of direct public service. It disappeared because we have been so good at increasing our efficiency and so good at looking at our services and product in terms of throughput and money, and not so good at looking at them or convincing others to look at them in terms of value. And so, our libraries chose to relocate staff to direct public services, but they can also choose to send them back. Now is the time.

Over the past half century we have cut our capacity to provide cataloging just about as much as we can, and now we experience the time-space discontinuity that is the Internet and digital information resources, and expanded discovery tools, and suddenly we see that there is so much more to do than we had thought.

Unfortunately for us, LC is a lot like us, except that it is bigger. LC's funding agency is having a hard time regarding it as a public good, and is buying into the hype that everything is or will be available on the Internet, and that it will all be easy to find (and free). Meanwhile, LC is taking on more and more direct public service functions. LC has, just as many of us, a certain segment of their workforce that is resistant to change. LC has, just as we all do, all of the inertia and impediment to change that comes from longstanding habits and practices, and processes that were developed to address problems that may not even exist any longer. LC, just like us, is trying to do too much with too little, and puts its resources into the things that its funding agency understands, and takes it away from cataloging. And, just like us, LC needs to find things that it can do better, as well as things that it simply will not do anymore.

You may recall that I mentioned that many of us believe—perhaps not always consciously—that if we can only figure out the right arguments to make, or if we can make those arguments often enough, and with enough pas-

sion, eventually people will recognize the rightness of our position, and they will somehow find the money for us to do it. It is a touching belief, but we cannot count on it. There are too many other worthy causes being argued by too many effective advocates for our priorities always to be the ones that get adopted.

We thought that LC would always be there, doing everything we need it to do, but we have to realize that it will not. And so, we need to readjust our attitude. All of us, including our libraries, our consortia, our associations, our cooperative groups, our vendors, and all other participants in the bibliographic sphere have to stop looking to LC as the mother ship and ourselves as tiny dependent shuttlecraft. We have to start thinking of all of us as more of a fleet. Some ships are larger than others. Some have different specialties and different capacities, but they are all part of an interdependent whole. More of us have to accept some of the responsibility to contribute more to the coordinated bibliographic control endeavor. We will continue to look to LC to help us out, but LC also has to be able to look to some of us to help them.

Because most of us are already operating pretty close to the bone, using some of our resources to help others and sharing more of the responsibility is not going to be easy. It will require a tremendous cultural shift, and that shift will take time and determination—but we need to make it. The result will be better service, wider dispersal of expertise, greater importance and standing, and less vulnerability to unexpected change.

Because we have viewed the value of cooperative cataloging in terms of per-record cost and in terms of limiting as much as possible the amount of original cataloging that we have to do for so long that it seems counterintuitive to say, "If we do more of the hard work, it will cost us all less in the end." It may help to understand how doing more will cost us less by considering an analogy. Cooperative cataloging works like a chain letter, but not a chain letter that you receive and immediately delete. It works how chain letters would work if everyone followed the instructions. Consider: You get a message that says, "Put your name at the bottom of the list below. Forward this message to five friends. Send a pair of socks to the person at the top of the list. In just a few weeks, you will get dozens of pairs of socks." If everybody followed all of the instructions, you would get dozens of pairs of socks, in exchange for sending one pair and forwarding the e-mail. On the other hand, if you do not follow the instructions, and almost nobody else does either, you get no socks. Even the person who actually does follow through gets no socks.

Cooperative cataloging is what happens when we all send the socks and forward the messages as instructed. After a while we get dozens of pairs of socks in return. Cooperative cataloging works because nearly everybody is contributing socks. There are some who just forward the messages and do not send socks, and they reap the benefits of all the other people who are actually sending socks. If there are not many such noncontributors, the system works well enough to keep the contributors both happy and contributing. But if a significant segment of the population stops contributing, the flow of socks dwindles, and those who are still contributing begin seeing less return on their effort, and begin to question whether the cost of their effort outweighs the value of their return.

In cooperative cataloging, no one is threatening bad luck if you break the chain, but the consequences to us all if enough people drop out of the chain are unsustainable. Keeping the chain going, on the other hand, requires a minimal investment, and results in whopping returns.

**Recognition that the way we have made decisions in the past may no longer serve us well.** This is the final aspect of the alternate universe that I will describe. As a lead-in, I need to do a brief recap of what we are like, what we believe, and how we have worked.

As a profession we regard what we do as a public good: something whose worth is so great that we have difficulty questioning its cost. From our perspective, we could write an ad, "An economics treatise: $125. Cataloging that treatise: $85 Marking it: $1. Getting the information inside that book to someone who wants it: Priceless."

We believe that the work we do should serve all segments of society, no matter how small, and that it should answer all legitimate needs. We believe in careful, comprehensive work, and we can tell stories about times when an error or oversight or shortcut has—or could have—prevented someone from finding something that might have answered their need. No matter when we entered the profession, we have been affected by these attitudes and by the sense of libraries as being a special part of a civilized society. We are not oblivious to changes around us and we do not reject innovation. We have adapted to change. We have even invited it and championed it, but it does not alter our view of the profession, its purpose, and its value.

Change is coming faster than ever before, and is involving virtually every aspect of our work. The planets have aligned, and along comes a report that tells us that we need to make even more changes—changes in operations, attitudes, and beliefs. We understand that the changes recommended are not important because they are in *On the Record*, but that they are in this report because they are important. Nevertheless, as we read the recommendations and what is in between the lines in *On the Record*, we see a daunting future. We could barely stretch our resources to provide access to the old mainstream materials, and now we are supposed to extend our efforts to all kinds of materials, even some that are very peculiar. We had trouble learn-

ing how to handle the old materials, and library schools had trouble teaching it, and now we are going to have to handle many more types, using a variety of standards and mechanisms. We have carefully protected the integrity of the information we supply by placing restrictions on who can contribute data, and by checking over any data that we do receive from others, and now we are supposed to solicit and welcome contributions by others, including commercial entities, and the great unwashed.

We have been used to relying on others to do a large part of our work, and used to reducing our own capacity to do that work in the belief that those others would always be there, and would always regard it as their bounden duty to keep on doing the work for us. We have not regarded ourselves as partners in the bibliographic control endeavor so much as dependents. Now we are asked to become real partners, and to provide substantive aid to each other as well as to the entity that has helped us for so long. It is like growing up and growing older and discovering that your parents need your help to do their shopping, to manage their affairs, and to get to the doctor. These new demands mean that we now need to look more carefully at our habits, our coping mechanisms, our outlook, and our decision processes, and realize that no matter how well they served us in the past, they may no longer be appropriate.

We as a group are extremely good at identifying all the possible negative consequences of making any changes. Some years ago my library brought in an "organizational culture" consultant, who administered some tests and determined that of all the groups that had been profiled utilizing those assessment tools, our culture was most similar to people operating nuclear power plants—people used to working in a milieu where the tiniest mistake could have disastrous consequences. People who were more than just risk averse, but who were belt, suspenders, glue, and jumpsuit people; where redundant checks were nearly universal, and where deviation from what was prescribed was severely punished.

If we are considering something as simple-seeming as ceasing to write call numbers inside books, for instance, we think of all that could possibly go wrong, and may not ask ourselves how often mistakes occur, or whether the negative consequences of a few mistakes would be outweighed by the lessened workload and greater speed. If we are receiving shelf-ready books, we notice the one record that is not for the piece we received, and do not think about the thousands that were just fine. We think about how to prevent problems, even at great expense, even though we know that we can never prevent 100 percent of them. We are not nearly so likely to consider how much it would cost to correct those problems after the fact as opposed to how much it would cost to try to prevent them. In other words, we tend to make our decisions according to the exceptions, rather than the rules. No matter how attractive perfection might be, we are not a nuclear power plant, so maybe it is time to seek other modes of making decisions.

In my other life, I am a figure skating judge, though one at a fairly low level. I judge primarily tests, including tests of what are called "Moves in the Field." Each move is a prescribed sequence of steps that has to be performed at a particular level of skill. Each pattern is established to teach and demonstrate particular competencies and concepts, and each move has a primary focus, and usually a secondary focus. For example, a move on the Pre-Juvenile test is called "Backward Perimeter Power Crossover Stroking." It consists of essentially six steps—three, mirrored by three in the other direction—with the whole sequence repeated for both lengths of the rink, with plain crossovers around the ends. The primary focus of this move is power, with edge quality secondary. The move as a whole is designed to teach how to generate power from weight shift, and from pressure against a dynamic edge, how to generate power from every step of a sequence, including the understroke of a crossover. To pass this move, you have to demonstrate these things while also demonstrating that you can do the correct steps according to the pattern prescribed, and that you can actually step on the correct edge in all places and maintain a clean edge.

If you do not realize what the purposes of the move are, you may well do it wrong. In fact, this move is done wrong so frequently that I have developed standard comments to write on test papers. The litany goes like this: "The primary focus of this move is power. All steps must generate power. The held edge is not a rest. The held edge must start and stay on a strong inside edge. When you start the third edge on an outside or a flat, you lose power." I deal the same way with all of the moves. If a pattern calls for three to five repeats and a certain shape, then the skater ought to be able to achieve the shape and size with the prescribed number of repeats. Not because it says so, but because being able to do it demonstrates a particular set of required skills.

Each move demonstrates a variety of skills, and sometimes a skater will be bad at one, but good enough at the rest that the overall quality is sufficient to pass the move at that level. Sometimes a skater will be bad at one move on the test, but very good at others, so you mark the bad move down, and mark the good ones up, and if the overall result is passing, you pass the test.

Why is this relevant to libraries? It is relevant because if we do not know why we are doing something, we cannot tell if we are doing it well, we cannot make good decisions about it, and we do not know what to concentrate on to make it better. If you think that speed is the same thing as power, and that the move is about getting down the ice quickly, you may do a very small pattern with shallow edges that does not develop power from edges or weight shift. It is relevant because it encourages us to recognize that perfection is not

to be expected, and to look instead for a result that weighs different factors against each other. It is relevant because it is a system in which it is acceptable to achieve a result that is "good enough" for the defined purposes, and that recognizes that "good enough" is not a pejorative term.

In libraries as in skating, we need to ask: What is our purpose? How does what we are doing achieve that purpose? Are some of the things we are paying attention to irrelevant to that purpose? Do any of the things we are concentrating on distract from the main purpose? We need to be aware of what is the level of quality that is reasonably achievable and accomplishes all of what is essential and much of what is desirable. We need to accept that it is not reasonable to expect every skater to be Michelle Kwan, and that a skater who cannot land quadruple jumps is not a failure. We need to recognize when something that we are obsessing about does not really matter. The color of the costume does not affect the sitspin. We need to recognize when something that might seem trivial actually serves an important purpose. Pointing your toe along the tracing makes a stronger edge and pressing your palms down stabilizes a turn.

We need to catch ourselves when we start talking about rules and practices as if they were the end itself. We need to catch ourselves when we make decisions based on the few problems, instead of the overall benefit, and we especially need to catch ourselves when we start to make decisions based on a few imagined or anticipated but rarely seen problems.

If we can school ourselves to ask the right questions and really to pay attention to the answers, we may find that it is possible and acceptable to introduce changes in practice that will save so much time, trouble, or money that we have a real chance of being able to turn our attention the new work that we need to handle.

## Conclusion

The alternate universe that I have been talking about is not different from where we have been living, but in this universe, people all across the bibliographic community can and must assume a position of greater importance, power, and responsibility. This universe will have us operating in a way that better enables us to do what we had in mind all the time—that is, to make information available to everyone. And so, despite what it may take to get used to it, and despite the possibly frightening trip through the wormhole, we should be happy to make the passage to this new universe.

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# Association for Library Collections and Technical Services Annual Report 2007–08

**By Pamela Bluh, 2007–08 ALCTS President**

The past year has been one of contrasts. The nostalgia and excitement of the fiftieth anniversary celebration in the summer of 2007 was followed by period of tranquility throughout the fall and winter, culminating in renewed energy and enthusiasm in the spring of 2008.

## Future of Bibliographic Control

Throughout 2007–08, attention was focused on activities related to the Library of Congress Working Group (LCWG) on the Future of Bibliographic Control, particularly drafting testimony for the working group's public hearings and preparing a detailed response to the final report *On the Record* on behalf of the American Library Association (ALA). In the spring of 2008, a task group appointed by the Association for Library Collections and Technical Services (ALCTS) board analyzed the recommendations in the Working Group's report and identified and prioritized those recommendations that ALCTS is best suited to address.[1] A second task group will continue the work by overseeing the implementation of these recommendations in the coming year.

## Non-English Access

A steering committee appointed to oversee the implementation of recommendations made by the Task Force on Non-English Access began its work in the summer of 2007. The work is complex and time-consuming and requires collaboration and consultation with numerous groups within ALCTS as well as in the information community at large. An implementation plan developed by the committee provides structure and focus and has helped clarify the committee's role within the community. An electronic discussion list (NonEnglish@ala.org), initially designed to facilitate discussion among steering committee members, is now open to the entire library community and has greatly enhanced the committee's visibility.

## Organizational Effectiveness

"The role of libraries is certainly in a state of transformation . . . [as is] the change in library user expectations."[2] Recognizing the validity of this statement, the

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ALCTS Board of Directors surveyed the membership using *The 7 Measures of Success: What Remarkable Associations Do That Others Don't*.[3] Response was outstanding and revealed that the members consider ALCTS to be a remarkably successful organization. The survey pointed out, however, that improvements in the areas of communication, effective utilization of data, and organizational adaptability are highly desirable.

To address the concerns that were voiced about communication, an electronic discussion forum (alcts-eforum@ala.org) was launched to give members and nonmembers a vehicle where topics of immediate interest could be discussed for brief periods of time. The inaugural discussion, on communication, attracted 112 subscribers and indicated very clearly that perceptions about the suitability and effectiveness of the association's communication channels differ widely and there is a definite need for different forms of communication depending on the audience. Nearly two hundred subscribers have registered for the e-forum and a second discussion on the use of vendor- and publisher-supplied cataloging records generated enthusiastic responses. New discussion topics will be featured on a regular basis and will be announced in advance.

After a careful review of the association's organizational structure, the Organization and Bylaws Committee submitted a ballot proposal to convert all discussion groups to interest groups. The proposal was approved by an overwhelming margin, a clear indication that ALCTS members are eager to support changes that will create a more nimble organization where emerging issues and changing industry conditions can be addressed spontaneously.

## Legislative Affairs

Throughout 2007–08, ALCTS was invited to comment on a variety of matters of national significance, ranging from the ALA Preservation Policy to increased funding for cataloging at the Library of Congress to support for shared regional depositories. Opportunities such as these raise the association's profile and underscore the value of cooperation in the legislative arena.

## Strategic Planning

In January 2008, the highly anticipated strategic planning Web site (www.ala.org//cfapps/alcts/planning/plan_home.cfm) was inaugurated. Designed so members and staff can easily track the scope and range of the association's work, the database facilitates collaboration among individuals and groups. Members are responsible for recording initiatives, relating them to the association's strategic plan, and tracking their progress. Action items are identified for planning, budgeting, and programmatic development and will be used to assess progress toward the goals outlined in the strategic plan.

## Fiscal Planning

Although remarkably successful programmatically, fiscal year (FY) 2007 (which ended on August 31, 2007) was an anomaly from the budget perspective. Higher costs and lower than anticipated registration for the fiftieth anniversary celebration resulted in a deficit at the end of the fiscal year. A combination of conservative budgeting, trimming expenses, and more accurate revenue forecasting have helped mitigate this situation in FY 2008 and made it possible to begin to rebuild the association's reserves. The dues increase for personal and institutional members implemented in the fall of 2007 was based on a detailed analysis of revenues and expenditures and in response to an anticipated increase of 3 percent in administrative costs over the next three years. The additional funds generated by the dues increase will help to offset inflation and support the association's administrative services as well as establish a solid foundation for new initiatives and project development.

## Sections and Services

One of ALCTS' most significant characteristics is the diversity of its members. They are affiliated with libraries of all types and sizes and include library staff at all ranks. Mentoring members and offering them support, encouragement, and opportunities to excel professionally are high priorities for ALCTS. This means reaching out to various constituencies, understanding their professional requirements, and creating products and services that address those special needs. During 2007–08, ALCTS focused particular attention on its public library members and made a concerted effort to engage them in association activities through both actual and virtual committee membership and by reflecting the public library perspective in program content when appropriate.

Throughout the year, the "Spotlight on Sections" column in the *ALCTS Newsletter Online* provided each section an opportunity to highlight its activities. The Serials Section responded to the changing serials landscape by changing its name to Continuing Resources Section (CRS). The Preservation and Reformatting Section (PARS), at the request of ALA, updated the ALA preservation policy and drafted definitions for digital preservation. The Council of Regional Groups (CRG) established a wiki, making it easier for affiliated regional and state organizations to maintain

ties with the national organization. The Cataloging and Classification Section took the lead, on behalf of ALCTS and ALA, in preparing comments for the LCWG and subsequently in analyzing the group's recommendations.

Programs, preconferences, symposia, and forums continue to attract enthusiastic audiences at conferences. In addition, developing continuing education using a variety of platforms and delivery mechanisms, particularly those that deliver content locally and on demand, is being emphasized. Two new Web courses, Fundamentals of Electronic Resources Acquisitions and Fundamentals of Collection Development and Management, were developed this year and will be offered for the first time in late summer and fall 2008. The online Fundamentals of Acquisitions course, a staple of ALCTS continuing education offerings, continues to be offered and is routinely sold out. New online courses that focus on cataloging, including Functional Requirements for Bibliographic Records (FRBR) and Resource Description and Access (RDA) are in the planning stages. A collaboration with the National Information Standards Organization led to the development of "Demystifying Library Standards," a webinar that is the first in a series of Web-based mini programs that will examine the industry standards used in technical services.

A robust publishing program including both traditional and online publications continues to attract attention and accounts for a significant portion of the association's revenue. *Library Resources and Technical Services (LRTS)*, the official journal of the association, celebrated fifty years of publication in 2007. The entire backfile of *LRTS* has been digitized, however only volumes for 2000–06 are presently accessible online. The bimonthly *ALCTS Newsletter Online* provides members with association news, conference reports, and announcements. The *LRTS* Editorial Board and the ALCTS Publications Committee continue to grapple with questions about open access, licensing, and copyright, as well as electronic publishing. A manuscript submission software program acquired by ALA during 2007–08 will expedite acceptance of manuscripts and facilitate the peer review and revision process.

Two new awards were established in 2007–08. The Preservation and Reformatting Section honored the memory of George Cunha and Susan Swartzburg, early leaders in cooperative preservation programming and strong advocates for collaboration in the field of conservation, with the LBI George Cunha and Susan Swartzburg Award. The award, sponsored by the Library Binding Institute, acknowledges and supports cooperative preservation projects or rewards individuals or groups that foster collaboration for preservation goals. The Coutts Award for Innovation in Electronic Resources Management, generously supported by Coutts Information Services, is presented by the Collection Management and Development Section to a librarian who has demonstrated innovation and excellence in the practice of electronic collection management and development.

## Summary

The past year will be remembered as the year when ALCTS responded to the controversies over bibliographic control and also focused attention on organizational renewal by developing new member services, reaching out to all constituencies, expanding the channels of communication, collaborating with colleagues, and exercising its leadership role in the library and information community.

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# OPAC Queries at a Medium-Sized Academic Library

## A Transaction Log Analysis

By Heather L. Moulaison

*Patron queries at a four-year comprehensive college's online public access catalog were examined via transaction logs from March 2007. Three representative days were isolated for a more detailed examination of search characteristics. The results show that library users employed an average of one to three terms in a search, did not use Boolean operators, and made use of limits one-tenth of the time. Failed queries remained problematic, as a full one-third of searches resulted in zero hits. Implications and recommendations for improvements in the online public access catalog are discussed.*

Many academic libraries seek to make their online public access catalogs more user-friendly and catalog searches more successful. This paper reports the results of a study conducted in March 2007 that examined transaction logs to determine if data about searching behaviors could be used to improve the catalog interface and inform plans to update the library's Web site. The author concludes with recommendations that may be applicable to other libraries.

### Background

Librarians at The College of New Jersey (TCNJ) library began considering the need for changes in the online public access catalog (OPAC) interface and library Web site in the fall of 2006. Two library groups were interested in assessing these changes. The TCNJ library cataloging department's OPAC design working group wanted to improve the OPAC interface and display, and TCNJ library's Web committee wanted to create a new Web site for the library. They wanted the new Web site to give more straightforward access to the OPAC and other library resources. One cataloging librarian involved with both groups sought to address the questions raised, while incorporating research into the mechanics of human information behavior underlying the OPAC's current usage. A study assessing the transaction logs was deemed a concrete way to begin documenting patron use of the OPAC. This study was designed to respond proactively to questions likely to be raised by both library groups. Two research hypotheses were identified as needing to be tested.

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- Research Hypothesis 1: Users are more likely to employ simple queries (i.e., not use complex operators and search strategies) and will not take advantage of the value-added features available in the OPAC search environment.
- Research Hypothesis 2: When searches yield zero hits, whatever the reason, users will abandon the search.

The study reported in this paper took place at TCNJ, a highly selective public residential college focusing on the undergraduate experience. Student enrollment at TCNJ is composed of approximately six thousand undergraduate students and nine hundred graduate students. Incoming undergraduate students are in the top 7 percent of their graduating high school class, with an average SAT score of 1307. The student body is primarily comprised of students who attend college directly after graduating from high school; 95 percent of first-year students live on campus, and more than half the total student population lives on campus. TCJN has approximately 950 full-time faculty and staff, and approximately fifty of them work in the library.

## Literature Review

Two types of literature were investigated in preparation for the study: research studies of patron use of OPACs, including difficulties in the online environment and with searching, and research addressing undergraduates—the major patron group using the TCNJ library. Literature addressing the patron use of OPACs is vast; selected representatives are discussed here. Most undergraduates were born between 1986 and 1990 and have grown up surrounded with technology. In considering the OPAC and its ideal functionality, TCNJ wanted to take into account this important user group.

### Patron Use of the OPAC

Numerous studies on the library OPAC have been published since its wide-scale adoption as a replacement for the card catalog. OPAC studies published before the mid-1990s tend to focus on OPACs with MS-DOS interfaces. Although these studies give insight into the mechanics of searching behavior as a branch of human information behavior and information seeking, they do not necessarily reflect how the current generation of library patrons is approaching the tasks of formulating queries and searching. Many OPAC studies are older than the student users in today's colleges and universities. Despite the fact that these articles cannot address the immediate question of undergraduate use of modern library systems, articles about OPAC studies from the 1980s and early 1990s remain relevant and pertinent on many levels. Peters' article analyzing the transaction logs at the University of Missouri–Kansas City in the late 1980s remains strikingly applicable.[1] Observations such as "It is amazing that some OPAC users willingly spend hours learning the intricacies of software they want to use on their personal computers, but they grow impatient spending five minutes learning the basic commands and structure of an online catalog in the library" seem as relevant today as they were almost twenty years ago.[2] Peters' overall search failure rate of 40 percent is partly attributed to system design. One might safely assume that modern users would find keyword searching via a graphic user interface (GUI) to be more straightforward and less prone to failure than command-line searching in a MS-DOS interface such as the one Peters studied.

Borgman's paper from 1996 attempts to lay to rest the card catalog design model, noting that current OPACs had not yet moved forward.[3] "The record structure, content, and primary searchable fields are drawn from card catalog design models, with the searching functions and many of the interface design characteristics are drawn from retrieval system models."[4] Borgman synthesized research showing that "people arrive at a catalog with incomplete information for any of the access points. . . . They must use information external to the catalog."[5] An incomplete knowledge of the information to be retrieved complicates the use of the OPAC when carrying out an unknown item search.

Issues relevant to today's OPACs have also been explored, and solutions for improving OPACs have been advanced. Papers by Arsenault and Ménard and by Corrado investigated the erroneous use of initial articles in left-anchored title browses and the failures that can ensue.[6] One of the recommendations made by Corrado was the provision of additional title access via the initial article. Lau and Goh have also done work with academic library OPACs and user queries; they used the OPAC transaction logs to study the queries and to assess the failure.[7] Transaction log analysis such as the one carried out by Lau and Goh at a large academic institution reveals that strategies employed by OPAC users have not changed, even with the ubiquity of the Internet and search engines. They find that users continue to enter simple queries of one to three terms and that users employ Boolean operators only slightly more than 11 percent of the time. They, too, wrote their article with a Web-savvy library patron in mind as the primary user. TCNJ's project was carried out in this new environment.

### Undergraduate Users in Academic Libraries

Due to the large percentage of undergraduate students at The College of New Jersey, attention was paid to literature

addressing the way this user group interacts with information systems in the online environment. When Marcum described a hypothetical user experience for an undergraduate student on an average American college campus, she might well have been describing the undergraduate users at TCNJ.[8] As work was undertaken to redesign the OPAC and the library Web site, librarians and designers wanted to keep this largest user group in mind.

Library-related research has investigated the way in which contemporary undergraduate users interact with libraries. Sweeney pointed to expectations on the part of the undergraduate library user, whom he called a Millennial, and recommended technology-based ways for libraries to remain relevant.[9] Millennials are also sometimes called the Internet Generation, Echo Boomers, the Boomlet, Nexters, Generation Y, the Nintendo Generation, the Digital Generation, and, in Canada, the Sunshine Generation. Sweeney wrote that spirited individualism is a defining characteristic of Millennials and explained that they expect more choices, want more personalization, are less likely to read instructions, and learn experientially and continuously.

Several observations provided by Oblinger are pertinent to how today's Millenials approach the library catalog. Because these students have never known life without computers and the Internet, "the computer is not technology—it is an assumed part of life."[10] They approach problem solving through trial and error; learning resembles playing Nintendo more than the more logical approach to solving problems of earlier generations. Millennials have zero tolerance for delays and multitasking is a way of life.

Surveys carried out by the Pew Internet and American Life Project also can inform librarians as they work to understand undergraduate users. In "Generations Online," Fox and Madden stated that "Internet users ages 12 to 28 years old have embraced the online applications that enable communicative, creative, and social uses. Teens and Generation Y (age 18 to 28) are significantly more likely than older users to send and receive instant messages, play online games, create blogs, download music, and search for school information."[11] Preskey suggested that, while the generation currently doing undergraduate studies is a generation of digital natives; digital immigrants need to understand and, indeed, enter the digital world to teach and reach these students effectively.[12] This is the current environment in which academic libraries must operate to provide services to the new generation of academic users, and this is the domain in which OPACs have to compete in order to remain viable research tools.

While undergraduates may be comfortable in the digital environment, they are not necessarily expert searchers. A report by the United Kingdom's Joint Information Systems Committee observed that, while undergraduates may be digitally literate and comfortable using Google, "digital literacies and information literacies do not go hand in hand."[13] The report further suggested that searching skills have not improved—and may have deteriorated—during the last twenty-five years.

## Research Questions

The study sought to answer two research questions:

- Question 1: Are library patrons carrying out complex searches employing advanced search features such as limits and Boolean operators?
- Question 2: What is the reaction of library users when they launch an OPAC search that gets zero hits?

Question 1 grows out of an awareness that librarians usually have been trained in search strategies and information retrieval in the OPAC environment, and that undergraduate users have not received that same degree of training and do not have the same depth of experience. OPACs are populated, however, with carefully created MARC records that contain numerous fields that allow for limits to be enacted or that permit other advanced searches.

Question 2 begins with an understanding that undergraduates are more at home using Google and other search engines, which index whole documents along with metadata and information about linking sites. As Marcum noted, full-text indexing provides considerably more keyword access to full-text results in the search engine than to the surrogate in the OPAC.[14] The number of hits returned in a Web search can be staggering. OPACs are not meant to work in the same way as Web-based search tools. In OPACs, especially those of medium-sized academic libraries such as the one investigated, receiving zero hits in response to a search is common.

### Study Design

To address the research questions, the cataloging librarian worked in collaboration with the systems librarian to ensure that full and complete transaction logs were available for the month of March 2007. The integrated library system (ILS) in use was Voyager. Voyager allowed for a complete capture of transaction information based on IP address and session identification number. Using those transaction logs, this study took into account all nonlibrarian queries during the chosen month, then focused in particular on three days of transactions. Queries initiated by library faculty or staff workstations were isolated via IP range and removed from consideration. All other queries were retained for this study, including those generated from IP ranges for on-campus (for example, student dorms, library computer labs, and

other public, nonlibrary staff computers) and all off-campus, Web-initiated, non-Z39.50 queries. All Z39.50 queries of the library catalog were omitted from the study because they do not utilize the OPAC interface to the ILS. Three days judged to be representative of the month were selected for close examination: Monday, March 5, the first day of the school week and a week before Spring Break; Saturday, March 24, a weekend day one week after Spring Break; and Wednesday, March 28, a weekday when undergraduate classes do not meet. The Wednesday schedule allows students time to do research and participate in on-campus activities and therefore no classes are held.

The retained queries were first analyzed to address the research question about the nature and sophistication of the OPAC queries. When possible for this study, all system queries were taken into account. All queries from the selected days were used to calculate the average number of queries per user, the average number of terms per query, the type of search or the index browsed, and whether errors using initial articles were present. However, because the ILS in use at the library does not allow for advanced limits or Boolean operators to function in "browses" (such as the "Subject Heading Browse" or the "Author Browse"), only queries with the labels "Keyword—Relevance" and "Keyword—Boolean" were examined for limit- or Boolean-based elements.

In addressing the second research question about the reaction to zero hits, all non-library staff queries for each of the three days were examined. In each case of failure, the study noted what patrons did to correct or re-run the query, or if they abandoned the query. For this part of the study, some users modified the terms used in their query without changing the type of query. Other users, when faced with a failed search, chose to query a different index or to change search terms and switch indexes. Others modified the search by adding advanced operators such as Boolean terms or quotation marks, or search limits such as location or item type. Other possibilities included running the same erroneous query again, unchanged, or stopping the search entirely. Each of these possibilities was coded for the failed searches.

The library's OPAC may differ from other search interfaces that patrons have encountered on the Web or when using other library Web sites. The library's OPAC interface defaults to a left-anchored browse of the title index. OPAC users are instructed in the drop-down list of queries to "omit initial articles" because initial articles are not interpreted in the system as stop words. The initial articles are not indexed as part of the title due to the MARC 245 (title field) second indicator in the bibliographic record. This indicator instructs the system to begin indexing the title under the first significant word; initial articles are ignored by the system. Left-anchored, patron-initiated searches that begin with an initial article fail automatically.

Patrons may run other queries when doing research on the OPAC. A series of searches and browses appears on a drop-down list to the right of the box where patrons enter text. Two primary keyword searches "Keyword—Relevance" and "Keyword—Boolean" are possible through this drop-down menu. Neither of these keyword search options is immediately visible to users; users must first select from the drop-down list of choices before scrolling down to these last two options. The "Keyword—Boolean" search does not automatically "AND" together users' search terms. Therefore, if users include two or more terms but do not enclose them in parentheses or add Boolean operators between them, the search will fail. The "Keyword—Relevance" is the only search that allows for a relevance ranking; it automatically "OR"s together terms without necessarily "AND"ing them first. The system also counts some frequent words as being less relevant. A query, therefore, can have a hit high in the relevancy ranking, but all of the search terms will not appear in the corresponding bibliographic records. Figure 1 presents the screen capture for a failed search.

Besides using the queries from the drop-down box on the search screens, users can navigate to desired records in other ways. Access points in bibliographic records automatically have blue underlined hyperlinks. Clicking on a hyperlink launches a browse of that access point's index, automatically placing that term in the results screen. The "Advanced" search functionality, a separate search interface on the "Advanced" or "Guided Search" tab, is another way for patrons to query the OPAC. The advanced option automatically inserts Boolean operators between concepts and applies quotation marks if the user chooses to search as a phrase.

### Manipulating the Transaction Logs

Server transaction log entries were manipulated using Microsoft Excel. The date and time of the query, the session ID assigned by the system for all queries carried out during

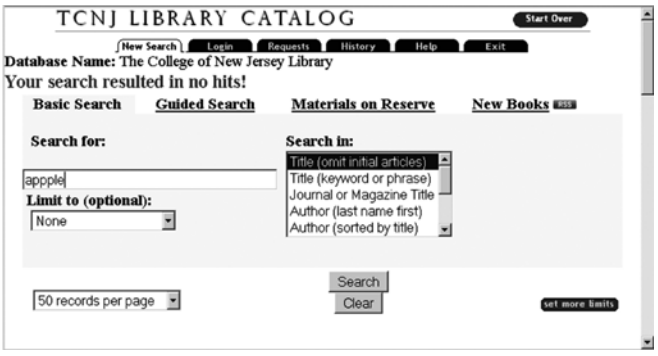


**Figure 1.** Basic Search Interface: No Hits

a fourteen-minute period of activity, the type of query, the terms entered (including Boolean operators, initial articles in title searches, and typographical errors), whether user-initiated limits were placed, whether the system placed limits on the search, whether the query was launched as a result of a hyperlink within a viewed record, the number of hits if a search was carried out, and the quality of the search (basic or advanced) were recorded as part of the transaction logs.

For the one-month period of study, 43,587 queries emanated from non-librarian computers on campus and from off-campus searchers. This number of queries was significantly higher than anticipated by librarians given the small size of the campus community and the fact that this was a medium-sized library. Sessions were counted as queries that took place within a system-defined time limit. If the system was inactive for fourteen minutes and forty seconds, it timed out the session. The end of a session did not necessarily indicate the end of a set of related patron queries. If patrons resumed a search after being timed out, they had to start over. In starting over, users would have to reselect the index to search or the query to run and retype any search terms or queries.

Throughout the process of assessing the transaction logs, care was taken not to infer anything about the reaction of the user. Because users were unavailable to answer questions about their motivation, their behavior, or their satisfaction with the results, this survey only reports aspects of the queries that were quantifiable. Conclusions are not drawn about anything other than the mechanics of the searches themselves and the way in which they were constructed.

## Results

**Question 1: Are library patrons carrying out complex searches employing advanced search features such as limits and boolean operators?** For the three days analyzed in-depth, the OPAC was queried 3,698 times from off-campus and library personnel computers. The largest percentage of queries (31.7 percent) was the default "Title (omit initial article)." Because this is the default search, it requires the least amount of effort to initiate on the part of the user. The second most common query was the "Keyword—Boolean" search (15.6 percent) and the third most common query was the "Keyword—Relevance" search (12.2 percent). These latter two searches were, as mentioned earlier, hidden from view on the drop-down menu (see figure 1 for the five visible index choices). Users had to intentionally seek out the keyword searches to use them. In table 1, the queries are listed in the order that they appear in the drop-down box visible to patrons. The results listed in table 1 only include queries keyed in by patrons. They do not include browses that were launched by clicking a hyperlinked access point in an opened bibliographic record. Such browses do not require patrons to select indexes, enter terms, or decide on a query strategy; for this reason, they have not been included. Noteworthy is that 1,071 (28.96 percent) of the 3,698 searches conducted during the three days initially failed.

For the purpose of this paper, the "Keyword—Boolean" and "Keyword—Relevance" were the only two queries considered in the discussion of keyword searching. "Title keyword" was ignored because it was initially assumed to

**Table 1.** Total Queries and Failures During Study

| Label in System | Type of Query | Three-day Total for Queries *N*=3,698 | Percent of Total Queries | Failed Searches *N*=1,071 | Percent of Search Failures |
|---|---|---|---|---|---|
| Title (omit initial articles) | Left-anchored browse | 1163 | 31.5 | 606 | 56.6 |
| Title keyword | Keyword search | 290 | 7.9 | 163 | 15.2 |
| Journal or magazine title | Left-anchored browse, with system-applied limit | 51 | 1.4 | 29 | 2.7 |
| Author (last name first) | Left-anchored browse | 404 | 10.9 | -- | -- |
| Author (sorted by title) | Left-anchored browse | 21 | 0.6 | -- | -- |
| Subject heading browse | Left-anchored browse | 290 | 7.9 | -- | -- |
| Call number bBrowse | Left-anchored browse | 0 | 0.0 | -- | -- |
| Keyword—Boolean | Keyword search | 576 | 15.6 | 174 | 16.3 |
| Keyword—Relevance | Keyword search | 452 | 12.2 | 17 | 1.6 |
| Tab 2: Guided search | Search | 200 | 5.4 | 82 | 7.7 |

be much less popular. In retrospect, including it would have been worthwhile because it was more frequently used than expected. Future iterations of this research will therefore consider "Title keyword" along with the other two keyword search queries possible.

Measures of search complexity, such as the number of terms included in each search and the number of limits used, are a way of documenting the sophistication of the queries. More than one-third of the three days' keyword searches used two terms in the query. The average number of search terms was 2.6. Fewer than 2 percent of queries entered included either "6 terms" or "7 or more terms." See table 2 for further details.

Another measure of search complexity is the use of limits and advanced operators such as Boolean operators. Both were observed being used in the searches studied. In TCNJ library's OPAC, a searcher can post different kinds of limits, including date of publication, type of material, and location in the library. In the keyword searches studied over the three-day period, 10 percent (365) had these kinds of limits applied. The addition of limits can be an effective strategy for restricting to the information when used correctly. The number of searches with limits is much higher than anticipated, and implications will be discussed below. Table 3 shows the advanced and special operators used in the searches over the three days. The advanced search technique most commonly used employed Boolean operators. Operators may not have been used intentionally especially if, for example, they were simply words entered as part of a title. Intentionality on the part of the user is impossible to ascertain in a study such as this where users are not able to explain their actions. Although not advanced operators per se, periods appeared in several of the keyword searches (2.3 percent). "Not" and "&" were never used over the three-day period, while quotation marks were used in almost 10 percent of keyword searches.

**Table 2.** Use of Terms Keyword Searches

| Number of Terms in Keyword Searches | 3-day Total *N*=789 | Frequency of Use % |
|---|---|---|
| 1 term | 142 | 18.0 |
| 2 terms | 288 | 36.5 |
| 3 terms | 201 | 25.5 |
| 4 terms | 79 | 10.0 |
| 5 terms | 54 | 6.8 |
| 6 terms | 12 | 1.5 |
| 7 terms or more | 13 | 1.7 |

**Question 2: What is the reaction of library users when they launch an OPAC search that gets zero hits?** During the three days of the study, almost 30 percent of all searches failed overall. For this study, failure is defined as a query that results in zero hits. The default left-anchored title browse led to the most failures. In the drop-down box, this query is labeled "Title (omit initial article)." Despite the instructions about the initial article, a full 5 percent of these queries began with either "A" or "The." All of these queries failed because of the incorrect use of the initial article whether or not the material was used. Despite the fact that this query is a browse of the title index, if the character string does not make an exact match with entries in the title index, the system declares zero corresponding results.

When faced with failure, users had to devise a strategy for how to proceed. The most common reaction (52.3 percent) to a failed OPAC query was to relaunch it using different or modified terms at least once in the session. More than one-third (35.9 percent) of the searches opted to change the index, either with or without changing the search terms. Nine percent of users simply stopped searching after getting zero hits. More than 12 percent ran the same failed search again (either immediately or later in the session) without any changes. This percentage is lower than the 18.9 percent of re-run failed searches reported by Connaway, Budd, and Kochtanek before the advent of the Web.[15] Some users tried adding search limits or other advanced search strategies when relaunching a search; in doing so, they did not always rekey the search terms. Although the addition of limits can be a good strategy when narrowing a large result set, it is not an effective strategy if the basic search is yielding no hits. Table 4 presents the user responses to a failed search.

## Discussion

This study examined the transaction logs from queries carried out by students, faculty, and off-campus users at a

**Table 3.** Use of Advanced Search Features

| Advanced Search Feature | Frequency of Use in Keyword Searches % |
|---|---|
| AND; and; And | 17.0 |
| OR; or; Or | 0.8 |
| NOT; AND NOT | 0.0 |
| . (period) | 2.3 |
| : (colon) | 0.1 |
| & (ampersand) | 0.0 |

medium-sized academic library. Librarian searches were excluded from this study. Queries considered in this research likely were initiated by undergraduates, as this is the largest population served by the TCNJ library. Transaction logs give no indication of the status, experience, mindset, or goals of the user, and these aspects of the user experience cannot be evaluated in this study.

The answer to the first research question—whether users employ advanced operators such as Boolean operators and search limits—was seen as affirmative. For this element of searching, users understand that there are ways to limit within the library catalog in order to refine their search. The use of limits was especially noteworthy because patrons had to apply them manually from the search screen. The prevalence of using Boolean operators is less certain, because the conjunction "AND" may have simply been a word that was part of the search string being queried.

Almost 30 percent of searches resulted in failure (zero hits) with the current OPAC system. Despite different types of queries, use of limits, and browses that could potentially get users the information they require, the TCNJ OPAC produced failure nearly one third of the time. A medium-sized academic library does not have every piece of material that its users may want. The OPAC, however, should be designed in a way that is intuitive for patrons.

Because the default search and most-used query was the "Title (omit initial article)" and because this search was responsible for the most failures, it deserves special consideration. Users are supplying initial articles with this query despite instructions. At this selective college with top-ranked students, users are not reading instructions and are approaching the default query assuming they know how to use it. Libraries need to be sure that the default search made available to patrons is one that does not need explanation or instructions.

The way the ILS is constructed influences some of the failure that patrons experience. Patrons are forced to supply Boolean operators or quotation marks when doing a "Keyword—Boolean" search. Users who do not add these advanced operators generate failed searches, no matter how correct their search terms are. Of the failed searches in the study, Boolean searches accounted for 16.3 percent of the total (see table 1). Users had fewer instances of failure when carrying out the "Keyword—Relevance" search. Relevance searches failed less than 2 percent of the time. However, when users opted for the relevancy ranking afforded by the "Keyword—Relevance" search, their terms combined in a way that made multi-term queries or nonunique terms ineffective.

Other failures or problems came from the patrons themselves. Users did not necessarily choose the most logical index or query type for the terms that they entered. In some instances, users did not read the instructions. This is clear in the way that they did not follow the examples, especially concerning the use of initial articles in the default search. Typographical errors also kept patrons from finding materials (see figure 1 for an example of the basic search interface result for no hits due to a typographical error). Interestingly, patrons often re-ran a failed search, exactly as typed, before quitting the session.

The strategy of applying limits to searches, especially failed ones, demonstrated that users were willing to make use of advanced operators and special OPAC-only capabilities. Users were aware that these features were available and were willing to try them. For this reason, despite the current ubiquity of Web search engines as gatekeepers to digitized information, suggestions about abandoning some of the rigorous work that goes into cataloging library materials would be premature. Users do understand that library OPACs have unique features, and are forming their search strategies accordingly. Librarians will also want to continue studying the pros and cons of providing only a simple "Google-like" search box as the primary OPAC interface if the system provides no way for patron-supplied limits to be incorporated in the search.

**Table 4.** Patron Responses to Failure

| Strategy Employed | Frequency of Use | Frequency of Use When Search Failed % |
|---|---|---|
| Modify terms | 560 | 52.3 |
| Change index | 384 | 35.9 |
| Add or remove advanced operator | 60 | 5.6 |
| Stop searching after failure | 96 | 9.0 |
| Redo failed search outright | 110 | 10.3 |
| Redo failed search later in session | 21 | 2 |
| Observation: Typos in failed searches (minimum) | 28 | 2.61 |

## Concluding Recommendations

Two primary recommendations for improving the OPAC search experience could be considered based on

this study. The first recommendations include adding elements to the ILS to enhance the user experience. The second set of recommendations assumes that ILS technology cannot be modified for the moment and that a reconfiguration of the local decisions that underlie the OPAC setup must be carefully undertaken.

To alleviate the issue with failed searches due to typographical errors, automatic spell-check functionality should be added to the system. The spell-check feature should be based on the live local OPAC, and should only suggest spelling suggestions that are actual terms in active OPAC records. Search engine spell-check features or generic dictionary-based approaches are discouraged. They may suggest terms that are spelled correctly, but that do not correspond with the content of bibliographic records in the local OPAC. Correcting the misspelled word is desirable; being able to suggest relevant library holdings after the correct spelling is identified is more desirable.

As an added feature to the ILS, a separate indexing of titles that includes initial articles could be generated to complement the regular index. If a system had titles indexed both with and without initial articles, regardless of the coding in the MARC 245 field, left-anchored title searches beginning with initial articles would no longer fail. Left-anchored title searches would succeed even if patrons misunderstand the instructions for title entry. From a cataloging point of view, this solution is not perfect. It would, however, get patrons closer to the material they seek and solve the problem of failed title searches that include initial articles.

The second set of recommendations focuses on the in-house setup of the database. Even among TCNJ librarians, confusion existed between the two types of keyword searching. For the public search experience, one type of keyword search needs to be chosen and perfected within the limitations represented by the system. The search terms ideally would be "AND"ed together automatically and should not require patrons to enter Boolean operators in order to run a basic search. After terms are searched using an automatic "AND," a way to "OR" together the terms and to continue to populate the list of hits should be possible. Because the default left-anchored title search resulted in so many failures, the library should make the new keyword search the default search for users.

Finally, the OPAC interface needs to be intuitive enough to use without reading instructions, tips, or help screens. Web usability is studied in the creation of Web pages; it should also be a major factor in the creation of a design layout for the OPAC. Patrons are major stakeholders in the look and feel of the OPAC, and they need to be consulted when the OPAC interface is being studied. User-centered design principles should be employed. When possible, the OPAC should be customized for the patrons, keeping in mind their expectations and the popular online information systems they use.

Like the search interfaces and online services (e.g., book, video, and music merchants) that are ubiquitous on the Web, library OPACs should not be change-adverse. Evaluating and updating interfaces should be continuous. Continued and repeated research, such as the study described in this paper, should to be conducted to ensure that the library Web site continues to serve user needs. OPAC design and evaluation is an ongoing process and through proactive initiatives such as OPAC redesign projects, libraries are uniquely positioned to work with patron-stakeholders to meet their evolving information needs in the Web environment.

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# Literature of Acquisitions in Review, 1996–2003

By Barbara S. Dunham and Trisha L. Davis

*In this review, the authors discuss key trends in acquisitions found in the professional literature published from 1996 through 2003. During this period, technology surfaced as the primary factor affecting acquisitions policies and procedures. Advances in technology allowed vendors and libraries to select, order, and pay for materials via automated systems and the Internet. Such changes also allowed acquisition units to streamline many of their processes and improved efficiency. As the demand for electronic resources continued to grow, acquisition units frequently were restructured to meet the more complex acquisition process. Acquisitions librarians often were required to assume the responsibility for negotiating license agreements and establishing online access, and to handle the myriad issues required to manage electronic resources. The changes in technology were complex improvements to existing workflows; the addition of electronic resources management introduced significant new responsibilities to the acquisitions unit.*

The impact of technology on acquisitions and the place of acquisitions in the library organization figured prominently in Schmidt's review of acquisition literature of the early 1990s.[1] Both themes carried through the published literature from 1996 through 2003. The literature reflected an evolution within acquisitions work centered on automation and the use of the Internet, both offering new options for communication and business practices. Budgets continued to present challenges due to the rapidly increasing costs of scholarly publications.

The last review of the acquisitions literature covered the period through 1995.[2] In order to bring the acquisitions literature reviews up to date, this paper will cover 1996 through 2003 and a second paper will cover the period 2004 through 2007. Only the key publications from 1996 through 1999 are summarized. The literature from 2000 through 2003 is reviewed in depth.

## Research Method

For 1996 through 1999, the authors made very broad searches of the databases, conference proceedings, and journals on acquisition literature to identify major trends and issues for those years. Articles and abstracts were reviewed for scope and coverage of acquisitions topics. Selected publications were chosen to represent the key trends and issues of importance during this time frame. No attempt was made to review every article.

To identify the significant acquisitions literature published from 2000 through 2003, the authors took two approaches. First, general acquisitions searches were conducted in the databases Library Literature and Information Science Abstract with Full Text and Library, Information Science, and Technology Abstracts with Full Text. Second, additional searches of these databases and selected library journals were conducted using more specific terms related to acquisitions. Citations and abstracts were reviewed for possible inclusion in the review. Searches were

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limited to scholarly journal articles, conference proceedings, and reports in English. Every attempt was made to find literature relating to any aspect of acquisitions; however, the authors concede that some works may have been overlooked. Selected articles were retrieved and reviewed in detail by both authors, who then grouped them by topics. Those papers that bridged more than one topic were placed under the topic that was most prominent. Some literature fell outside the major themes identified or was peripheral to the topics; these were excluded from the review.

## Summary of the Acquisitions Literature 1996 through 1999

Automated systems development and communication via the Internet continued to be the primary forces for change in acquisitions. Lines began to blur between collection development, acquisitions, and cataloging. Ordering materials no longer occurred just within the acquisitions department and cataloging no longer occurred just within the cataloging department. Approval plans, while still traditional in many respects, took on a new look as the activity of receiving, reviewing, and accepting or returning books on approval became a virtual activity rather than a physical one. Because of the ease of communication via the Internet, vendors modified how they offered old services and opened doors to new ones.

Invariably, the availability of automation updates and new technologies resulted in change, allowing tasks to be done more effectively and more efficiently. Such changes brought new opportunities and often new responsibilities. They forced organizations to examine their purpose, processes, and structure in order to take better advantage of these opportunities.

Reorganization and change were continuing topics in the acquisitions literature. At the 1995 Feather River Institute, Cook presented a paper on reorganization at Appalachian State University.[3] The Association for Library Collections and Technical Services (ALCTS) hosted an American Library Association (ALA) preconference in 1997 on changes occurring in acquisitions.[4] The journal *Library Acquisitions* published a special issue in 1998 on reorganization in acquisitions departments.[5] This issue presented articles on the merging of the acquisitions and serials departments at the University of New Mexico, decentralizing serials receipts at two branches of the University of Washington, outsourcing at Stanford, reorganizing collection development and acquisitions at the University of Dayton, acquiring electronic resources at Texas Tech by using a cross-functional team approach, and the changes in the acquisitions department at Notre Dame in the 1990s.

With reorganization, roles changed. Staff positions often were expanded and the acquisitions librarian usually assumed new responsibilities. The literature reported a decrease in the number of acquisitions librarians. Many were moved to other assignments within the library; others assumed new responsibilities such as collection development, negotiating license agreements and pricing for electronic resources, and copyright management. Diedrichs stressed that "acquisitions librarians must also be prepared to move beyond our traditional roles and cultures. Our first and foremost job is to be librarians."[6] Ogburn indicated that acquisitions librarians were moving into a records and materials management phase with more time being spent on acquiring records, information, and services and less time on actually acquiring materials.[7] Two key skills needed for success were negotiation and the ability to understand contracts.

Regardless of the impact of automation on organization, the budget continually commanded attention. Hoffert reported in 1998 that public libraries experienced an average increase in materials budget of 7 percent compared to 1997.[8] Budgets for academic libraries also increased an average of 7 percent, but so did costs.[9] Hoffert noted that during the previous five years, the costs for monographs had increased 25 percent and serial prices had increased even more. For the Association of Research Libraries (ARL), she also noted that serial unit costs rose 169 percent from 1986 to 1996. The purchase of monographs and serials decreased, which was offset by increased interlibrary loan activity and libraries forming consortia.

Budd and Craven were concerned about the impact of shrinking budgets on library resources, especially on holdings of unique titles.[10] Their study demonstrated a significant decline in unique materials across all subjects. Morris and colleagues at Iowa State University performed a time-and-cost study to determine staffing costs associated with monograph acquisitions and the impact of automation on the process.[11]

As a result of the continuing budget squeeze, acquisition librarians continued to focus on approval plans, firm orders, and discounts to trim costs. Outsourcing was tested and viewed with varying opinions and results. Approval plans became more prevalent as a cost savings measure. *The Acquisitions Librarian* dedicated an issue to the topic of approval plans.[12] Authors in this issue investigated the degree of overlap of titles between institutions, whether approval plans work for small libraries, the impact of approval plans on the firm order process, the impact of approval plans on the library structure and the need for active management to make them cost effective, the issues of profile construction and returns, and relationships between vendors, publishers, and libraries. An ARL study compiled by Flood showed that approval plans continued to be efficient and cost effective.[13] Wilkinson and Thorson examined using a Request for Proposal as another means for acquiring serials

or for acquiring approval plans.[14] Even small details became important to cost savings. Barnes examined ways of utilizing macros to save keystrokes and reduce errors for selection, budgeting, and ordering.[15]

The Internet increased libraries' ability to do business with nontraditional vendors. At the 1998 Feather River Institute, Scheschy discussed the growth of online publishers and booksellers who provide alternative sources for materials.[16] The use of these Internet options was particularly important for reducing costs of acquiring rush materials and out-of-print titles.

The serials crisis that began in the 1980s continued through the 1990s, although the term "serials crisis" was used less as the decade progressed. The rising cost of materials resulted in difficult choices as librarians struggled to meet users' needs with a limited budget. Librarians were faced with either trimming monograph budgets to support ever increasing serials budgets or canceling serials. The literature showed that the methods often used to determine which journals to cancel were price histories, journal usage, faculty recommendations, and alternative sources. Part of Bowling Green State University's cancellation plan reported by Brown was to use document delivery as a means of meeting users' needs for journals no longer held locally.[17] Nationwide, concern was expressed about the effects of repetitive cancellations. Chrzastowski and Schmidt found that libraries' cancellation of unique journals and retention of only core collections had resulted in widespread duplication of journals nationwide.[18] The increasing importance of electronic journals and their growth was the topic of a paper by Okerson, who discussed the different pricing models offered by publishers and vendors.[19]

The issue of licensing to access versus purchasing to own quickly emerged. Negotiation of licenses, a new skill for most librarians, often became the responsibility of the acquisition librarian as part of the ordering process. Literature during this time provided guidance on understanding, evaluating, and negotiating licenses. Yale University developed a Web site and electronic discussion list, LIBLICENSE (www.library.yale.edu/~llicense), to help librarians navigate the clauses of a vendor's license. Okerson described this initiative in a 1999 article.[20] Davis explored the impact of license terms on copyrights and the need to identify and protect user rights in the licensing process.[21] Kaye discussed copyright boundaries and the impact of technology on those boundaries.[22] An ARL survey compiled by Soete and Davis examined how libraries organized electronic resource licensing and how associated problems were handled.[23]

Outsourcing and licensing moved library and vendor closer together. From a vendor's perspective, Nauman described how vendors changed their services and products to meet the evolving needs of acquisition departments and technical services as a whole.[24] Alessi discussed changes made at Baker and Taylor in response to libraries' needs.[25] At the 1996 ALA Annual Conference, Gammon discussed changes at the University of Akron Bierce Library with the implementation of services from Blackwell North America, which she referred to as a partnership to provide better service to the library's users.[26]

Allen and Hirshon examined the recent growth in collaboration by academic libraries, which was demonstrated by the growth of consortia.[27] They based this growth on the concept that more can be done by working together than alone. Because of the serials crisis, rapid development of technology, and rapid growth of electronic resources, consortia offered an alternate model for the acquisition of materials. Resource sharing also gained more interest and growth. Allen and Hirshon saw this trend evolving as libraries seek alternatives to tight acquisitions budgets and the continually rising costs of electronic resources.

Government agencies have been shifting their services and information distribution to an electronic environment since the late 1980s. The Government Printing Reform Act of 1996 (HR 4280) limited what a depository library received in print. Hernon and Dugan reported that the government was expanding its fee-based online services, and shifting more costs to the libraries and users at a time when libraries and their depository collections were facing increased fiscal stringencies.[28] McCraw saw the issue for libraries as how to budget for and fund access to government electronic information, and when the government failed to provide quality electronic information, how to budget for commercial databases.[29] Cheverie was concerned about funding for the continued support of traditional materials, for the need to preserve an electronic copy, for the maintenance of an electronic collection, and for the organization and access to the collection.[30]

An important work during this period edited by Schmidt is *Understanding the Business of Library Acquisitions*.[31] This book, with chapters written by experts in the field, takes a complete look at acquisitions from publishing to purchasing and includes chapters on ethics, management, and organizational issues.

## Review of Literature from 2000 through 2003

Budgets continued to be an important topic in most of the literature from 2000 through 2003. The use of electronic interfaces between libraries and vendors for ordering and payment processing was explored in the literature as one way to control costs. Approval plans and standing orders were addressed in the literature with a focus on managing them as another means of control of costs. Libraries looked toward online booksellers as an option for acquiring in-print and out-of-print materials.

### Budgeting and Financial Interfaces

Budget constraints continued to be a significant issue for public and academic institutions in the new millennium. Clayton examined the four areas comprising a library's "bottom line" and their relationship to the parent institution's budget.[32] He identified three areas directly related to acquisitions: budget cycle, budget control, and budget allocation. Clayton emphasized that acquisition purchases, like operating funds, need to be spread evenly throughout the budget year to avoid an end-of-the-year surplus of funds that must be spent before fiscal year close. He advised libraries to overorder monographs to some extent because invoices may not arrive in time for posting against the current fiscal year. He recommended that libraries retain expenditure information to be able to monitor vendors and track allocations.

Integrating or linking the financial systems of the academic library's acquisitions unit and the parent institution provides an efficient mean of processing purchases. Lamborn and Smith's study examined the challenges, benefits, and process of automating the financial interface between the libraries' acquisitions systems and the institutions' accounting systems at the University of Northern Colorado and Colorado State University.[33] They were able to transfer payment information directly into the university accounting system, which eliminated rekeying data, reduced errors, completed the payments to vendors faster, and freed library staff for other work. The authors discussed the evolution of automated interfaces and the issues and steps for establishing the interface and the workflow.

Another interface frequently used for transferring data is Electronic Data Interchange (EDI), a standard by which information may be exchanged electronically between businesses regardless of location. The International Committee on EDI for Serials (ICEDIS) described it as "the exchange of commercial information between computers irrespective of processing system. This is achieved by the use of standard formats that must be agreed to between trading partners for each document."[34]

In the last decade, libraries in the United States have been moving slowly toward full implementation of EDI. Bluh discussed the values in using EDI and the issues associated with implementing it.[35] She suggested that using EDI could improve efficiency of routine operations such as ordering, claiming, and invoicing; free staff for more complex work; improve response time; reduce errors; and provide accurate and timely fiscal control. She also examined the use of EDI by libraries as a means of fast and reliable business communication with subscription agents and book jobbers. Bluh surveyed a small group of legal publishers regarding their current or planned use of EDI. She found that knowledge of and interest in EDI was minimal for most legal publishers because the majority of their customers had neither the need nor the capability of utilizing it. Agents and jobbers that served a larger universe of partners (including academic libraries, public libraries, and special libraries) were found to be interested in EDI.

Muir examined the use of EDI from a public library perspective in the United Kingdom and discussed the challenges associated with implementation.[36] His investigation revealed that significant savings could be gained by eliminating manual processes. Using an online system resulted in fewer errors and improved processing times. In addition, a switch to vendor-supplied cataloging resulted in savings in staff time, which allowed staff to move into customer-service roles in the library.

Taglienti and Srivastava faced a different problem in the tracking and payment of acquisitions materials.[37] Local accounting needs and the acquisitions module of the integrated library system (ILS) did not mesh, forcing the authors to develop local Microsoft Access databases to automate existing practices. Initially they developed a standing order database for automating standing order check-in and a periodical account database for serial invoicing. Later, these databases were combined and a monograph orders database was developed to form an acquisitions module.

Most libraries continued to face budget constraints from 2000 through 2003. Flowers reported on strategies to gain internal operating efficiencies at the University of North Carolina at Chapel Hill.[38] In 2002, she implemented five strategies to meet budget constraints. The first was the "book year," which is the specified time frame during which funds may be encumbered for the fiscal year. The second was the use of a large approval plan that could be adjusted to meet changing budgets. The third was the use of students or temporary help during peak ordering and receiving periods. The fourth was to favor use of nonstate funds, if available. The fifth was to use the vendor's database for online selection and ordering to place orders more quickly. In addition, other operational efficiencies such as vendor evaluation, encumbrance control on foreign currency conversion, resource sharing, cancellation of print serials, use of standing orders or firm orders, less tolerance for duplicates, and more price negotiation with publishers were used.

Part of managing the budget is the allocation of funds. Dividing the acquisitions budget among the various departments is a potential source of conflict. While Clayton mentioned allocation in discussing the library's bottom line, acquisitions is often deeply involved with the process of determining how the allocation will be made. Durant described six methods for allocation of funds often used in an academic environment.[39] A lump-sum budget involves a set amount of money allocated for materials that is used until all the money is spent and that uses a single account to fund all activities. The formula budget allocates dollars based on various criteria as established by the library. The line-item

budget allocates amounts to disciplines or departments. The program budget allocation reflects library service provided to patrons, while the performance budget (or function budget) reflects the tasks that the library staff performs. The last type is the zero-based method, which is informed by projected activities and expenses as opposed to current or past services. Understanding these budgeting options is important to determining the best method to use.

Mulliner described the allocation formula used at Ohio University (OU).[40] The OU formula is applied to 70 percent of the budget and spans the academic departments. The formula includes media and format criteria. Five percent of the budget is used for interdisciplinary and area studies program and 25 percent is used for library needs such as general periodicals, reference, and special collections. This base formula is carried forward each year and updated every three years. The updated formula is applied only to increased (new) funding. Disciplines may not be funded at 100 percent of their formula levels, but over time funding will draw closer to the desired level. This method moderates the effects of any big swings in funding levels, avoids subscription cancellations due to formula-dictated decreases, and mitigates opposition against using the formula during budget decreases.

Payne of Furman University Library (FUL) discussed key lessons learned from developing a new allocation formula designed to be implemented over a two-year period.[41] The impetus for the allocation change was journal price inflation. Payne stressed that the library must articulate the current system's problems, set clear goals for the reallocation process, and realize that no ideal formula exists. Budget allocation is a political process requiring persuasion and compromise. Formula development is iterative and creates winners and losers. Libraries must be ready to deal with political fallout.

Arora and Klabjan were concerned with the increase of periodical prices, the tremendous growth of scholarly research, and the limited increase in the acquisition's budget.[42] Their focus was the allocation of funds from a single journal budget among several interrelated units of an academic library. Their allocation method used a mathematical model based on citations data from the Thomson Scientific ISI database. The model also could be modified to include allocations for electronic journals based on usage data from vendors for the number of times electronic journals were accessed.

Wise and Perushek proposed another mathematical model for budget allocation, which they referred to as goal programming.[43] Goal programming techniques rank the goals in terms of their importance to the organization and provide a solution for conflicting or incommensurable goals. The model focuses "on minimizing the deviations between the goals themselves and what can be achieved within the given set of constraints rather than trying to maximize or minimize the objective the objective criterion directly."[44]

Kao, Chang, and Lin proposed another allocation model, which they referred to as "acquisition budget allocation model via data mining" or ABAMDM.[45] In this model, mined circulation data informed how the budget should be distributed to the various departments. The authors believed that daily circulation data would be influenced by the use of electronic resources, complicating the allocation process. The model was tested at Kuhn Shan University of Technology and proved to be an acceptable method in determining budget allocation.

Similarly, Wu used a data mining model (DMBA) for allocating funds based on the utilization of library materials.[46] Wu's model extended the ABAMDM model by computerizing the process using Structured Query Language (SQL) to gain efficiency in preprocessing circulation data. The program uses that data to develop the concentration (utilization) for the different circulation categories, which is combined with statistics to derive the final weights as a basis to determine allocation.

Packer researched the impact of interdisciplinary Web-based, full text databases and bundled subscription packages on the library's existing allocation plan.[47] Bundled packages, often referred to as the "Big Deal," offer a mix of electronic journal titles, some of which may have little value to the institution's teaching and research agendas. Publishers advertise that such bundled subscription packages lower the individual cost of each title. Packer argued that a bundled purchase may not be easily justified if its cost requires cancellation of other valued materials or reduces funds for some academic disciplines. The key question is how well the aggregated subscriptions support the library's curriculum and research objectives for its collection. Her study showed that "the change in 'expenditure' for subscription titles ranges from nothing at all to 221.715 percent for Health Sciences titles, followed by 58.448 percent for Sociology and 32.75 percent for Technology."[48] Packer's analysis revealed that bundled packages provided a differential gain that was unintended, unplanned, and made the effects on the budget inequitable.

Albanese reported that the 2001 *Library Journal* Academic Library Book Buying Survey confirmed the widely held impression that libraries were shifting from print to electronic resources.[49] One factor driving this shift was cost-effective access to information provided by vendors' full text databases. The key factors influencing the purchase of full text aggregated databases as well as electronic journals were distance learning programs and student demand for access to online materials. The study revealed that even as material budgets increased slightly, rising inflation and increased cost of digital materials diminished the library's buying power, resulting in continued cancellation of journals. The study

also revealed that the availability of electronic resources reduced spending for books in areas such as reference, computer science materials, and science materials.

Petrick examined the acquisitions budget of the State University of New York to determine whether the increasing purchases of electronic resources were affecting the overall acquisition of materials at the university.[50] Budget data from 1994 through 2000 showed that in some cases, print materials were cancelled due to duplication of electronic journals available within an aggregated database. His findings indicated that the funds spent on electronic resources were increasing but that the increase generally was not taken from other areas.

Gherman, university librarian of Vanderbilt University, addressed two major acquisitions problems—budget allocation and storage space.[51] The methodology used for budget allocation was based primarily on use statistics because the library did not have a centralized budget. This traditional method of allocation had become unreliable with the increased use and availability of electronic resources. At the same time, storage space was at a premium because the collection had filled the existing space. Given these two conditions, plans were made to build a digital library by aggressively acquiring digital products. Gherman also developed a strategy for managing the existing print-based collection. The library joined the Information Alliance with the University of Tennessee at Knoxville and the University of Kentucky, which supported resource sharing. Vanderbilt focused on reducing internal costs so that more funds could be redirected to scholarly resources. Vanderbilt also participated in a pricing experiment called PEAK (Pricing Electronic Access to Knowledge), a pilot project that provided access to all Elsevier journals, and joined the Southeastern Library Network (SOLINET) for the consortial purchase of e-books.

For school libraries, much of the acquisitions literature focused on budgets, practical applications for controlling budgets, and developing ways for schools to acquire materials on restricted budgets. Truett and Lowe studied the allocation of the school library budget in North Carolina and performed a survey of schools in western North Carolina.[52] They were interested in the distribution of monies to the school media centers. The involvement of site-based management teams (SBM) or school improvement teams (SIT) in the allocation of the budget, how involved the media specialist were involved in the allocation process, and the media specialists' understanding of the budget process were influences. Funding of public schools in North Carolina is based on average daily membership (ADM) in which the enrollment is multiplied by the per-child allocation determined by the state. The suggested allocation for the media center was 60 percent of the instructional materials budget. For 2001–02, the authors calculated the allocation per student for the media center was $29. The authors found that few media specialists knew the total school budget or what percent of the budget they received. They found that even though schools had SBMs or SITs, the principals made the final budget decisions and the final approval of purchases. Five percent of the media specialist reported a zero budget, and more than half reported $7,500 or less thus showing inequities in the school library amounts.

The May/June 2002 issue of *The Book Report* contained several articles in a section titled, "Spending Smart: How to Budget and Finance" that provided practical advice about managing collections and budgets in school libraries.[53] Bernstein offered suggestions on budget planning and spending priorities.[54] She suggested developing a budget by using guidelines and statistics from the state education association as a starting point. This approach could also serve as a starting point for discussing budget needs with the administration. Bernstein also offered suggestions for handling teacher and student materials requests.

Baule offered steps to increase the materials budgets and observed that often the reasons for not getting needed funds are that school librarians fail to ask or their proposals are not focused on the right issues.[55] He pointed out that schools often have discretionary funds that can be requested and recommended that requests should focus on the budget holder's priorities. Baule also provided ten suggestions for stretching a budget.

Barringer used Microsoft Excel to manage her school library's budget, her orders, and her collection.[56] She developed a template in Excel that conformed to her school district's requisition standards. Formulas entered into the template automatically updated the spreadsheet and budget. By checking the sheet, Barringer could tell what had been ordered so that duplicate orders were not placed, which books were on back order, and which requests were being held for more funds.

Using a credit card for library purchases can be an easy way to expedite purchases and save money. Buchanan requested a library charge card for purchasing materials.[57] One of the main benefits was the turnaround time, often within two days, for receipt of the materials. A second benefit was the savings on shipping charges for charge card orders, which may be 8 to 10 percent of the total. Buchanan established procedures for creating a purchase order, the approval process, placing the order, and bill payment. She stressed the need for responsible use of a library charge card and the importance of maintaining good records and a good filing system.

Harbour utilized collection mapping to maintain her collection and to make budget decisions.[58] Collection mapping can help media specialists make weeding decisions, show how the library collection supports the curriculum, support funding requests and plan budgets, and show where

the monies have been spent. She detailed the process of establishing a collection map and how to use it for collections that support a specific unit. Harbour found collection mapping to be a good planning tool and, over time, to be useful to determine the quality of a collection.

### Approval Plans and Standing Orders

Approval plans and standing orders continued to be a major topic in the acquisition literature, mostly from the perspective of cost. New technology enabled libraries to move from the traditional approval review shelf to an electronic approval shelf.

Flowers described the goal of acquisitions at the University of North Carolina at Chapel Hill as obtaining material quickly, cheaply, and efficiently.[59] She examined how approval plans and standing orders affect the accomplishment of these goals. Depending on how standing orders and approval plans are administered, they can reduce the cost of material. Flowers determined that savings could be gained if some items on standing order were switched to an approval plan. She found predicting expenditures was difficult because publication patterns are not regular. She noted that some monographic titles can be handled more efficiently on an approval plan that is monitored and tweaked as needed.

Langendorfer and Hurst examined the options of purchasing continuations on approval plans or on standing orders.[60] They summarized the advantages and disadvantages of both plans using the vendor YBP. The key advantage of a standing order plan is that the vendor provides important services such as duplication control, change of status of series, quantity of stock, and discounts. An approval plan offers the flexibility to evaluate volumes and accept only what is needed, the ability to adjust the library's profile for series, and discounts. While each library should evaluate their local needs, the authors suggested that the standing order is a better choice if a complete series is desired; otherwise the approval plan offers more flexibility.

Plodinec and Schmidt evaluated approval plans and standing orders to see if they offered a possible means of controlling cost.[61] The Mississippi State University (MSU) Libraries established an approval plan with Blackwell Book Services to supply books from 338 university presses. Included in this plan were seven presses that also provided standing orders. The standing order for the University Press of Mississippi was maintained; however, MSU Libraries did further research before deciding to drop the remaining six standing orders or block them from the approval plan. The authors found that costs could be reduced by 4.72 percent by using the approval plan even when taking into account shipping and handling costs. Timeliness of books received from the vendors varied. Those on standing orders arrived before those on approval 82 percent of the time. Department heads did not consider timeliness the most important factor. Twenty-nine percent of the books received on the standing orders were either excluded from the approval plan due to either profiling choices or cost limitation, or were deemed not appropriate by the vendor. MSU Libraries considered the ability to review the books on the approval plan an important advantage over the standing order process. Given this and the cost savings, MSU Libraries decided to drop the standing orders.

Bartolo, Wicks, and Ott described the process of establishing a monographic approval plan in geography, which also could be used for selection across the OhioLINK (Ohio Library and Information Network) consortium.[62] Under the statewide Cooperative Collection Building Initiative, libraries could develop their own profiles for statewide use. Kent State University Libraries wrote a new monographic approval plan profile and explored the degree of interdisciplinary overlap in geography as part of their initiative. The exploratory study showed measurable interdisciplinary interests warrant further study to determine if joint acquisitions between disciplines could maximize investment and possibly have application in statewide approval plans.

Oddo demonstrated that establishing a Modern Greek approval plan was not an easy process.[63] Oddo designed a plan that focused on Modern Greek history, literature and literary criticism, economics and economic theory, social conditions, and political science. His initial approach was to modify one of the existing foreign language approval plans, but he found that they could not be easily modified for Greek materials. Oddo then made inquiries directly to Greek vendors; but these vendors responded slowly or not at all, and generally had a limited in-stock offering. The best source for Modern Greek titles was colleagues traveling to Greece who would purchase books for the library or would encourage booksellers to send orders immediately. In the end, Oddo established a new approval plan covering general reference texts and individual bibliographies, history, economics, social history, language, fine arts, Greek Church history, and serials with the hope that the selected vendor will be responsive.

A frequent challenge faced by acquisition librarians is the request for material that is not yet published (NYP). The primary concern is tracking the order and publication status because they have a forthcoming effect on the budget. Bazirjian described a procedure developed by the Acquisitions Services Department at Pennsylvania State University (PSU) Libraries to efficiently handle NYP materials.[64] PSU Libraries made the decision to not carry over NYP materials as encumbrances from one fiscal year to another because they affected purchase capability in both the current and new fiscal years. PSU Libraries used the Sirsi Corporation software, Unicorn, as its management system for NYP orders.

By building modified bibliographic records for NYP orders in Unicorn in advance of publication, acquisitions eliminated the need to store or track paper order requests. The system provided regular reports for the NYP titles, allowed selectors to view their requests, and allowed the acquisitions department to view a list of the NYP requests. A report, based on a pre-established review date, could be generated for the selectors to check monthly by title or subject. When the title became available, an order was placed. If a title were not yet available, a new review date was set.

Resource sharing among institutions has created a need to build group or consortial approval plans to maximize benefits. Diedrichs described the development of the OhioLINK statewide consortial approval plan.[65] She discussed the concerns, the process, and the success of developing a cooperative approval plan for the purchase of monographs. The vision was to select only one vendor for the approval plan with OhioLINK signing the agreement on behalf of all libraries, eliminating the need for each individual library to do so. The expectation was that the discount would be the same or better than existing approval plan arrangements. Each individual library would retain control of its own approval file and the central system would track the number of copies ordered. The two main barriers to the project were commitment (participation was optional) and infrastructure support. Other potential barriers were turf protection, expense of loaning versus purchasing, rigidity of definition, budget issues, strained consensus, and turnover in membership. Diedrichs also discussed the process of selecting the vendor for the consortium, consortia-specific issues, and the benefits of the plan.

Armstrong and Nardini examined the possibility of a consortial approval plan for the Triangle Research Libraries Network, composed of Duke University, North Carolina Central University, North Carolina State University, and the University of North Carolina at Chapel Hill.[66] For their study, acquisitions in four Library of Congress class numbers were examined over a six-month period to determine if current needs were being met by separate approval plans or if a consortial plan would be of benefit. Their study focused on determining how much overlap occurred, how titles not acquired on approval were ordered and received, the level of use based on circulation data, whether low circulating titles could be placed in working categories, possible savings if plans were coordinated, and whether titles not acquired would be valuable additions. The study revealed that savings would be realized if the approval plans were coordinated.

Worley described how the General Libraries of the University of Texas at Austin took advantage of two options offered by Blackwell's Book Services to reduce their costs.[67] By using Blackwell's Preferred Edition and Paper Preferred options, the Libraries were able to reduce costs by nearly 11 percent. The General Libraries had two approval plans to obtain titles from the United Kingdom and from the United States. No discount was received for titles received under the UK plan, but titles received under the U.S. plan were discounted and frequently offered at a lower list price. By switching to the Preferred Edition option, UK titles that were also available for purchase through the U.S. office were received directly from the U.S. unit with the related discount and lower pricing. The switch to the Paper Preferred plan provided the paperback edition instead of the hardbound edition if there was a price difference of a certain amount and if it would be available within sixty days. Worley provided a detailed description of their approval plans prior to implementing the two options and the process of establishing them. He also described some of the limitations that libraries need to be aware of when using either plan.

Technology enabled vendors to offer new services or to offer old services in a new way, such as the virtual approval plan. Pugh noted that selectors have commented that they do not have sufficient time to look at approval shelves.[68] A virtual approval plan could improve this situation by eliminating the time constraints. However, a virtual approval plan could increase the number of titles for online review. Pugh suggested using a virtual approval plan as a supplement to the normal process for the selection of difficult titles.

Clendenning's article discussed the changing roles of collection development and acquisitions at the University of Virginia Libraries (UVL).[69] Looking for a better way to meet its primary goal of responding quickly to users' needs, UVL looked for an improved method to expedite delivery of approval plan books. One solution was for YBP to supply approval notification slips in electronic form through their Global Online Bibliographic Information (GOBI) order database. Through GOBI, the selectors could do both the selecting and ordering functions. This reduced the time delay of handling paper slips. In some situations, the stock would be depleted by the time the order was placed, and it would be placed on back order. Clendenning reported that with the change to the online approval system, delivery times were dramatically reduced, books arrived within two weeks of the invoice date, and materials arrived shelf-ready.

With the rising journal costs, Galbraith of Washington State University's Owen Science and Engineering Library wanted to scale back or eliminate the approval book plan as a way to reduce costs.[70] Galbraith's plan was to utilize Collection Manager, Blackwell's Web-based approval plan. Selectors received training from Blackwell on Collection Manager and eNotes, and Blackwell addressed their concerns and procedures. After a year and a half of evaluation, the library switched to ordering via Collection Manager and stop using approval books. Galbraith found that they were more successful making selections by using Collection Manager, eNotes, table of contents, and book jacket infor-

mation than by having the vendor select and send titles on approval.

Flowers and Perry examined decentralizing ordering and moving to online selection and ordering, which they called vendor-assisted e-selection.[71] Factors influencing the move toward e-selection and online ordering were decline in library staffing, desire to meet user's expectation of delivery times, and development of expanded services and online tools by vendors. The authors described the changes made in the Academic Affairs Library at the University of North Carolina Chapel Hill and at the University of Chicago Libraries to implement an online selection and ordering process. Some of the trade-offs in implementing the process were the potential increase of duplicate items, a more complex process that tied the library more closely with one vendor, and the time and training required to establish the e-selection process.

McColl and colleagues of the Tri-College Consortium wanted to reduce material costs and staff time.[72] The Consortium (Bryn Mawr, Haverford, and Swarthmore colleges) share an online catalog and library materials. Because of their close physical proximity, Bryn Mawr and Haverford shared a shelf approval plan while Swarthmore had its own shelf approval plan. By using a virtual approval shelf, the three colleges shared a single approval plan and reduced duplication and costs. In addition, they saved on travel time for selectors by eliminating the need to review the books in person. They also switched to a shelf-ready service, which reduced the processing time and shipped the books directly to the receiving library. While this change clearly reduced acquisition's costs and time, the authors were concerned about the added online review time spent by the bibliographers. They hoped that the approval plan profile could be adjusted to eliminate such extra work in all but a few subject areas.

Vendors have developed electronic products to replace most of the print tools used for finding, evaluating, and ordering resources. Wiegand evaluated several cost-effective and customizable electronic products available for use in the acquisitions process at small libraries.[73] Wiegand reviewed ChoiceReviews Online, Baker and Taylor's Title Source II, Faxon's kLibrary, jake, Scout Report, Serials Update Service, and Publist.com for their use in ordering monographs and serials.

Public libraries also were shifting to electronic products and moving toward online purchasing. With the prospect of adding a new branch library, Hale needed to find a more efficient method of ordering and tracking materials for North Las Vegas Library District.[74] Their ordering process was manual and lacked an efficient means of tracking orders, often resulting in duplicate titles being ordered. With the implementation of Baker and Taylor's Title Source II (TSII), the library district could download bibliographic records into the local catalog and the librarians could easily search the TSII materials for collection development purposes and to review bibliographic information. TSII allowed customers to leave orders on the system, making it easy for librarians to see if a book has been ordered previously.

One very essential book that covers all aspects of acquisitions and could fit under every heading in this review is *The Complete Guide to Acquisitions Management* by Wilkinson and Lewis.[75] Some of the topics discussed are the acquisition of different material formats, the organization of acquisitions departments, the acquisitions systems, vendor selection, the publishing industry, outsourcing, and ethics. It is essential reading for novices in acquisitions and a resource for others in acquisitions and librarianship in general.

## Electronic Resources

Since the inception of electronic journals, their management has been a challenge. Their acquisition process does **[not?]** fit well with existing procedures for managing print materials. Acquisitions departments have struggled with integrating them into existing workflows.

Loghry and Shannon of the University of Nevada at Reno library worked as part of a taskforce to develop a workflow for managing electronic journals.[76] The result was the development of two Electronic Products Work Forms (EPWF). The first form, EPWF-I, contained selection and acquisition information and the subject specialists' recommendations. The second form, EPWF-II, tracked the steps in the approval and purchase process, including creation of license files, ordering, and establishing service once the vendor has turned on access. By utilizing these forms, the library was able to document the increase in workload and adjust staffing and structure changes.

Duranceau and Hepfer surveyed libraries about staffing needs for managing electronic resources.[77] From the survey responses, they found that staff support at least doubled and electronic collections grew at least ten times larger during the same period. Six areas were consistently reported as understaffed: licensing, cataloging, non-OPAC record management, access trouble-shooting, site monitoring for content changes, and setting up and maintaining links to electronic journals and Internet-accessed databases. They also found that while libraries consistently added staff hours to support electronic resources, they often did so by distributing the work to existing staff rather than hiring additional staff. At Massachusetts' Institute of Technology and the University of Buffalo Libraries, the authors found that few of the tasks involved in managing e-resources were routine; many required a broad knowledge of library systems and networks, as well as product details. While the research did not recommend whether support should be centralized

or not, it did confirm that more staff is needed to support electronic collections.

Goldberg and McAdam examined the University of California at Irvine Libraries' Internet Processing Working Group, a collaborative approach for selecting, acquiring, and processing electronic resources.[78] The group drafted requirements and guidelines for processing electronic resources in a collaborative approach with members from collection development, acquisitions, cataloging, reference, and systems. They also developed an online Electronic Resources Order/Processing Form for bibliographers to provide ordering information. A technical services coordinator, who later became the electronic resources acquisitions librarian, was responsible for identifying pricing of electronic resources and access requirements, licensing, and creating bibliographic records with orders attached.

Jasper of the Houston Academy of Medicine at Texas Medical Center (HAM-TMC) also discussed a collaborative approach to managing electronic resources with a focus on providing and maintaining access.[79] The assistant director for collections played a large role in the licensing and managing of the electronic resources. At HAM-TMC the serials librarian handled subscription inquiries and payment.

Ball examined the purchasing of electronic resources by six public library consortia and five individual libraries in England.[80] Data was gathered from surveys, interviews, proxy server hits, and service providers used for reviewing subscription renewals. Findings indicated that electronic resources are very expensive and that consortial negotiations often do not result in any price advantage. The trend was toward the purchasing of traditional materials. CD-ROM was the main digital medium and electronic resources were not integrated into the catalog with traditional materials. Because of the complexity of licensing for electronic resources, the preference was for a single national license for public libraries. Also, consortia and individual libraries saw a need for a national approach for electronic resources procurement.

The licensing of an electronic resource is often complex and often requires negotiation. Alford examined licensing through historical and practical perspectives.[81] His discussion of negotiating points provided clear explanation of terms and arguments for negotiating changes. Miller's article focused on the introduction of licenses and four important areas: services clause, authorized users, licensee clause, and reasonable effort.[82] She provided examples of each clause, different interpretations of the clauses, and a library solution for each interpretation. Richards examined the impact of licensing on copyright and the potential impact on licensees waiving their rights and on fair use.[83] Blosser discussed how vendors could assist library customers with licensing and registration information.[84] He viewed the vendors as middlemen, who could work with publishers to standardize the format and language of licenses. Urquhart examined the issues associated with developing a framework for purchasing and licensing electronic resources within a consortium as a form of outsourcing.[85]

For a report commissioned by the Digital Library Federation, Jewell examined how research libraries acquired commercial online materials.[86] He covered ten key issues encountered in the acquisitions process beginning with economics and selection. Other topics addressed were licensing issues, user support, usage information, and evaluation. Jewell's report includes suggested practices for each area discussed.

Hawkins looked at the development of trends for electronic books (e-books) in the book industry.[87] He also discussed issues associated with the purchase of e-books and the special equipment that libraries may need for users to read them.

### Booksellers and Vendors

Kruse and Holtzman examined the usefulness of online booksellers and the barriers associated with purchasing from them.[88] Local purchasing regulations and institutional auditing requirements are potential obstacles to online purchasing. Problems may occur if a signed purchase order is required or if the seller fails to include the purchase order number on the invoice. Competitive bidding is sometimes required for expensive purchases. Online booksellers often require purchases be made with a credit card. Frequent use of credit cards in acquisitions may require a procedure for tracking purchases and balancing statements. Online booksellers are geared to serve the needs of an individual, not the needs of a library. The library may not have an interface that works directly with an online vendor, which may require entering the same data into the bookseller's system and into the library system. The library could also be faced with varying shipping costs, rather than a flat fee as negotiated with most traditional book dealers. Some online booksellers offer discounts, but the discounts are normally not as high and may not offset shipping charges. While most online booksellers can handle books in print, they may have varying difficulty accepting order for prepublications, back orders, and out of stock materials. Kruse and Holtzman pointed out that the use of programs called shopping bots, which search the Internet for pricing information and may identify a source offering an expensive item at a lower price. The Web has increased accessibility of out-of-print dealers. Similarly, the Web has helped libraries find new sources for foreign titles. The Web has also aided in finding replacement copies and titles a publisher reports to be out of stock and in obtaining rush items and textbooks.

Gray of Marshall University and Brantz of Colorado Christian University (CCU) utilized discounted wholesalers

for the purchase of print materials on two projects as a way to supplement their collections on a limited budget.[89] Gray used Green Valley Book Fair, which offered a selection of 500,000 titles. Green Valley agreed to search Marshall's catalog for duplicates before the final purchase. Any duplicates missed could be returned. Some drawbacks were the selection availability, the need for an itemized invoice that listed the titles, and the cost of travel and lodging. On the positive side were the great savings and the opportunity to personally examine and select books for the library.

Brantz used local book superstores, primarily Barnes and Noble and Tattered Cover, for his project.[90] As with Marshall, a process was developed to determine duplicate titles. Faculty could select materials in person at the bookstore and leave them at the sales desk for later acquisition. Because faculty could build their collection for their courses, the process resulted in adding books directly useful to the students, providing subject expertise in areas where the staff might be lacking, and building a strong institutional relationship between the faculty and the library, which has increased the support of the library.

To meet faculty's requests for quick delivery time of ordered materials, Flinchbaugh tested the use of online book vendors.[91] Eleven online book vendors were evaluated on availability, fill time, and cost. Six of the eleven were considered acceptable. Rush orders were filled in less than ten days and the cost per volume decreased. Flinchbaugh also implemented several organizational and procedural changes for ordering from online book vendors and for service improvement.

Allen and Miller performed a price comparison of books purchased through a traditional vendor and an online bookseller to see which was cheaper.[92] The authors selected titles consisting of trade and scholarly materials varying in subject and bindings. As each title was considered for purchase, pricing data was collected from the vendor and online bookseller the same day. Only eight of the tiles on the list were available from the online bookseller at a lower price than from the vendor. Ordering from the traditional vendor resulted in a savings of $273.86 over the online bookseller.

Kellerman described a process used at Pennsylvania State University Libraries to provide out-of-print titles that are difficult to find.[93] Because publishers warehouse less material than they once did, books may become out of print quickly. Few publishers offer print-on-demand books. Current technology can produce a copy within a few days, eliminating the need to wait months for a volume. In some situations, Kellerman proposed that the University Libraries create a digitized copy of the book if it could be obtained through interlibrary loan. She found per page costs ranged from $.13 to $.39 for copyright royalties, staff time, paper, phone calls, and so on. Kellerman saw this as a viable option for libraries until vendors are able to provide service competitively.

Tonkery discussed publisher and corporate mergers and acquisitions (M&A) from a vendor point of view.[94] He noted that companies see M&A as an "opportunity to expand the market share, gain access to technology or content, increase the product line, and increase the value of the combined companies for both sets of stockholders. Often there is an opportunity to reduce costs by reducing corporate overhead."[95] Changes in information technology and publishing had a great effect on M&A in the subscription agencies. Tonkery reported that between 1991 and 2001, subscription agencies dropped in number from one hundred to fewer than ten. Antitrust legislation and regulations provide a means of monitoring areas that are dominated by a few publishers such as STM (scientific, technical, and medical), legal, and tax publishing. Tonkery noted that because pricing patterns are perceived as monopolistic in the STM area, the marketplace is looking for other alternatives.

Stanley looked at M&A from a librarian's perspective as mergers proliferated and reduced supplier choices.[96] She noted that libraries need to understand that publishers and subscription agencies are businesses and thrive by showing a profit and growth, creating a market share, and responding to changing markets. She suggested that libraries check the financial stability of a newly merged company, not overlook any new services gained, and examine bottom line costs and services in determining if the company meets the library's needs. Stanley suggested that vendors remember the money and time invested in a business relationship between a library and a vendor when considering a merger. Consulting libraries before the final merger could resolve issues before they affect the library customers. She also suggested that vendors provide financial statements and information on services that will be changed.

Edelman and Holley's book, *Marketing to Libraries for the New Millennium*, is an essential source for understanding the marketplace.[97] The book is based on a one-day meeting sponsored by the Joint Committee of the Association of American Publishers and the ALCTS. Publishers, vendors, and librarians discussed the results of a survey of library marketing practices and trends. The book covers changes and needs in the marketplace, the finding and selecting of books using the Internet, and how librarians determined from whom they would purchase materials. The book covers the complexities associated with the acquisitions of materials.

### Reorganization and Changes in Workflow

Fowler and Arcand evaluated time and cost studies for monographs acquisitions at Iowa State University (ISU) Libraries between 1994–95 and 2000–01.[98] The goal of their research was to increase the organization's effectiveness due to the use of advanced technology. One key result was the consolidation from multiple approval plan vendors

to a single approval vendor. The authors explained that "the streamlining effect of the library's reliance on one vendor approval plan, as opposed to a number of smaller ones, meant that the library was able to identify and fill gaps in its collection."[99] A related improvement was implementing PromptCat to receive records for materials ordered on approval. ISU Libraries also merged the serials and monographs acquisitions departments and automated all ordering via the Horizon ILS. These changes allowed ISU Libraries to downsize staffing through attrition and reclassify other positions with greater responsibilities to higher levels. Over several years, they saw reductions in hours and costs as these changes and technological improvements were implemented. The revamped organizational structure and workflows resulted in greater efficiencies, time and cost reductions, and staff improvements.

Branton and Englert faced a perception of inefficiencies due to a lag-time problem between the receipt of orders and the availability of the items at the University of Southern Mississippi (USM) Libraries.[100] Also, due to a budget crisis, the USM Libraries were mandated to reduce and flatten the technical services unit organizational structure in a matter of days. The acquisitions and cataloging functions were merged into a new department under a single department head. A cataloging-at-point-of-order team handled all tasks from point of order to receipt of materials. Ninety percent of the print materials ordered could be handled by this new process with little change to the bibliographic record, resulting in faster delivery of new materials to the user. When duplicate and repetitive tasks were addressed and manual procedures were eliminated, USM Libraries were able to reduce the time between ordering and receiving by six to eight weeks.

Maurer and Hurst provided a detailed description of Kansas State University's (KSU) new workflow and the integration of automated technology to handle routine work and reduce costs.[101] When KSU Libraries and Media Services changed vendors to YBP for their approval and firm orders, KSU also shifted their outsourced monograph cataloging from OCLC TechPro to OCLC PromptCat. With the integration of YBP and PromptCat into the workflow, KSU eliminated pre-order searching for duplicates, the transfer of records into the Innovative Interface Inc. (III) system prior to ordering, and the keying of order records from YBP, and also gained electronic invoicing from YBP. As a result of implementing these new processes, KSU was able to reduce their cost per bibliographic record by $4.96.

Greever of the Kenyon College Library faced a similar experience when the library implemented YBP's online service, GOBI.[102] Kenyon had a slip approval plan with YBP, but did not receive books on approval. With GOBI2, faculty and liaisons could select and approve orders and acquisitions staff could complete the process. As a result, acquisitions staff did less keying and less OCLC searching, bringing them closer to one-stop shopping. Additional gains were made when the Kenyon library implemented PromptCat, through which the cataloging records matched to and overlaid the YBP brief records in the local catalog.

Marshall and Tellman described the reorganization of technical services staff when the University of Arizona (UA) Library downsized and the professional positions were transferred to public services.[103] The basis for the reorganization was primarily economic, but supported UA Library's mission of placing more librarians in public services. Several new plans were implemented by UA Libraries to process incoming materials under this new staffing scenario. One decision was to receive books on approval plans, preprocessed, shelf-ready, and with an appropriate bibliographic record for the catalog. Another decision was to use cataloging copy for materials received from other vendors and foreign approval plans when possible. Because a backlog was not considered acceptable, a "frontlog" was created for materials for which no records could be found. The frontlog is a public book stack area consisting of partially processed materials. The frontlog allows users to check out materials waiting for complete processing. After one year, items on frontlog for which no records are available are sent for cataloging at OCLC TechPro. The authors found that in a within a year, 898 books were retrieved from the frontlog; of that group, only 3 percent did not have records and were sent to TechPro.

Bazirjian discussed the team structure implemented at the Pennsylvania State University Libraries and the actions taken as a result of a team assessment survey.[104] With the reorganization to a team structure, one librarian headed the Acquisitions Services unit and the number of functional areas was reduced to three teams: approval/gifts, firm orders, and commonwealth services. Serials and Preservation were removed from Acquisitions Services. Teams were self-directed, and each month one staff member handled the team functions on a rotational basis. A team assessment survey was designed to determine strengths and needs of the teams; the survey results showed that the team structures should be maintained and enhanced with clearer definitions of team roles and a department head in human resources. The greatest areas for improvement were poor performance and disciplinary issues, lack of informal rewards and recognition of accomplishments, and need for accountability of assignments, performance standards, and an annual performance review process. Bazirjian stressed the importance of taking action on items from the survey.

### Collection Development and Interlibrary Loan

A daily challenge for collection managers is finding ways to maintain and grow a collection within budget constraints. While all collection managers face this challenge to varying

degrees, the sciences and engineering fields present unique situations.

A new model for adding materials to a collection consists of collaboration between collection development, acquisitions, and interlibrary loan units. Ward and colleagues examined two models for on-demand collection development that use acquisition funds for the purchase of books requested by patrons through interlibrary loan (ILL).[105] The University of Wisconsin–Madison Libraries limited purchases to the subject areas housed in the General Library System, the current year plus three prior years, to monographs or proceedings, a maximum cost of $250, potentially high use items, and foreign language and imprint titles. Requests that could not be filled through ILL were reviewed as candidates for on-demand purchase and rush processing. Primarily online providers were used for English language titles depending on the discount and shipping cost. For foreign purchases, traditional vendors were consulted. A credit card was used when possible to facilitate payment and delivery. During the two years studied, 135 titles were purchased at an average cost of $36.86 per book including shipping, and were processed and cataloged for an average patron pickup time of eight days. The materials circulated an average of 3.5 times each with 73 percent circulating two or more times.

Purdue University Libraries' (PUL) pilot for on-demand books was similar to the one at UW–Madison.[106] The main difference was that PUL sent the books to patrons before being cataloged. Purchases were based on ILL requests for recently published titles that appeared appropriate for inclusion in the local collection. Purchasing criteria were scholarly works in English, published within the past five years, available for shipment within one week, limited to a maximum cost of $150, and available from Amazon. Once a purchase was approved, a screen print from Amazon was sent to the acquisitions unit for ordering; the titles also were entered into the ILL management system. During thirty months, 1,943 books were purchased at an average cost of $37.50, including shipping. Fifty-seven percent of the books circulated at least once after being cataloged while only 31 percent of books acquired through the regular process circulated once. Bibliographers reviewed about half of the on-demand books and indicated that 80 to 99 percent of them were appropriate for the library collection.

Allen tested a similar plan at the Thomas Crane Public Library (TCPL) in Quincy Massachusetts, where an expedited purchasing model was utilized to fill ILL requests by purchasing titles that were subsequently added to the collection.[107] In the TCPL model, the ILL librarian considered purchases on a case-by-case basis for problematic titles. Selection was based on availability, price, subject matter, and suitability for the collection. Titles were minimally processed and circulated to the patron first. They would be considered for addition to the collection when returned. Seventy-nine percent of the items were received in fourteen days or less at an average cost of $17, which included shipping. In 2001–02, 84 percent of the items circulated an average of three times; in the previous two years, 95 percent circulated an average of eight times per item and 30 percent circulated more than ten times.

Truck described the situation of the Public Library of Des Moines (PLDM) where the budget had not been increased in ten years and the weeding of the collections had been ignored.[108] The project included determining the collection size for each library branch, choosing a median collection age, and calculating the needed budget based on the average cost per item in a material type. The desired collection size was set at 500,000 items with a medium age of five years. Truck chose median age over average because the "older important titles that are retained in the collection will not influence or *drag down* the overall age measurement of the collection."[109] Later the median age was adjusted by using the date added to the collection instead of its copyright date. This allowed for heavily used classic titles that are replaced frequently to be considered new items. Under the collection plan, 10 percent of the collection was to be replaced every five years, which made calculating the budget simple by multiplying that figure by the average cost per item. To allocate the funds by media type and among the branches, a collection management team was formed. As a result of implementing the collection development plan, Truck was able to triple the budget, decrease collection size, and increase the availability of popular collections.

## Conclusion

The acquisitions literature from 2000 to 2003 provides a significant example of the impact of new communication technologies on library operations. Acquisitions work was reviewed, redesigned, and restructured to take advantage of the dramatic power of Internet resources and capabilities. The literature of this period reveals how acquisitions staff embraced these opportunities and developed their units into significantly more efficient operations.

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# How Much are Technical Services Worth?

## Using the Contingent Valuation Method to Estimate the Added Value of Collection Management and Access

By Philip Hider

*This paper reports on an application of the contingent valuation method in order to establish a dollar estimate of the value added to a collection by a library's technical services. The overall benefit-cost ratio of the Wagga Wagga City Library, in New South Wales, Australia, was estimated to be 1.33:1, whereas the benefit-cost ratio of its technical services was found to be much higher, at 2.4:1, indicating the particular importance of this work. The use of stated preference techniques such as contingent valuation is discussed, with reference to library and technical service contexts.*

Technical services departments are often in the firing line when budget cuts are required. Their work may be valued by library managers, and indirectly by library patrons, but it is often less visible than the work of other departments, and particularly hard to measure in terms of the dollars it adds to a library's worth. This paper reports on an attempt to estimate this added value, in dollar terms, by means of a particular technique, namely, contingent valuation, and discusses how this technique, and related techniques, might be used for further investigation into the contributions made by technical services departments.

### Cost-benefit Analyses of Technical Services

While estimating the costs of selecting, acquiring, and processing items is relatively easy, determining the corresponding benefits, in monetary terms, is much less straightforward and has rarely been attempted. Instead, library managers mostly use internal measures such as circulation statistics, cataloging output, and so on, to gauge the performance of technical services departments. These measures enable managers to identify areas for improvement, but they do not indicate whether the technical services department adds as much value as, say, reference services. In order to compare the value of different library operations, an external unit of measurement is needed, such as the dollar. Benefit-cost analyses of the various library departments can then be performed.

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Library operations producing higher benefit-cost ratios are not necessarily the operations that should be assigned more of a budget. This is because an increase in investment might make less difference to operations with higher benefit-cost ratios, and also because benefit-cost ratios are likely to be interdependent to some extent. However, if operations with much lower benefit-cost ratios are expensive, then library managers can reasonably consider reducing their budgets, given a finite, and often decreasing, amount of income. Conversely, managers may have more difficulty justifying a budget cut when it was clearly demonstrated that the operation concerned returned a particularly high value for money.

Because technical services are usually not purchased by end-users, their value for money (or benefit-cost ratio) cannot be directly measured through reference to market prices. The same, of course, applies to many other library services. Instead, their monetary value must be estimated either indirectly, for example by surveying end-users' demand for alternative, commercially available services, or directly through what are known as stated preference (SP) techniques. While indirect measurement may sometimes be feasible for library services as a whole, or certain types of library service, it is less applicable to technical services work, which is essentially dependent on particular library collections. Thus we turn to SP techniques, which are explained in the next section.

## Stated Preference Techniques and Contingent Valuation

There are many situations where goods and services may not be marketed, but where knowing how much (or approximately how much) they are worth, in dollar terms, is very useful. Economists have developed a range of techniques, including SP techniques, to estimate how much consumers and potential consumers would pay for a good or service were it to be available in the market. SP techniques are most commonly employed in environmental economics, where the object is to find out the value to a population of a particular environmental benefit, such as conserving a forest. Two main types of SP technique are contingent valuation (CV) and choice modeling (CM).[1] In both cases, users and nonusers are surveyed and asked to respond to hypothetical scenarios. In CV surveys, individuals are asked how much they would be willing to pay (WTP) for a good or service, or how much money they would accept in order to forgo the good or service (WTA); in CM surveys, individuals are asked to choose between particular combinations of goods or services.[2] Although CM surveys can often produce richer data, the CV technique was used in this study, as it was considered easier to apply in the context of library use (and nonuse).

The CV method is somewhat controversial, even in fields such as environmental economics, but estimations based on the technique have been used by policy makers in a variety of areas, including the funding of public bodies. Murphy and others have shown how the accuracy of the method varies considerably, according to the particular ways in which the CV survey is designed and administered.[3] For instance, responses tend to be higher to WTA questions than to WTP questions; they also tend to be more reliable when questions are delivered in person, and when the sample is more representative of the population at large, covering frequent users, occasional users, and non-users.

The NOAA (National Oceanic and Atmospheric Administration) panel of experts established a set of benchmarks by which subsequent CV surveys are often judged, and further refinements have been developed in recent years.[4] Examples of what are regarded as best practice are use of a referendum-style question based on WTP rather than WTA questions; identification and filtering of protest responses (for example, responses that reject the scenario itself); and testing results by measuring their association with other variables, such as demographic ones. The CV survey used in this research project attempted to adhere to this best practice as closely as possible.

## Valuations of Library Services

Missingham, and Imholz and Arns have identified some recent studies that have sought to quantify the benefit of library services in monetary terms.[5] In some of these studies, the benefit has been defined primarily in terms of cost savings. An example would be the study conducted by the Graduate School of Library and Information Studies at McGill University, which estimated the savings to Canadian libraries provided by the catalog records from the National Library of Canada.[6] This approach assumes that a particular good or service is required, by one means or another. In other cases, a more open-ended assessment has been attempted, whereby an estimate of the value of a good or service is determined by the end-user. Such studies may occasionally be based on actual transactions—in the case of book sales, for instance—but most employ various techniques to estimate the value of nonmarketed goods and services.[7]

Only three of the studies cited by Missingham, however, employed SP techniques as either their primary or one of their primary methods.[8] In two of these cases, the library service as a whole was being valuated. The British Library used CV surveys to estimate that its key services were worth to the British public more than four times the money that they cost; and Holt, Elliott, and Moore employed a combination of methods, including CV surveys, to estimate the

benefit-cost ratio for public libraries in St. Louis, which apparently ranged from 2:1 to 10:1, depending on county.[9] In the third case, the subject of study was a national bibliographic database; using a CM survey, the National Library of New Zealand found a 3.5:1 benefit-cost ratio.[10]

Two other SP studies from the library and information science literature are noteworthy. Most recently, Aabø used a CV survey to estimate a 4:1 benefit-cost ratio for the public libraries in Norway.[11] Earlier, Harless and Allen used the CV method to estimate a benefit-cost ratio of 3.5:1 for the library reference service at Virginia Commonwealth University.[12]

Although these studies demonstrate that SP techniques can be successfully applied to library contexts, librarians' use of them has been quite rare. This project appears to represent the first time the CV method has been used to estimate the dollar value of a library's technical services.

## Research Design

The CV survey in this project sought to provide a valuation of a specific public library service as a whole, and of its technical services operations in particular. The public library in question is Wagga Wagga City Library, which is located in the center of Wagga Wagga, New South Wales, Australia, a city of 60,000 people. The library's physical collection comprises more than 100,000 items, including a wide range of periodicals, audiovisual materials, and reference resources, and a well-stocked children's collection.

The details of the survey's design and administration are presented elsewhere; a summary follows.[13] After piloting, the survey was administered as a printed questionnaire and distributed to households in and around Wagga Wagga. A cluster sampling technique was used with the aim of obtaining a sociodemographically representative sample of households, whereby sixteen Australian Bureau of Statistics (ABS) collection districts were randomly selected for the survey proper (after five other districts had been used for the pilot survey; there are about forty districts in and around Wagga Wagga altogether). Twenty-four survey forms were distributed within each of the sixteen districts by visiting homes on adjacent properties and verbally inviting householders to complete and leave the questionnaire out for subsequent collection (when an invitation was accepted, three properties were skipped). Completed forms were exchanged for a $5 shopping voucher. Of the 384 forms distributed, a total of 336 forms were completed and returned, which was considered both an excellent return rate and a reasonable sample size given a total population of around 18,000 households. Sociodemographic questions were included in the questionnaire so that the sample could be checked against corresponding characteristics of the population according to recent ABS statistics.

A sample copy of the questionnaire may be accessed at http://athene.csu.edu.au/~phider/cvquestionnaire.doc; an extract from the questionnaire is provided in the appendix. The questions in the survey from which dollar valuations could be estimated were based on hypothetical scenarios involving a change to the way in which the city council charged its rates. The three questions have been extracted from the questionnaire and included in the appendix. For these questions, instead of the council charging each household a single levy covering all its services, respondents were asked to imagine that the council now charged for its various services separately, including its library service. (Most of the City Library's funding comes from the council; a small fraction comes from the state government.) In the first scenario, the Council then held a referendum and asked its citizens to vote on a particular monthly levy for the library, which was deemed to represent the cost of the service at its present level. The survey made clear that if the vote was not carried, then the library would be closed. Six versions of the questionnaire were distributed, featuring six different monthly levies—the relationship between price and willingness to pay could then be expressed as a statistical function.

Respondents were asked two further WTP questions, based on similar scenarios. This time, however, the level of library service was reduced. In the second scenario, the library was converted into a self-service library, which consisted solely of the collection, maintained at its present level, and supporting access tools, such as the catalog. In the third scenario, the self-service library consisted solely of the collection, without a catalog. The monthly levies, on which respondents were asked to vote in the second and third scenarios, were scaled down according to the lower costs that would be involved in running the library and according to the responses in the pilot survey.

Two alternatives to referendum-based WTP questions are open-ended WTP questions, in which respondents are asked to name their maximum price, and WTA questions, in which respondents are asked about the minimum compensation they would accept in return for the service closing down. However, both these alternatives are considered to produce less accurate results, often exaggerating the actual demand. Further, both present difficulties in constructing realistic scenarios in the context of public library funding. Although Harless and Allen employed an open-ended WTP question for their reference service with the assistance of a payment card (on which respondents were asked to indicate their maximum WTP), such a question works less well for more abstract services, like technical services, and for services that are considered essentially public, that is, ones that cannot really be privatized.[14] Similarly, WTA questions about library services in general, or about technical services specifically, would likely be unrealistic. It is highly improb-

able that a council would sell off its library and pay a refund to its citizens, and inconceivable that a library would abandon all management of its collection.

Because technical services, in some form or other, are an integral part of a library's service, painting a scenario in which these services are paid for separately is unrealistic. Instead, scenarios were constructed, as described above, in which the other parts of the library service are dropped—something that is also unlikely, but feasible; indeed, the self-service library concept has been implemented on occasion. In order to compare the technical services' benefit-cost ratio with that of the library's overall ratio, a status-quo scenario, based on the present level of service, was also required.

Having respondents consider the three scenarios and their corresponding WTP questions independently was important, otherwise the order in which the questions were asked might affect results. To encourage this, the preamble to the three questions emphasized that they should first be read as a whole, but then considered separately: this has been shown to reduce any sequencing effect.[15] Theoretically, the questions should be ordered randomly in each questionnaire to counter any sequencing effect, but this was impractical in this case, because describing the reduced-service scenarios before the status-quo scenario could confuse the respondent and would be harder to comprehend.

The three WTP questions were formatted in a way that attempted to increase the accuracy of the responses by providing response options that allowed people to express support for a service or good without committing dollars to it.[16] One of the response options also allowed for protest votes to be identified, with respondents being invited to state other reasons why they voted against the proposal, including reasons reflecting their rejection of the system on which the scenario was based.

In case respondents did not know what they were being asked to value, a brief overview of the library and its services was included in the preamble to the WTP questions. The questionnaire also included various secondary questions about respondents' use of the library's services and collection, and about their demographic characteristics.

## Results

The survey was administered between May and July 2007. The demographic profile of the sample corresponded quite closely with recent figures from the Australian Bureau of Statistics for Wagga Wagga, with the exception of gender, where women were overrepresented among respondents. This bias was corrected for in the analysis. The number of protest votes, as identified by reasons given in one of the "No" response options, was reasonably low—3.3 percent for the present-level scenario, and 3.9 percent and 5.4 percent for the two self-service scenarios. Any atypical demand on the part of protest voters would therefore not significantly affect the results.

Disregarding the protest votes, the acceptance rates for each bid in the three scenarios are shown in table 1. All dollar values given in this article are in the Australian currency. While voting was sensitive to price in the case of the first and second scenarios, it was not so in the case of the third scenario, which proposed a self-service library with no catalog. Although a demand function involving various demographic variables could still be derived from the responses to the third scenario's WTP question, and an overall value estimated, this was not considered a valid result because the function did not involve an inverse relationship between demand and price. The six bids for the third question may have been set too low to bring out the demand curve, or there may have been a large sequencing effect on the third question, whereby respondents were influenced by the first two scenarios, even though they were asked to respond to the three scenarios independently.

The first two WTP questions yielded results that were deemed to be valid by virtue of the fact that they produced a demand model involving both price, in a strong inverse relationship, and certain demographic variables, demonstrating that the responses were not random. The optimal demand model was derived through binary logistic regression, a statistical technique commonly used in the CV method to analyze the relationship between demand and possible factors, where demand is represented by the binary variable of acceptance or rejection of the proposed levy (i.e., the yes/no vote). The covariates tested for inclusion in the demand

**Table 1.** Acceptance Rates for Bids in Scenario Based on Present Level of Service

| Scenario Based on Present Level of Service | | | | | | |
|---|---|---|---|---|---|---|
| **Bids ($)** | 2 | 4 | 8 | 10 | 12 | 20 |
| **Acceptance (%)** | 69.0 | 56.6 | 43.1 | 53.4 | 31.1 | 16.7 |
| **Scenario Proposing Self-Service Library with Catalog** | | | | | | |
| **Bids ($)** | 1 | 2 | 3 | 4 | 6 | 10 |
| **Acceptance (%)** | 57.1 | 45.1 | 30.4 | 57.6 | 41.3 | 32.7 |
| **Scenario Proposing Self-Service Library without Catalog** | | | | | | |
| **Bids ($)** | 0.5 | 1 | 2 | 2.5 | 3 | 5 |
| **Acceptance (%)** | 58.9 | 47.1 | 45.5 | 65.0 | 50.0 | 53.8 |

model were price (i.e., the proposed levy), age, sex, parenthood, education, and income as indicated by the survey responses. The larger factors on demand (such as price) were identified through the Wald statistic (see table 1). A greater Wald statistic indicates a larger factor. Equations involving the different variables were generated through the regression, with the larger factors being added first. The -2 log likelihood measure was produced for each new equation, its reduction indicating a better fit (i.e., a more optimal model). In the case of the scenario based on the present level of service, the -2 log likelihood was not reduced after the addition of the price, sex, education, and income variables—the optimal model was thus deemed to comprise these four factors. The statistical procedure was repeated using the data based on the self-service library scenario supported by the catalog, resulting in an optimal model involving price, sex, and parenthood.

The equations for the two optimal models were then used to estimate a mean WTP for the two scenarios: the demographic variables' coefficients (see column B in tables 2 and 3) were multiplied by their respective means, and the products were added together, along with the constant (also in tables 2 and 3), and then divided by the coefficient for price (also in column B). The demographic variables' means were based on the sample, except in the case of gender, where a ratio derived from ABS figures was used.

The calculations produced a mean WTP of $8.27 per month for the present level of service, and $3.66 for the reduced service (with the catalog). Multiplied by the estimated number of households in the city and its surroundings (17,756), the total value of the library's present services were estimated as $1,762,105 for the year, whereas a library that offered only a collection (including online resources) supported by technical services operations and output (including a catalog) was valued at $779,844. These valuations do not cover additional benefits enjoyed by organizations and visitors from outside of Wagga Wagga, but these are not considered to be that large in comparison with that derived by individual residents, and would probably not differ significantly in relation to the two levels of service.

The benefit-cost ratio of the library's services in general was thus estimated as its total valuation of $1.76 million divided by its total costs, which were based on its 2006–07 budget of $1,329,422. The budget does not cover accommodation, because this is provided "rent free" by the council, but this cost would apply to both scenarios in any case. The resulting benefit-cost ratio estimate was a healthy 1.33:1.

The benefit-cost ratio of the library's collection and the technical services that support it, as represented by the self-service library scenario described in the second WTP question, was estimated as its total valuation of $779,844 divided by those elements of the library's 2006–07 budget that pertained to the collection, and the collection management and processing operations. These elements included the (spent) acquisitions budget of $179,229, staffing and other costs involved in technical services ($207,178), annual license for the OPAC module ($3,560), other IT costs relating to the provision of the online databases and catalog ($10,000), and shelving ($30,000), added up to a total cost of $429,967. The estimated benefit-cost ratio was thus 1.8:1.

A benefit-cost ratio specifically for the library's technical services was calculated by first deriving an estimate of the value that they add to the collections, assuming that the market value of the collections is similar to the amount required by the library to purchase them, the value the technical services add to the collections is the value of the self-service library ($779,844) minus the (spent) acquisitions budget ($179,229). This value ($600,615) was divided by all the costs incurred by technical services ($250,738) to produce a benefit-cost ratio of 2.4:1. This compares very favourably with the library's overall benefit-cost ratio of 1.33:1.

The importance of the collection and its supporting services was also borne out by responses to other questions in the survey. Respondents were particularly interested in improvements to the collections, and were especially critical of them in comparison with other services the library offered.

**Table 2.** Variables in the Equation for Present-Level Scenario

| | B | Wald |
|---|---|---|
| **Price** | -.129 | 25.132 |
| **Gender** | .548 | 3.419 |
| **Education** | .359 | 8.192 |
| **Income** | .090 | 3.781 |
| **Constant** | -1.622 | 6.063 |

**Table 3.** Variables in the Equation for Self-Service Scenario

| | B | Wald |
|---|---|---|
| **Price** | -.083 | 4.360 |
| **Gender** | .705 | 7.103 |
| **Parenthood** | -.066 | .078 |
| **Constant** | -.002 | .000 |

## Conclusions

Results from the CV survey indicated that Wagga Wagga City Library provides good value for money, and that its technical services provide especially good value. Given that the library is often visited for its collection (particularly its physical collection), the importance of the technical services operations might not come as a great surprise, but the extent to which these operations add value to the collection, making it worth much more than if it comprised a randomly purchased and randomly arranged set of items, is worth emphasizing.

The technical services' benefit-cost ratio might be a little overstated as the market value of the collection may be a little higher than what the library paid for it (the library may enjoy special deals with suppliers, for example), and so the value added would be a little less than calculated. However, the valuations produced by the survey are also likely to be conservative, at least in comparison with what might have been produced by other types of CV question and valuation techniques.

While current investment in technical services at the city library would thus appear to be very worthwhile, a few points should be noted when drawing conclusions. First, these results paint with a very broad brush, and do not indicate which particular aspects of technical services add the most value. The results also do not mean that technical services operations, as a whole, could not provide even better value by improving in certain ways, nor that costs could not be cut through certain efficiencies.

Furthermore, the results do not mean that the library should be transformed into a self-service library, even though the benefit-cost ratio for the latter was higher. A smaller ratio may still yield a greater return, if the investment is much larger. The comparison only works if the larger ratio holds with the same amount of investment, and this is unlikely to be the case here—two self-service libraries, for example, are not necessarily twice as beneficial as one self-service library.

The value of the collection (and to some extent its supporting services) is also understated because the CV method does not take into account any latent (i.e., future) values. Certain items in the library's collections may become of historical significance to later scholars, for instance.

Nevertheless, even if it is only an estimate, the CV method allows for a dollar value to be attributed to services whose impact on users is particularly hard to gauge.

## Discussion

Important methodological issues need to be considered when applying stated preference techniques in library contexts. Some key points:

- Comparisons between parts of a library service, or between libraries, or between libraries and other types of service, need a level playing field. That is, the same type of SP question needs to be asked—for instance, a closed, referendum-based WTP question with the same response choice. Other studies have shown different question types can lead to very different valuations.
- Second, comparison may not be fair if the populations that the services serve are different. Socioeconomic factors may well affect results. For instance, wealthier communities may be prepared to pay more and some communities may have higher expectations given different cultural and educational backgrounds.
- Services with lower benefit-cost ratios are not necessarily the ones to be targeted for budget cuts. Services with higher benefit-cost ratios may be less affected by cuts; further, the benefit and cost of a service may well be affected by reduction in other services. When a set of services is analyzed using SP techniques, responses are not always perfectly sensitive to scope. That is, the aggregate of the values assigned to the individual services may be greater the value assigned to the overall benefit. For example, the WTP values assigned to individual databases may total more than the value assigned to the library's online databases as a whole.
- The scenarios on which the SP questions are based need to be realistic. For example, a scenario in which a public library starts charging for standard book loans may be requiring too great a suspension of disbelief.
- Questions should be designed to take account (as far as possible) of over- and understatement. Even closed questions based on referenda tend to provide overstatements of WTP, but these can be mitigated through correction mechanisms, for example, by allowing respondents to express support for a service without having to pay the proposed levy, or by reiterating the importance on an honest response. On the other hand, respondents may sometimes understate their WTP for strategic reasons—for instance, in an attempt to gain a lower price or the continuation of a "free" service. Such attempts need to be identified through appropriate response options and follow-up questions.
- The more specific the service being valuated, the greater the possibility that respondents do not really know what they are being asked to value. It may be reasonable to assume that most members of the public will have some idea of their public library's services, but much less reasonable to assume that most will know much or anything about, for example,

the library catalog's authority file. This issue can be partly addressed by careful description and explanation, but what respondents can comprehend in a survey context where there is limited time (typically a few minutes) and material (typically one or two pages about the product or service, perhaps with one or two pictures) may be limited.[17]

The last point is of particular note if more detailed valuations and cost-benefit analyses of technical services are to be undertaken. Research may have to focus on use rather than nonuse, and employ more extensive interviews so as to be sure that respondents make properly informed choices. Given the complex nature of modern technical service provision, the CM method may usefully supplement the CV method, ensuring that the various facets of a particular service or product (such as a library catalog) have been considered. The CM method also tends to produce richer data that allows for more analysis of what makes a service or product of value, and which facets might need further improvement. The CM study that examined the value of the National Library of New Zealand's bibliographic database suggests that the method could be successfully applied to various other technical service outputs, including the regular library catalog.[18] A study that aims to examine the value a library OPAC adds to its collection is being planned.

The relative invisibility of technical services does not make them of less value. However, in a world of finite budgets, their value needs to be clarified. A list of intangibles may persuade some, but not all. What may persuade others is analysis based on a unit of measurement everyone understands—the dollar. By careful application of stated preference techniques, librarians can demonstrate very concretely just how valuable technical services are to users.

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## Appendix. Extract from the Questionnaire (Questions 7–9)

### Your valuation of the City Library Services

The following three questions, 7–9, are based on different **hypothetical** scenarios that are **not** actually being proposed, but that we are using in order to estimate how much the city library services are worth to the community. Please read the brief summary below of what Wagga City Library has to offer, and then read through all three scenarios, before voting in the three referenda. Please try to imagine that each scenario was for real. It's also important that you treat each scenario separately.

Wagga's city library is funded by the City Council. The library provides access to over 100,000 books, magazines, newspapers, CDs, videos and online information resources. Its collections include a wide range of reference materials, resources for family history and local studies, music, fiction, audio books, children and youth sections. Members may borrow up to 10 items at a time. The library other services include an information desk, interlibrary loans, Internet and e-mail, word processing, photocopying, storytime sessions for children, delivery services for home-bound residents.

### Question 7: Scenario A

Suppose that Wagga City Council changed the way it charges its rates and broke them up into several separate charges, one of which was for the funding of the city library. This means that you would no longer pay the rates you currently pay, but instead pay several separate amounts, e.g. an amount for refuse collection, another amount for roads management, etc. Suppose that at council elections you had the opportunity to vote on the council's proposal of **$2** as the new monthly charge for the City Library, to be paid by each household. This amount is what was calculated to maintain the present level of library services.

**If the vote is carried, then this would be confirmed as the monthly charge for the library. Please note that you would not have to pay any rates for the library in addition to this charge.**

**If the vote is not carried, then Council would close the library and no charge would be levied.**

Which of the following five options would you choose in the ballot? *Tick one box.*
Please vote as if this is the only option available.

### Voting Slip

Proposal: Wagga Wagga City Council levies a monthly library charge of **$2** per household.

*Please choose ONE of the following options:*

- I would vote YES to $2 as the monthly charge per household for the library.
- I would like to see the library stay open, but can't afford the $2 monthly charge and so would vote NO to the proposal.
- I would like to see the library stay open, but would prefer to spend my money on other things and so would vote NO to the proposal.
- I would like to see the library stay open, but would vote NO for the following reason:
- I would vote NO to $2 as the monthly charge per household for the library, as I would not mind if the library closed.

### Question 8: Scenario B

Suppose again that Wagga City Council changed the way it charges its rates and broke them up into several separate charges, one of which was for the funding of the city library. Suppose also that the council planned to reduce costs by transforming the library into a self-service library. The library's current collections and online materials would still be maintained and could still be borrowed, but no professional staff would be available to assist members, and machines would be installed so that members would check out items themselves. The physical collection would continue to be arranged on the shelves in the current fashion, and the library's online catalogue would still be available. However, no other services would be offered, such as the information desk, interlibrary loans, or terminals with Internet access.

Suppose that at council elections you had the opportunity to vote on the council's proposal for the monthly library charge of **$1**, to be paid by each household, for this self-service library.

**If the vote is carried, then this would be confirmed as the monthly charge and the library would be trans-**

**formed into a self-service library. Please note that you would not have to pay any rates for the library in addition to this charge.**

**If the vote is not carried, then the city library would be closed and no library would replace it; consequently, no charge would be levied.**

Which of the following five options would you choose in the ballot? *Tick one box.*
Please vote as if this is the only option available.

#### Voting Slip

Proposal: Wagga Wagga City Council levies a monthly library charge of **$1** per household.
*Please choose ONE of the following options*:

- I would vote YES to $1 as the monthly charge per household for the library.
- I would like to see the library stay open, but can't afford the $1 monthly charge and so would vote NO to the proposal.
- I would like to see the library stay open, but would prefer to spend my money on other things and so would vote NO to the proposal.
- I would like to see the library stay open, but would vote NO for the following reason:
- I would vote NO to $1 as the monthly charge per household for the library, as I would not mind if the library closed.

### Question 9: Scenario C

Suppose again that Wagga City Council changed the way it charges its rates and broke them up into several separate charges, one of which was for the funding of the city library. Suppose also that the council planned to reduce costs by transforming the library into a self-service library. In this scenario, the council planned exactly the same self-service library as in the previous scenario, except that in this case there would also be no library catalogue, although the collections would continue to be maintained and arranged on the shelves as they are now, and the online materials would continue to be accessible through the library's website. As in the previous scenario, the materials could still be borrowed, but no professional staff would be available to assist members, and machines would be installed so that members would check out items themselves, and no other services would be offered, such as the information desk, interlibrary loans, or terminals with Internet access. *So the only difference is that in this plan, the self-service library would not have an online catalogue.*

Suppose that at council elections you had the opportunity to vote on the council's proposal for the monthly library charge of **$0.50**, to be paid by each household, for this self-service library.

**If the vote is carried, then this would be confirmed as the monthly charge and the library would be transformed into the self-service library outlined above. Please note that you would not have to pay any rates for the library in addition to this charge.**

**If the vote is not carried, then the city library would be closed and no library would replace it; consequently, no charge would be levied.**

Which of the following five options would you choose in the ballot? *Tick one box.*
Please vote as if this is the only option available.

#### Voting Slip

Proposal: Wagga City Council levies a monthly library charge of **$0.50** per household.
*Please choose ONE of the following options*:

- I would vote YES to $0.50 as the monthly charge per household for the library.
- I want to see the library stay open, but can't afford the $0.50 monthly charge and so would vote NO to the proposal.
- I want to see the library stay open, but would prefer to spend my money on other things and so would vote NO to the proposal.
- I want to see the library stay open, but would vote NO for the following reason:
- I would vote NO to $0.50 as the monthly charge per household for the library, as I would not mind if the library closed.

# Book Reviews

**Edward Swanson**

***Using XML: A How-To-Do-It Manual and CD-ROM for Librarians***. By Kwong Bor Ng. New York: Neal-Schuman, 2007. 171p. $85.00 paper (ISBN 978-1-55570-567-1/1-55570-567-7). How-To-Do-It Manuals, no. 154.

Extensible Markup Language (XML) is not a new topic in the library community, and good selection of books is devoted to incorporating XML into library-related activities and applications. *Using XML: A How-To-Do-It Manual and CD-ROM for Librarians* differs from these publications because it is a basic introduction to XML syntax. The author, Kwong Bor Ng, an associate professor at the Graduate School of Library and Information Studies of Queen College, City University of New York, provides a step-by-step guide to learning XML-based resource description and bibliographic-data management.

While *Using XML* briefly discusses XML applications in libraries, the text refers interested readers to *XML in Libraries*, edited by Roy Tennant, which covers using XML for catalog records, interlibrary loan, and building digital collections.[1] This is not a shortcoming in the book because the author specifically states that *Using XML* "will focus on using XML to encode metadata, primarily bibliographic data" (14). The volume does not focus on particular XML applications; its strength is its broad overview of creating records in XML and adding structure, definitions, and style to those records. These basic concepts can then be applied to more specific applications on an individual level.

Although it is an introduction to XML, *Using XML* covers a variety of XML-related topics, making it a great resource both for beginners and for those with some XML experience. The book is structured into five parts, which are based on XML difficultly level (as determined by the author) starting with "Introducing XML," which discusses the concepts of XML, and ending with "Advanced XML Techniques," which covers schemas and Extensible Style Language (XSL). These parts are further broken down into manageable chapters and sections focusing on a specific topic. Readers with some XML experience can go directly to their needed information because the chapters and sections are listed in the table of contents, allowing easy access for readers who just need a refresher in a specific area.

This is a practical guide on XML whose major strength is its numerous exercises using real bibliographic data. Right after learning the basics of XML in the first part, "Basic XML Techniques" begins the exercises with the reader creating a basic XML document. As the reader progresses, that basic document evolves into a more complex XML document as the later exercises build upon it. The exercises are easy to follow because they stand out clearly from the rest of the text. A majority of the text is an explanation of those exercises, reinforcing their concepts. The accompanying CD contains an electronic copy of the exercises to which readers can compare their own exercises.

The CD does contain some errors. It can either display a Web page interface with links to all its files or be viewed just as files. The files include the XML exercises and further reading materials consisting of World Wide Web Consortium (W3C) documents on XML, all of which are freely available from the W3C Web site (www.w3.org). The major flaw in the CD is found only in the Web page–interface view in the chapter 9 exercises with the .xsd extension. Most of these files will not open properly because of incorrect link names. Yet all the files are present on the CD and can be accessed through viewing just the files display.

The appendixes are an excellent addition to the book. They contain a glossary and a handy listing of numeric references. Additionally, the author takes a further look at two XML-based Machine-Readable Catalog (MARC) formats: a simplified MARC DTD and the MARC21 SLIM schema. The author mentions these formats, along with many other XML-based metadata formats, several times throughout the book, but never goes into detail on any but the Simplified Dublin Core, and even that coverage is brief. Just as *Using XML* does not focus on specific XML applications, it also does not focus on actual metadata formats. Rather, it teaches readers how to create their own DTD or schema for their own bibliographic management. Even in the appendixes, the author touches only briefly on a simplified MARC DTD, but thoroughly discusses the more widely used MARC21 SLIM schema. The amount of detail in the MARC21 SLIM section is an unexpected, but pleasant, surprise as the author breaks the schema into several parts and discusses each of the parts in detail. The complete schema is included in the text along with an electronic copy on the CD.

Overall, *Using XML* is a basic introduction to XML syntax that complements books on incorporating XML applications into library activities. While readers could find an online XML tutorial or a general XML guide, *Using XML* is aimed at librarians and

uses exercises and jargon that make sense in the library world. Yet its broad XML coverage does not restrict this book to specific applications, allowing many different areas in technical services, digital libraries, and Web development to benefit.—*Tabatha Becker (tbecker@uccs.edu), University of Colorado at Colorado Springs.*

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1. Roy Tennant, ed., *XML in Libraries* (New York: Neal-Schuman, 2001).

***Using Interactive Technologies in Libraries***. Eds. Kathlene Hanson and H. Frank Cervone. New York: Neal-Schuman, 2007. 105p. $59.95 paper (ISBN 978-1-55570-612-8). Library and Information Technology Association Guide, no. 13.

The stated objective of *Using Interactive Technologies in Libraries* is to "help you see through the buzz to determine the most useful applications" (xi) to implement in your library. The editors strive to help librarians not only understand new technology but also to learn how to use it themselves. Kathlene Hanson and H. Frank Cervone have achieved this goal by selecting authors who have concrete experience on which they have based their contributions to this text.

A major challenge of writing a book about technology is that it could easily become outdated before it even hits the press. The editors of *Using Interactive Technologies in Libraries* avoid this potential pitfall by selecting tried and true technologies for their focus. The book focuses on technologies that, despite being at the peak of their "hype cycles" (xi), have been tested and have lasted longer than the latest passing craze. In five chapters, this volume addresses four unique technologies: RSS (two chapters with different foci), wikis, blogs, and podcasts. Each author gives a brief introduction of the technology and goes on to describe how it might be applied in libraries. This description of applications is often based on the authors' own experiences using the technology. The practicality of the chapters makes this book useful to any novice user of any one of the technologies addressed.

With the exception of the chapter titled "Wiki as Research Guide," all of the chapters deal in some way with RSS feeds. For example, in "An Introduction to Podcasting," John Iliff and Tyler Rousseau highlight that RSS feeds help make podcasts accessible. One might question whether there should have been more diversity in the selection of topics; however, RSS feeds are such a successful and ubiquitous technology that there is almost no avoiding them, and certainly no harm in addressing their use in a variety of contexts.

It might be expected that a book about *using* technology would be completely optimistic about the subject. That is not entirely true in this case. In "Library Blogs: The New Technology Bandwagon" the author uses a critical eye to address the potential issues of leaping into a technology trend without a full understanding of whether it will be an improvement to library service. The author describes the results of a survey he conducted at his academic institution in which students indicated their lack of understanding of and interest in RSS feeds. These survey results were the reason for his reluctance to enter into the world of blogging. The title of this chapter is somewhat misleading because it actually describes the potential for failure of library blogs while providing one possible solution. But the author's skepticism does balance out the views of the other seemingly unwavering fans of technology featured in this text.

While the technologies addressed could be easily implemented in any library setting, the examples are from academic libraries. The inclusion of an example of a successful implementation of one of these tools in a public or special library would have rounded out the book nicely.

*Using Interactive Technologies in Libraries* is a slim, accessible guide to implementing four of the most popular technologies within library settings. Both librarians new to technology and those with an existing interest will find this book to be a useful addition to their technology toolkits. —*Sarah Wickett, (wicketts@queensu.ca), Queen's University, Kingston, Ont.*

***Sudden Selector's Guide to Business Resources***. By Robin Bergart and Vivian Lewis. Chicago: ALCTS CMDS, 2007. 70p. $28.00 (ALA members $25.65) paper (ISBN-13 978-0-8389-8414-7; ISBN-10 0-8389-8414-2) ALCTS/CMDS Sudden Selector's Series, no. 1.

It is not unusual for librarians to be asked to take on new work assignments, including collection management for a new subject area. If this has happened to you, you know how valuable it would be to have a mentor, advisor, or a written guide to get you started in mastering the new collection development assignment. What you need is a nuts-and-bolts, how-to-do-it guide to provide basic resources and encouragement. This is exactly what the new ALCTS/CMDS Sudden Selector's series provides.

This first volume in the series offers advice to librarians who are new to business subject fields and who lack formal education in management or business. The authors state that the purpose of the book is to help the librarian through the first few months on the job through "becoming a competent selector of business resources and all that this role entails: joining associations, finding mentors, monitoring electronic discussion lists, and of course, learning how to select materials for your collection" (xii). This is a sizable mission for a seventy-page book. But, from the start, the authors make it clear that this is not a comprehensive book outlining all major resources in business, but rather a beginning point

for a selector new to business library collection development work.

As the authors also point out, business librarianship is challenging. Business libraries serve diverse public, academic, and corporate clientele. A number of specific specialties (real estate, hotel management, insurance, investment advice, sales) can be included as part of the collection. A large number of business books are published annually; the *Bowker Annual and Book Trade Almanac* estimates 5,598 business books in 2006.[1] New librarians will not be able to acquire everything, so they will need to know what publishers, topics, content levels, and formats are needed in a specific collection.

Business library users have many different needs. Some business researchers need trade literature or corporation Web sites, some need academic research, some need data of various kinds, and still others need extensive information about business practices and regulations in specific countries or regions of the world. The *Sudden Selector's Guide to Business Resources* successfully provides the general sources that all business librarians (public, corporate, academic) use to guide their selection decisions.

Both authors are academic librarians working in Canada. The book is focused on North American business resources in English, and a strong point of the book is the inclusion of many Canadian resources in addition to important U.S. resources. One of the authors is new to librarianship; the other is an experienced business librarian. This pairing of outlook and experience creates a good mix of sources: up-to-date Web newsletters and blogs along with more standard print and electronic resources. Because of the obvious collaboration between the enthusiastic new librarian and the seasoned professional in evaluating and choosing content, the book has credibility and appeal as a training tool.

It is possible, of course, to debate which resources and information should be included or excluded from this training guide. In general, the authors have focused on significant up-to-date resources and categories of information that most business librarians would agree are appropriate and useful. There are some omissions. For example, information on finding library associations and library association colleagues is included, but information on finding local business associations or business association colleagues is not. Approval plans can really help new collection managers, and their components are mentioned briefly. But information outlining resources that may be available from your approval plan vendor (book reviews, tables of contents, peer-purchases) is missing. In the chapter describing essential business electronic resources, journal literature is well covered, but there is little information on more targeted business sources, such as accounting standards or advertising costs. But, for those librarians who want to branch out beyond the boundaries of the given lists, the heart of the book contains a good bibliography of recent and older standard bibliographies and guides to information sources on business topics that go into much greater detail and will include the print and electronic resources that any new business librarian will need to discover.

Some niceties are sacrificed to brevity. Because most entries in the book are lists of sources with brief or no annotations (for example, a list of print business news titles or a list of Web-based business newsletters), it is often not possible for the reader to determine if the Web sites require subscription fees or registration, to find the bibliographic details for print sources, or to determine which of the listed sources is most highly recommended. Also, the book's utility would have been enhanced by an index at the end.

The educational preparation of new collection development librarians is an important professional issue. Several American Library Association groups, including the Association for Library Collections and Technical Services Collection Management and Development Section and the Reference and User Services Association Collection Development and Evaluations Section have standing committees investigating core competencies for collection development librarians and the need for both formal education and in-house training. The Special Libraries Association and the Association for Library and Information Science Education also have worked on issues related to collection development competencies. Many new collection development librarians are not prepared to meet fully the collection building challenge in new subject areas. There has always been, and will likely continue to be, a void occurring where formal academic education for librarians leaves off and in-house training or mentoring for new hires begins. It is into this void that the Sudden Selector Series bravely ventures to provide valuable connections, tools, print or electronic resources, advice, and, most of all, encouragement for a librarian about to embark on a new collection building adventure. Recommended for all new business librarians and those interested in business library collection development.—*Judy Wells (j-well@umn.edu), University of Minnesota, Minneapolis.*

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1. *Bowker Annual Library and Book Trade Almanac* (Medford, N.J.: Information Today, 2007): 487.

***Commemorating the Past, Celebrating the Present, Creating the Future: Papers in Observance of the 50th Anniversary of the Association for Library Collections and Technical Services***. Ed. Pamela Bluh. Chicago: ALA/ALCTS, 2007. 207p. $38.50 ($34.65 ALA members) softbound (ISBN 978-0-8389-6431-

4/0-8389-8431-2). ALCTS Papers on Library Technical Services and Collections, no. 16.

"In 1957, the year ALCTS' predecessor, the ALA's Resources and Technical Services Division (RTSD) was founded, the Soviet Union launched Sputnik, the first artificial satellite" (96). In 1957 there were no MARC formats, no AACR, no LC Rule Interpretations, no OCLC or RLG, no ISBD, no BIBCO, CONSER, NACO, or SACO, no Internet, no computers in libraries, no online catalogs or online access to Library of Congress (LC) bibliographic files or documentation, and no Integrated Library Systems. What catalogers had were printed classification schedules, older cataloging codes, typewriters, and LC–printed unit catalog cards to which each individual library had to add the headings traced on the bottom of the cards.

We also had RTSD and its sections and their respective publications. Today, after all the changes that have occurred in librarianship (and particularly in technical services) we still have RTSD (now ALCTS) and its sections and their publications. The contributors to this book chronicle ALCTS over these past fifty years, both the constants and the changes.

As a personal note, 1957 was also the year in which I got my MLS and joined ALA and RTSD, although it would be another ten years or so before I began to attend conferences and to participate in RTSD and its Cataloging and Classification Section. I retired in 2004 but continued to attend conferences through 2007; thus my entire professional life paralleled the period covered in this book, I know many of the chapter authors and the persons they mentioned, and I witnessed or participated in a number of the activities described.

*Commemorating the Past.* Not surprisingly, this is the strongest aspect of the book. The first chapter is devoted to the history of the division. Miriam Palm briefly describes its changing organizational structure, headquarters staffing, and publications, but the rest of the chapter is devoted to the remembrances of past presidents, executive directors, and newsletter editors, following a structure provided by the questions Miriam asked them to answer. They describe their personal backgrounds, the organization and its culture in the years of their activity, their professional heroes, their greatest achievements and biggest disappointments, the biggest changes they have seen in technical services over the course of their careers, and what they see as the biggest challenges for the years ahead. I enjoyed these reminiscences, at least partly because I knew the people mentioned.

Another chapter consists of a single personal memoir, "The True History of AACR2, 1968–1988, A Personal Memoir by One Who Was There." This chapter by Michael Gorman fits the theme of the book, since RTSD's Cataloging and Classification Section and its committees are the ALA bodies responsible for cataloging codes. As a cataloger and former teacher of cataloging, I found this chapter fascinating. Gorman has a well-deserved reputation for being outspoken and writing well; he lives up to his reputation here.

Another strongly historical chapter is Yvonne Carignan's "'And a Handful of Visionaries': A History of Library Preservation." This is a well-researched history of library preservation, but of all the chapters it shows the weakest connection to the theme of the book. I found only three references to ALCTS and to its Preservation and Reformatting Section (PARS) in the chapter. Of course PARS is the newest section in RTSD/ALCTS, having been established in 1980 as the Preservation of Library Materials Section (PLMS).

Two of the former ALCTS presidents who contributed to the first chapter also authored chapters of their own: Janet Swan Hill (1997–98) wrote "Education For and About Technical Services: Where We Are, and Where Do We Go Next?" and Peggy Johnson (1999–2000) wrote "Collection Development in the Best of Times and the Worst of Times." The latter chapter is written historically, as are the remaining two chapters.

"Taming the Serials Beast: A Look Back and a Peek Forward," by Regina Romano Reynolds, is a fine summary of the history of serials control. "We are Not Alone: ALCTS and the World," by David Miller, is perhaps the most unusual chapter. It and Janet Swan Hill's on education for technical services are the only chapters not directly related to one of the functional sections of ALCTS. The focus of Miller's chapter is ALCTS's involvement with international librarianship. He discusses international cataloging, the activities of the various RTSD/ALCTS International Relations Committees, RTSD/ALCTS relations with the International Federation of Library Associations and Institutions (IFLA), and the international activities of the various RTSD/ALCTS sections and their committees. I had personal involvement in one of those activities. In 1980 the Cataloging and Classification Section Committee on Cataloging: African and Asian Materials (CC:AAM), of which I was then a member, was consulted about the possible value of the American Library Association and LC switching from the Wade-Giles system of Chinese romanization to the Pinyin System. As David reports, the committee voted to retain the Wade-Giles System, but I have always been proud of the fact that I was part of a minority of two that voted in favor of Pinyin. Ten years later CC:AAM reconsidered the matter and this time came down in favor of Pinyin.

*Celebrating the Present, Creating the Future.* With the strong historical emphasis of the various chapters, there is less of a role for either celebrating (or even describing) the present or creating the future.

Janet Swan Hill is well known for

her work on education for librarianship, so she was an obvious choice to write about education for technical services. Although her chapter has its historical component, its emphasis is a discussion of ALCTS members' current concerns related to education based on a 2005 survey of ALCTS members on ALCTS services and important issues for technical services. Education-related concerns were a prominent feature of the answers received. After discussing the concerns identified in the survey, Hill concludes with a paragraph listing some of the things she thinks ALCTS can do beyond offering programs, seminars, and institutes.

All of the chapters contain some view of the future, including the former officers writing in the first chapter and Michael Gorman in his personal memoir. They are all well documented.

This book will probably appeal most to those having some active involvement in RTSD/ALCTS during the period covered. Newcomers to ALCTS and the field of technical services will benefit from having this overview of where the field and the division has been.—*Judith Hopkins (ulcjh@buffalo.edu), Norcross, Ga.*

***Growth, Creativity, and Collaboration: Great Visions on a Great Lake***. Eds. Patricia Sheldahl French and Margaret Mering. Binghamton, N.Y.: Haworth Information Pr., 2005. 394p. $34.95 softbound (ISBN 0-7890-29376-6); $49.95 hardbound (ISBN 0-78902975-8). Published simultaneously as *The Serials Librarian* 48, nos. 1/2 and 3/4.

***Roaring Into Our 20's: NASIG 2005***. Eds. Margaret Mering and Elna Saxton. Binghamton, N.Y.: Haworth Information Pr., 2006. 369p. $29.95 softbound (ISBN 978-0-7890-3288-1/0-7890-3288-0); $49.95 hardbound (ISBN 978-0-7890-3287-4/0-7890-3287-2). Published simultaneously as *The Serials Librarian* 50, nos. 1/2 and 3/4.

***Mile-High Views: Surveying the Serials Vista***. Eds. Carol Ann Borchert and Gary Ives. Binghamton, N.Y.: Haworth Information Pr., 2007. 400p. $90.00 hardbound (ISBN 978-0-7890-3658-2). Published simultaneously as *The Serials Librarian* 52, nos. 1/2 and 3/4.

Even in today's world of blogs, wikis, discussion lists, and other Internet applications, attendance at academic conferences remains one of the best methods available for keeping up. What the academic conference gives up to Internet applications in immediacy, it more than makes up in quality and in the greater concentration of useful information presented. Unfortunately, given tight library budgets and skyrocketing fuel prices, attendance at these conferences is becoming increasingly difficult for many librarians. Moreover, even in the best of times, only a limited number of librarians are able to attend any given conference. While nothing compares to the experience of attending an academic conference in person and spending time conversing with your peers, the publication of conference proceedings helps to broaden the availability of the material presented.

The North American Serials Interest Group (NASIG), in cooperation with Haworth Information Press, has been doing just this since the first NASIG conference in 1986. The annual proceedings of each NASIG conference are published each year as a volume of *The Serials Librarian* and simultaneously as a monograph that is available separately. These proceedings contain nearly all of the presentations given at that year's conference, allowing the geographically or fiscally challenged librarian to benefit from the conference.

Each presentation is presented either as a formal paper provided by the presenter or in the form of a summary transcript recorded by a NASIG conference attendee. Each format has its benefits. The formal papers often include citations and figures or charts provided by the presenter. Sessions that are summarized by a recorder usually add a section on any post-presentation discussion or questions.

Each volume begins with some common front matter including a listing of NASIG officers, scholarship recipients, an "About the Editors" section, a table of contents, and an introduction. Back matter includes a short description of the poster presentations, lists of attendees by last name and by affiliation, and a topical index. In between, each volume divides the presentations into sections for "Preconference Programs," "Vision Sessions," "Strategy Sessions," and "Tactics Sessions." Vision sessions used to be known as plenary sessions and are scheduled to avoid conflicts with any other sessions. Vision sessions tend to look at big-picture issues from outside the world of serials. Strategy sessions involve broad issues of interest to all or most players in the serials world. Tactics sessions are more practical and focused.

Each year the conference takes its theme from the host city for the conference. Thus the 2004 conference, held in Milwaukee, Wisconsin, was themed "Growth, Creativity, and Collaboration: Great Visions on a Great Lake." The 2005 conference, held in Minneapolis, Minnesota, was themed "Roaring into Our 20's," reflecting both the fact that the conference is the twentieth-annual NASIG conference as well as Minneapolis's proximity to the "roaring" Mississippi River. The 2006 conference, held in Denver, Colorado, was themed "Mile-High Views: Surveying the Serials Vista."

The 2004 conference proceedings, *Growth, Creativity, and Collaboration: Great Visions on a Great Lake,* contains thirty-nine sessions comprising three preconference sessions, five vision sessions, twelve strategy sessions, and nineteen tactics sessions. The preconference reports include Steven Miller presenting the beginning of the Serials

Cataloging Cooperative Training Program's "Integrating Resources Cataloging Workshop." Miller focused the session on electronic integrating resources such as updating Web sites and databases. Nancy Slight-Gibney, Virginia Taffurelli, and Mary Iber presented a preconference session titled "Budgeting Lesson and Stories" on the way their three very different libraries approached their respective serials budget crunches. Each provided ideas on how a library can maintain and even expand usage during a period of serials cancellations. In my opinion, the gem of the preconferences was Susan Davis and Beverly Geer's "Serialist Boot Camp." This session provided an excellent overview of the entirety of serials work and should be required reading for librarians in areas other than serials as well as for new serials librarians and library students.

The vision sessions began strongly with an interview with Matthew Battles, the author of *Library: An Unquiet History*, conducted by Adrian Alexander of the Greater Western Library Alliance. Battles discussed the role that libraries and librarians should play in our society. The central part of his argument is that "librarians [should] be heard as the public intellectuals of their communities, be that an academic community or the community at large" (45–46). The other four vision sessions consist of two sets of two. Kenneth Frazier and Loretta Ebert offer alternative takes on the cost effectiveness of Big Deal licensing agreements. Frazier, in his session "What's the Big Deal?" questions whether the Big Deal is the solution to rising journal costs and describes how he avoids them at the University of Wisconsin–Madison Libraries. Ebert, by contrast, explains how she was able to make use of a Big Deal licensing agreement to affordably expand journal access at the Rensselaer Polytechnic Institute Library through consortia bargaining in "What's the Big Deal? 'Take 2' or, How to Make It Work for You . . ." The final pair of vision sessions involves two takes on alternative publishing. Heather Joseph, the president of BioOne, surveys the alternative publishing landscape and examines the various approaches currently being used. John Tagler of Elsevier responds in "Alternative Scholarly Publishing: A Commercial Publisher's Perspective."

The first four papers in the strategy sessions section come from a joint presentation on the business of scholarly publishing. October Ivins, Bill Kasdorf, and Keith Seitter explain the economics of the scholarly publishing business and the process through which journals are published, and discuss the dilemma that small academic publishers face when confronted with deciding whether to offer their journals in print, electronically, or both. The three of them finish by offering librarians some advice of how they can support small academic publishers. Other sessions include discussions of managing electronic resources and the costs associated with maintaining them, journal pricing, the image of librarians, open access, and two sessions dealing with journal publications by scholarly societies.

The papers contained in the "Tactics Session" section cover a wide variety of areas within serials librarianship and publishing. Yvette Diven, Cathy Jones, Rick Anderson, and Jane White address collaboration and cooperation between librarians and serials vendors. Sandhya Srivastava and Nancy Linden discuss their experiences in fostering collaboration between librarians and faculty in serials collection management that results in a better focused serials collection as well as a higher degree of trust and respect between the two groups. Other tactics sessions dealt with serials cataloging, budget issues, managing electronic resources, usage statistics, issues of interest to public serials librarians, and the Divine/Faxon/Rowecom bankruptcy.

The 2005 conference proceedings, *Roaring into Our 20's: NASIG 2005*, contains thirty-five sessions comprising three preconference sessions, two vision sessions, twelve strategy sessions, and eighteen tactics sessions. The preconference reports include another Serials Cooperative Cataloging Training Program workshop, this time their "Serials Holdings Workshop" presented by Catherine Nelson and Julie Su. The second preconference report is on Adam Chesler, Phil Greene, and Kim Maxwell's session titled "Serials Esperanto: Helping Librarians, Vendors and Publishers Understand Each Other." The presenters, each representing one of the parties above, took turns explaining the history of their constituency's involvement in the serials process as well as the unique difficulties that each group faces. In the final preconference, "How to Avoid Death by Meeting: Strategies for Better Meetings," Betty Kjellberg offers tools that can be used to make meetings more effective. Kjellberg discusses how to prepare a better agenda, the development of a culture that expects meetings to begin on time and stay on topic, the role of the meeting scribe, and methods that can be used to help groups work through issues.

The two vision sessions were Marshall Keys's "Chaotic Transitions: How Today's Trends Will Affect Tomorrow's Libraries" and Leif Utne's "Painting America Purple: Media Democracy and the Red/Blue Divide." Keys looks at a number of trends affecting libraries, several of which he identifies as "critical for 2005 and the next ten years" (30). These trends include the rise of a blogging culture, technological changes in cell phones that put enormous computing power in patrons' pockets, the ever-changing nature of intellectual property law, and RSS feeds. Keys ends by forecasting that over the next twenty years librarians will need to design "library services for a digital way of life" (36). Utne

discussed the role of journalists and librarians "in promoting democratic dialogue" (38) and the importance of this dialogue, and he explained how the *Utne Reader* has been involved in promoting such discussion. Utne also touched upon the transformative effect of the Internet in fostering dialogue and disseminating information.

The twelve strategy sessions in this volume cover a wide variety of issues. Oliver Pesch and Alfred Kraemer present a two-session sequence on collecting and managing usage statistics for electronic resources. Pesch's session, "Ensuring Consistent Usage Statistics, Part 1: Project COUNTER" provides a history of Project COUNTER (Counting Online Usage of Networked Electronic Resources) as well as a description of its purpose, usage, and the various reports available from COUNTER–compliant electronic resource vendors. Kraemer goes on in "Ensuring Consistent Usage Statistics, Part 2: Working with Use Data for Electronic Journals" to describe the sudden shift from heavy print to heavy electronic usage he observed at the Medical College of Wisconsin Library and some of the problems associated with collecting and utilizing usage statistics for electronic serials. Presentations by Amy Brand and Jenny Walker deal with metasearch tools, or federated searching as it is sometimes called. Other strategy sessions in this volume look at cataloging, alternative access, institutional repositories, and the licensing of electronic resources.

The eighteen tactics sessions recorded in the volume are also quite varied. Lucy Duhon and Jeanne Langendorfer present a session on serials binding titled, "Binding Journals in Tight Times: Mind the Budget," which explores the issue and discusses how the question of binding is being addressed at the University of Toledo and Bowling Green State University libraries. Many familiar topics are included in this volume's "Tactics Sessions" section including federated searching, providing and maintaining access to electronic resources, scholarly communications, open access, and Big Deals. Tina Buck, Stephen Headley, and Abby Schor continue Headley's 2004 efforts to increase the discussion of public library issues at NASIG conferences by presenting "Collection Development in Public Libraries." Paoshan Yue and Araby Greene go beyond Keys's vision session to offer the first truly Web 2.0 presentation in the three volumes under review with "Do You See RSS in Your Future?" Finally, Beth Bernhardt breaks things up by offering a little practical advice in "Presentations That Keep Your Audience Interested and Awake."

The 2006 conference proceedings, *Mile-High Views: Surveying the Serials Vista*, contains thirty-three sessions comprising four preconference programs, three vision sessions, eleven strategy sessions, and fifteen tactics sessions. The 2006 conference continues the trend of offering Serials Cataloging Cooperative Training Program workshops as preconference sessions. This time both the "Basic Serials Cataloging Workshop" and the "Advanced Serials Cataloging Workshop" were offered by Joseph Hinger and Steve Shadle respectively. Tim Jewell, Trisha Davis, and Diane Grover presented on managing licenses for electronic resources, and Carol Hixson discussed how to set up an online institutional repository using her experience at the University of Oregon as a model.

Vision sessions included Robin Sloan of Current TV, one of the originators of the viral video *EPIC 2015,* discussing a version of the future where, as he puts it in his title, "Things Fall Apart." After Sloan showed the audience *EPIC 2015*, a transcript of which is contained in the proceedings, he continues the theme forward into a dark vision of 2016 in which a designer virus is unleashed upon mankind. In the end he explains that information is morally neutral, that "it's people that make a difference in the world, for good or ill" (66). Brenda Bailey-Hainer presented a session on digitization entitled "All the News That's Fit to Digitize: Creating Colorado's Historic Newspaper Collection." She includes not only a description of the project but details on the funding model and future plans for the project. To round out the vision sessions, T. Scott Plutchak discussed the coming transition to a culture based on the digital transmission of information as opposed to print distribution in "What's a Serial When You're Running on Internet Time?"

Plutchak's discussion is carried forward in the strategy sessions by Roger Schonfeld and the team of Colleen Carlton, John Kiplinger, and Nancy Kushigan. They looked at the issues of strategic library planning and the creation of a paper repository backup for electronic serial resources in "Getting from Here to There, Safely: Library Strategic Planning for the Transition Away from Print Journals" and "The UC/JSTOR Paper Repository: Progress Thus Far." Other sessions include a two-session sequence on identifying and meeting user's serials needs by Lynn Connaway and Regina Reynolds, and sessions on serials cataloging and open-access journals.

Tactics sessions in the 2006 volume include, as usual, a wide array of topics, including a comparison of the costs of print and electronic serials by Richard Fidczuk and Linda Beebe, as well as sessions on open access; workflow, project, and personnel management; and linking the library's electronic resources to your institution's course management system (e.g., Blackboard or Web CT). Abigail Bordeaux's session "Blogs, Wikis and Podcasts: Social Software in the Library" explores ways to use Web 2.0 applications to reach out to your patrons.

These three NASIG conference proceedings provide the reader with

a valuable snapshot of the serials field in the year of their publication. Each volume covers a wide range of topics in the area and provides instructive reading for the advanced, as well as the novice, serials librarian. The volumes themselves are well bound and expertly produced. The NASIG proceedings are a valuable addition to the field.—*John E. Adkins (johnadkins@ucwv.edu), University of Charleston, W. Va.*

***Institutional Repositories***. University of Houston Libraries, Institutional Repository Task Force, Charles W. Bailey Jr., chair. Washington: Association of Research Libraries, 2006. 174p. $45.00 softbound (ISBN 1-59407-708-8). SPEC Kit 292.

*Institutional Repositories,* number 292 in the Association of Research Libraries (ARL) SPEC Kit series, is based on the findings from a survey that was distributed to 123 member libraries of ARL in January 2006. The survey was implemented to collect baseline information regarding ARL members' activities about institutional repositories. The authors explain that the survey defines "institutional repository" as a "permanent, institution-wide repository of diverse locally produced digital works" (23) for public use that also supports metadata harvesting. Their definition also includes repositories that are shared among institutions.

The SPEC survey was designed by an impressive team of individuals from the University of Houston who represent a wide array of expertise, including electronic resources acquisitions, metadata creation, Web development, and special libraries (law and pharmacy). That team included Charles W. Bailey Jr., who was the Assistant Dean for Digital Library Planning and Development at that time (Bailey left the University of Houston in January 2007), and Jill Emery, director or the Electronic Resources Program, both recognized experts in their respective fields of work.

An examination of the survey responses yields some interesting figures. First, there was a 71 percent response rate (eighty-seven libraries responded), which is quite high. While the responding libraries are primarily American institutions, respondents also included Canadian member libraries.

When the survey was implemented, thirty-seven institutions had an operational institutional repository, another thirty-five had a target date of 2007 to make their repositories fully operational, and nineteen libraries had no immediate plans to develop an institutional repository. The volume was published in 2006, and it would be worth investigating how these libraries are now faring in terms of content (both level of content and success in recruiting it), if their policies have changed in any way and why, and how many of them are still using their original repository software. Additionally, it would be an interesting exercise to determine if any of the responding libraries that have indicated that they had no immediate plans to develop a repository have changed their plans and how.

*Institutional Repositories* is divided into three broad areas: (1) survey results, which includes an executive summary, the survey questions and responses, and a list of the institutions that responded to the survey; (2) representative documents from various responding libraries, which include institutional repository home pages, usage statistics, deposit policies, deposit agreements, metadata policies, digital preservation policies, institutional repository proposals, and promotion; and (3) the last section, which consists of selected resources, including general works and information specific to DSpace, eScholarship, and Fedora. The documents in the second section, such as deposit policies and agreements, are quite detailed and provide a wealth of information for institutions seeking sample documents for use in formulating their own policies.

The bulk of the volume consists of the full questionnaire, responses, and selected comments from the responses. The survey questions address a range of topics that include planning, implementation, assessment, staffing, units responsible for ongoing operation of the repository, budget, hardware and software, policies and procedures, content recruitment, and assessment. The executive summary examines these topics in detail and provides analysis and percentages.

The questions run the gamut of potential issues an institution needs to consider when planning to launch an institutional repository or when assessing progress and addressing areas of need.

Another notable fact about the survey results is that the predominant repository software used by respondents is DSpace. This is quite logical given that the first version of DSpace was released in November 2002, giving it ample time to capture some share of the market by 2006. In contrast, Fedora repository software was created late in 2003, and libraries would not have as much exposure to this software. A review of the Fedora Commons Community Registry indicates 127 known Fedora projects as of June 2008.[1] In comparison, the DSpace Foundation's Web site indicates that it has the largest community of developers and users worldwide, and reports that over 250 institutions are currently using the DSpace software.[2] The last point becomes more significant in light of the fact that in June 2008, DSpace and Fedora actively engaged in conversations regarding a possible collaboration.

The text is well organized, comprehensive in scope, and provides a wide variety of examples that may be consulted for comparison and guidance. *Institutional Repositories* is appropriate for libraries with an operational

institutional repository as well as those institutions that are in the planning or investigation stage. Since repositories are a fairly new development (despite the fact that the executive summary notes that one responding library had an operational repository in 1999) and a culture change for libraries, a follow-up survey and a comparable summary of the results would be very beneficial to the profession.—*Mary Beth Weber, (mbfecko@rci.rutgers.edu), Rutgers University, New Brunswick, N.J.*

### References

1. Fedora, "Fedora Commons Community Registry," www.fedora.info/wiki/index.php/Fedora_Commons_Community_Registry (accessed July 11, 2008).
2. DSpace Foundation, "Community," www.dspace.org/index.hp?option=com_content&task=view&id=305&Itemid=142 (accessed July 11, 2008).

***Library 2.0 and Beyond: Innovative Technologies and Tomorrow's User***. Ed. Nancy Courtney. Westport, Conn.: Libraries Unlimited, 2007. 152p. $45.00 softbound (ISBN 978-1-59158-537-4/1-59158-537-6).

One of the challenges facing any reader investigating "Web 2.0" is the seeming lack of consistent terminology. The introduction to this volume states that Web 2.0 refers to the technologies or tools available to expand into the newer realms available to libraries. Yet my own previous understanding of the term Web 2.0 is that it refers to the participatory Web in general. Then there is the term "Library 2.0" (yet to be globally accepted) that the author of the preface defines as "a reasonably good term to express how Web 2.0 concepts, practices, and technologies can be integrated into the library domain" (i). Fortunately, many of the seeming inconsistencies and confusing terminology concerning Web 2.0 are cleared up in the first chapter of the book.

*Library 2.0 and Beyond* consists of eleven chapters, each focusing on a different topic and each authored by an individual well versed in that area. Each chapter includes a separate reference section, and the book concludes with a bibliography of suggested background readings. Brief biographies of contributing authors appear at the end of the book.

Chapter 1 was written by Elizabeth Black, a systems librarian for Ohio State University Libraries who, along with responsibility for the Web site, institutional repository, and Knowledge Bank, works to apply Web 2.0 technologies in those libraries. The main theme of Black's chapter is explaining in considerable detail the variety of definitions of Web 2.0 and Library 2.0. She explains the consistencies and contradictions within those definitions and proceeds to describe the various technologies, their functions, capabilities, and applications. Black's chapter is an excellent primer and overview, especially for those librarians who are exposed to Web 2.0 technologies at work without understanding their broader implications. Her chapter puts the technologies into theoretical context and helps to fill in the gaps. It is a great way to begin the book and could serve as a stand-alone introduction to Web 2.0.

Michael Casey's chapter on library catalogs demonstrates clearly how current online catalogs are as antiquated as the paper card catalogs of the past. Drawing examples from Google, Amazon, Internet Movie Database, and other popular sites, Casey makes recommendations for what the library catalog of Library 2.0 should look like and how it should function. After reading Casey's chapter, I no longer feel guilty for surreptitiously checking Amazon to verify a correct title, ISBN, or the correct spelling of an author's name, or to find a mystery similar to those of my favorite authors. Casey's chapter, although he does say it explicitly, is a cautionary tale. If librarians persist in imposing a static, unidirectional catalog on our users, we will have only ourselves to blame for being viewed as irrelevant.

Chad Boeninger's chapter on wikis defines them as Web sites "in which the content can be created and edited by a community of users" (25). He discusses three potential uses for wikis in libraries: internal communication, institutional collaboration, and research guidance. He includes a discussion of the two kinds of wiki software available, the self-hosted option and "wiki farms," Web-based wiki hosting services. Two great wiki research sites are recommended in this chapter, also. I found particularly helpful the references to WikiMatrix (www.wikimatrix.org), a site that helps librarians choose the best way to host a wiki for their particular circumstances, and Wiki Index (www.wikiindex.org), a directory of wikis that are topic-specific. Reference librarians would do well to remember Wiki Index as a potential point of entry for queries for which traditional resources are few or nonexistent.

Christ Kretz writes about "Podcasting in Libraries." He explains that the term evolved from the words iPod and broadcasting and that it grew from bloggers placing audio files on blogs. Kretz talks about different ways that libraries are applying podcasts, such as booktalks, displays, library education, instruction and professional development, story times, teen shows, and tours, and he includes legal issues surrounding podcasts, software applications, and how to get started. His concluding list of references includes resources for producing podcasts.

The title of Christopher Strauber's chapter, "Handheld Computers in Libraries," is deceptively simple. He has compiled a comprehensive list of devices that he defines as "any device weighing less than 2 pounds that is capable of performing one or more of the library-relevant functions of a computer" (49). The variety of devices, their capabilities, price ranges, and applications are overwhelming. The author explains everything from MP3 play-

ers, smart phones, E-book Readers, to Ultra Mobile PCs (UMPCs). He gives price ranges and suggested vendors. At the end of the chapter he talks about uses within the library, archiving, and when to adopt a particular technology. His rule of thumb is to support technologies that most of your patrons are using, and he goes on to suggest that the approximate time to implement this support is when 50 percent of your households own the technology. Strauber concludes with suggested sources for additional information and trend spotting.

Eric Schnell defines a "mashup" as "a hybrid application whose content and functionality result from combining together third-party data sources" (64). I find the examples of mashups easier to understand than the definition. Schnell talks about ChicagoCrime, a database that combined police data from reported crimes with Google Maps. The final product consisted of a mapping site that illustrated where crimes were committed. Also, the avian flu site sponsored by the journal *Nature* combines information about avian flu outbreaks from the World Health Organization and United Nations data with Google Earth. Schnell says mashups are very dynamic and especially useful for unique customer subgroups. He lists development tools and examples of the burgeoning use of mashups within the library scene. Finally, Schnell covers the special challenges associated with mashups: intellectual property versus fair use, data security, changes in application programming interface, and the verification that the data used in a mashup is genuine. He contends that the technologies involved need to be simplified in order for mashups to develop into practical, standardized tools.

Brian S. Mathews defines and discusses online social networking and lists its core features. These include user profiles, friending, groups, individual messaging, announcements, message boards, photos, blogs, icebreakers, search functions, and privacy controls. Besides citing the well-known sites such as MySpace and Facebook, Mathews talks about the business site Linkedin and the journal site LiveJournal. He gives an honest appraisal of what he labels the "dark side" of the social Web, including online predators, stalking, addiction, and potential invasion of privacy, and he lists the pros and cons librarians cite about the place of social networking in the library. Finally, he lists the steps and sequence a library may wish to follow when entering the social networking environment.

The book also includes detailed discussions of folksonomies, tagging, virtual worlds, gaming, and digital storytelling. Notably missing in this otherwise thorough compilation is a chapter on blogs. For incorporating the many uses and contributions of blogs see *Library 2.0: A Guide to Participatory Library Service* by Michael E. Casey and Laura C. Savastinuk.[1]

*Library 2.0 and Beyond* provides a foundation and starting point for librarians, teachers, and instructors who wish either to understand more about the various technologies their patrons are using or who wish to begin implementing them. The lists of required technologies and potential vendors would be particularly helpful. The book also offers sufficient explanation for the reader wishing to learn more about the technologies. I feel confident that I now can read with more understanding articles and blogs regarding these technologies because of the thoroughness of the definitions and discussion in the book. The book also could serve as a handbook for anyone using the Web site 43 Things (www.43things.com). The chapters are self-contained, so they would make a good "on-desk" assignment, and the book could be kept as a reference in a departmental library.—*Cleo Pappas (cleop76@uic.edu), University of Illinois at Chicago.*

### Reference

1. Michael E. Casey and Laura C. Savastinuk, *Library 2.0: A Guide to Participatory Library Service* (Medford, N.J.: Information Today, 2007).

***Metadata: A Cataloger's Primer***. Ed. Richard P. Smiraglia. New York: Haworth Information Pr., 2005. 303p. $59.95 hardbound (ISBN 978-0-7890-2800-6/0-7890-2800-X); $39.95 softbound (ISBN 978-0-7890-2801-3/0-7890-2801-8). Published simultaneously as *Cataloging and Classification Quarterly* 40, nos. 3/4.

*Metadata: A Cataloger's Primer* is edited by Richard Smiraglia, a noted expert on knowledge organization. Smiraglia states in the introduction that the purpose of this text is to "provide a learning resource about metadata for catalog librarians and students" (1). While this may seem like an audience that has very different interests, this book is directed at practitioners with limited or no experience with metadata schemas and related concepts, as well as neophytes. The book is divided into two parts: part 1 is titled "Intellectual Foundations" and consists of articles that introduce metadata concepts and applications; part 2 is titled "How to Create, Apply, and Use Metadata," and covers Dublin Core, Extensible-Markup Language (XML), Encoded Archival Description (EAD), and the Metadata Encoding and Transmission Standard (METS).

Part 1 provides an overview of introductory and theoretical material and original research, and includes contributions by Jane Greenberg and Lynne Howarth. Part 2 serves as an instruction manual and cites a number of metadata texts that are widely used. Smiraglia suggests that readers consult them as a point of reference. It should be noted that the cited texts are dated from 1999 through 2004. Metadata applications and practices are continually evolving, and information quickly becomes outdated. The cited texts

are perhaps useful for background and historical perspective, but have limited usefulness in the current environment.

Smiraglia's introduction is inclusive and covers markup languages, various metadata schemas (Cataloging-in-Publication, Text Encoding Initiative, Dublin Core, the Anglo-American Cataloguing Rules, and MARC21). The chapters in part 1 are lengthy and cover metadata and bibliographic control in extensive detail. There is some overlap in concepts and examples between these chapters. Part 1 includes metadata applications in a health care agency and an analysis of Etruscan artifacts in an archeology museum. Both are interesting departures from the typical library and archive applications of metadata.

Part 2 is a hands-on guide to creating and applying metadata. The chapters in this part of the book include contributions by recognized metadata experts Anita Coleman, Patrick Yott, and Michael Chopey. Coleman's chapter addresses use of Dublin Core records for the library catalog and is a bit dated. Dublin Core is required for participation in the Open Archives Initiative-Protocol for Metadata Harvesting (OAI-PMH), yet is only one choice of metadata schema used by libraries. Many libraries use metadata from a variety of schemas, or prefer richer descriptive schemas such as the Metadata Object Description Schema (MODS) or Metadata for Images in XML Schema (MIX).

The introduction to Coleman's chapter notes "Professional positions like Metadata Architect and Metadata Librarian are increasingly common. . . . Some libraries are even replacing job titles such as Cataloger with them" (154). This has become the norm as there are numerous metadata cataloger positions and many departments that provide bibliographic description and access have been renamed as Cataloging and Metadata to reflect the range of their work. Her explanation of metadata elements and examples is helpful and will be useful to librarians who use Dublin Core. The appendix to her chapter includes a metadata-creation form that is quite long. It is not clear whether this form is available online, which would make it much more useful to metadata creators than a print form.

Alexander Thurman's chapter on metadata standards for archival control provides a concise overview of EAD and includes useful information in the appendix. The appendix contains a guide to a manuscript collection, a statement of collection scope, and index terms. The remainder of the appendix is devoted to a sample EAD record, which will be useful to those wishing to use this schema or to learn about it.

Patrick Yott's introduction to XML is a refreshing departure from how chapters in this type of text are typically written. He provides an overview of XML in easy-to-understand language and illustrates with examples that cite pop music legends Robert Fripp and Brian Eno. Part 2 concludes with chapters by Linda Cantara on METS and Michael Chopey on how to plan and implement a metadata-driven digital repository. While both chapters are well written, the authors have approached their topics differently. Cantara's chapter is streamlined and narrowly focused on METS. Chopey's is extensive and examines the steps and processes necessary for planning and implementing a repository.

One of the main drawbacks of this book is that it was published in 2005 and has limited utility in 2008. Metadata applications and concepts have greatly evolved over the last three years. Most people in librarianship have been exposed to metadata in some context, whether as a user or as a participant in a digital project. There are numerous texts on metadata, as well as classes and groups devoted to various aspects of metadata (e.g., collection development, metadata creation, and digital preservation). This text is helpful as an introduction to metadata, yet some of the concepts and ideas presented in it are dated and may not be relevant to current standards.—*Mary Beth Weber (mbfecko@rci.rutgers.edu), Rutgers University, New Brunswick, N.J.*

***Moving Beyond the Presentation Layer: Content and Context in the Dewey Decimal Classification (DDC) System***. Eds. Joan S. Mitchell, Diane Vizine-Goetz. New York: Haworth Information Pr., 2007. 220p. $50.00 hardbound (ISBN 978-0-7890-3452-6/0-7890-3452-2); $30.00 softbound (ISBN 978-0-7890-3453-3/0-7890-3453-0). Published simultaneously as *Cataloging and Classification Quarterly* 42, nos. 3/4.

This past spring the 2008 Public Library Association conference included a session called "Dewey or Don't We?" This phrase sums up the lukewarm feelings that many professionals feel toward the Dewey Decimal Classification system (DDC). Library journals and blogs are abuzz with first-hand accounts of libraries replacing DDC with more "user-friendly" systems. Library schools, professionals, and patrons continue to question its value in the library, especially with the ever-increasing body of digital information. Is Dewey necessary in our libraries or has it become an outdated relic of our past? Is there a future for Dewey?

*Moving Beyond the Presentation Layer: Content and Context in the Dewey Decimal Classification System* explores the past, present, and future of the Dewey Decimal Classification. It answers and addresses many of the concerns regarding the future of DDC in a digital environment. The collection of articles in this publication not only examines the development and function of DDC, but also discusses projects that have relied heavily on DDC and the way modern libraries are adapting it to fit their needs. While

the writing is somewhat scholarly, the articles included in this publication explore the uses of DDC in a variety of contexts and applications.

The topic is timely. In 2007, the Maricopa County Library District and Phoenix Public Library in Arizona made library headlines when they decided to stop using DDC and replace it with BISAC (Book Industry Standards and Communications). This sparked heated debate about the future of DDC in today's libraries. This debate is ongoing, and there is an ever-increasing number of libraries who are adopting other types of classification systems. *Moving Beyond the Presentation Layer* is making an appearance on the market at a time when professionals need to examine whether DDC has a future in the digital information environment, or if it is a classification system best restricted to the physical library.

At first glance, *Moving Beyond the Presentation Layer* gives the appearance of a textbook. Its unadorned cover may lead readers initially to hesitate to read what appears to be a collection of scholarly articles. The numerous pages advertising additional *Cataloging and Classification Quarterly* publications interspersed with the title page and sundry other Web site/Internet resources for bibliographic access to the journal serve to compound the situation. However, once the reader moves beyond this, the book follows a traditional layout that includes a table of contents, information on the editors, a preface, bibliographic references, and an index. In addition, through use of appropriate white space and clear, neat font, the reader is not further challenged by significant blocks of text, which are often associated with scholarly publications.

The preface, co-authored by the editors, provides insight into the nature and purpose of this publication.

*Moving Beyond the Presentation Layer* is broken down into three sections: an introduction, an international perspective, and a Web perspective. Each section comprises articles on topics relevant to the broad areas that each section tries to examine. Articles cover such topics as an introduction to DDC from its online inception, challenges that have been encountered and continue to be encountered, application of DDC on a world stage, and projects that have heavily relied on DDC. As a result, the strength of *Moving Beyond the Presentation Layer* lies in the depth and breadth of knowledge that has been gathered together in this work.

Drawing from a group of scholars within the cataloguing community, the authors explore DDC from a variety of perspectives. Taking advantage of this diverse body of knowledge, each author writes on a different aspect of DDC. For example, in the first section of the book, "Content and Context: An Introduction," Karen Markey introduces DDC to readers. She explores in depth the birth of online classification systems, the DDC Online Project, and the expertise and evaluations involved in creating online, accessible bibliographic records. The strength of Markey's article lies in the analysis of classification as an online tool for end users. Markey takes the time to examine the research that has been conducted in this regard, the evolution of information-seeking behavior in end users, and the role classification plays in information retrieval.

Also noteworthy is the article on teaching DDC. The Library of Congress recently created the Task Force on Competencies and Education for a Career in Cataloging to critically examine the education of catalogers. An important aspect of a cataloger's education includes the examination of classification systems and their future in a digital environment. With libraries moving away from DDC, catalogers, as well as practicing professionals, need to be well-versed in the theory, application, and adaptability of DDC in order to knowledgeably defend or object to the use of this classification system in their libraries.

In a world where most people believe Dewey is not taught outside of elementary school, how can we make DDC relevant and stress its importance to students? Arlene Taylor explores the challenges of teaching DDC to students. Taylor also looks at the challenges of content and the importance of teaching subject analysis when determining content and assigning a DDC number. Her response provides a thorough examination of techniques for teaching DDC, including overcoming logistical problems such as access to WebDewey for educational purposes.

The third section examines several notable projects that have relied heavily on DDC in a digital environment. Recently, Library and Archives Canada (LAC) undertook a project using DDC to access and retrieve online information about Canada. The challenges that co-authors Dean Zeeman and Glenyss Turner faced in molding DDC to their needs at LAC is discussed in this section. These projects provide a glimpse into the potential and future of DDC in a Web-based and digital information environment.

Overall, the insight that *Moving Beyond the Presentation Layer* provides is relevant and provides a critical examination into DDC in the context of its present challenges. Each article explores DDC's flexibility and relevance through illustration by the projects that professionals are currently undertaking that involve adapting DDC to suit their needs.

*Moving Beyond the Presentation Layer* provides professionals with an opportunity to acquire this unique collection of scholarly articles. The body of knowledge and exploration of DDC projects provides foundation and guidance into how DDC can be altered and applied to satisfy the needs of users and to fill the diverse needs of libraries today. As a result, this

publication would be an asset to the professional collection of any librarian, scholar, or cataloger. Because of the theoretical foundation provided, it can also easily be used as a textbook. *Moving Beyond the Presentation Layer* is highly recommended for any professional looking to explore DDC's functions, strengths, and weaknesses. The compendium provides insight into an advanced and ever-changing classification system that is not static, but rather is limited only by our own definition of classification systems and their application.—*Laurel Tarulli (tarulll@halifax.ca), Halifax Public Libraries, Lower Sackville, N.S.*

***Networking for Digital Preservation: Current Practice in 15 National Libraries***. By Ingeborg Verheul. Munich: K. G. Saur, 2006. 272p. $109.00 (IFLA members $81.00); hardbound (ISBN 3-598-219857-8). IFLA Publications 119.

This publication represents a valiant effort to assess the status of digital preservation efforts in fifteen national libraries in Asia, Australia, Europe, New Zealand, and North America from legal, organizational, and technological standpoints. The author is an employee in the Research and Development Division of the Digital Preservation Department of the Koninklijke Bibliotheek (KB, the National Library of the Netherlands), and the work is based on a study sponsored by the International Federation of Library Associations and Institutions-Conference of Directors of National Libraries (IFLA-CDNL) Alliance for Bibliographic Standards (ICABS). Unfortunately, the research, which dates back to 2004, may be too old to be of much use to those seeking current information about digital preservation standards and best practices, and the in-depth profiles of the fifteen national libraries probably will be of little interest to librarians working in other types of organizations.

The book resembles a much more detailed version of the type of study conducted and published by the Association of Research Libraries in its SPEC Kits series. Part 1 consists of introductory matter describing the study's purpose and methodology, a glossary of "Practical Definitions" of terminology used in the study, and a forty-five-page analysis of the survey results. The majority of the work profiles the fifteen national libraries surveyed, including their organizational charts and a table highlighting international collaborations among them. A brief list of references, an extensive list of acronyms, and a five-page summary of a National Library of Australia study from 2005 make up the appendixes. Unlike in many other scholarly publications, the survey itself is not provided as an appendix. The work is sparsely illustrated, with just two pages of "bird's-eye views" of operational digital repositories in the world over time and two pages of photographs humorously depicting the challenges of long-term storage and permanent access.

Even in 2008 I was interested in the analysis, despite the fact that it relied on dated findings: the questions raised (if not the responses) remain relevant. Under a working definition of digital preservation as long-term (five years or more) activities "concerning the maintenance and care for/curation of digital or electronic objects, in relation to both storage and access" (20), it documents many key issues surrounding digital preservation in the legal landscape and in library operations and services, and highlights international research and development efforts that may affect the field in the future.

A primary legal issue for the national libraries concerns legal deposit legislation, the requirement for publishers to deposit copies of their publications at the national library of the country in which they are published. In most nations, this legislation needs to be updated to include born-digital publications, which raise a host of new issues regarding copyright (digital publications can be distributed more readily and widely than physical publications) and preservation (long-term preservation of digital objects of necessity involves copying them, so digital rights management protections and laws limiting the making of copies for specific purposes inhibit digital preservation). The author cites the Library of Congress's Section 108 Study Group, the report for which has since been released, as a sign of imminent progress for one nation on this issue.[1] Although legal deposit legislation is not an issue I have had to grapple with, the question of what we have the right to copy and make available is relevant to all engaged in digital projects, so I appreciated the study's inclusion of these legal questions.

The descriptions in the analysis of the organizational structures and funding streams of digital preservation activities in the national libraries, while not replicable by the rest of us, were nonetheless instructive. Verheul's findings with respect to national libraries' interdepartmental collaboration in the digital context, regardless of where digital activities are primarily positioned within the organizational structure, echo my experience in my own institution: these activities cross traditional boundaries of collections, technical services, information technology, and administration.

The survey inquired about each national library's existing and planned digital repository systems, their design, development, implementation, and production, as well as the services performed by them, in terms of archiving and access. Special attention was paid to each repository's adherence (or intention to adhere) to the Reference Model for Open Archival Information System (OAIS), a framework developed by the Council of the Consultative Committee for Space Data Systems that provides a common vocabulary for long-term pres-

ervation and access to digital objects in a repository.[2] This model remains a foundational document of the digital preservation community in 2008.

The libraries were also surveyed about which formats were ingested into their digital repositories, in which versions, with what metadata, and whether the digital file's content alone or its "look and feel" should be preserved. Some libraries restricted ingest to specific storage formats in the hopes of forestalling the need to conduct format migration, and several had already employed migration as a preservation strategy. Policies differed on which versions to retain: Some considered only master preservation copies for long-term storage, while others created and stored a duplicate of the master file as well, and still others made room for access copies derived from the master or duplicate. Preservation metadata, which derives from administrative and technical metadata, were acknowledged as important in the survey analysis, but standards that were emerging at the time have been further developed; the PREservation Metadata: Implementation Strategies Working Group (PREMIS) released version 2.0 of its data dictionary in March 2008.[3]

The question of whether to focus on bit-level preservation of the digital file (preserving its content, which may not be renderable in future versions of hardware and software) versus the file's context, structure, appearance, and behavior (preserving its "look and feel") received special focus from Verheul, who, along with her employing institution, appears to be a proponent of emulation as a preservation strategy: as of 2004, only the KB among the national libraries had experimented with it, but its absence received frequent mention, indicating that it had been a survey question. Other strategies, such as distributed digital preservation (in which I am particularly interested), received only passing mention in the profiles of Denmark, New Zealand, and the United Kingdom, so did not appear to have been included as a survey question.

Part 2 of the book, with its in-depth descriptions of the fifteen national libraries on all of the topics for which the responses had been summarized in part 1, is long past its shelf life and would have been irrelevant to many readers even if the information were current. Many of the R&D projects described in this section as forthcoming have already completed at least one phase and published their findings, and some organizations are no longer in existence, so links to their Web pages may not work (for example, the Research Libraries Group merged with the OCLC Online Computer Library Center in July 2006).

While I admired the thoroughness with which Verheul approached her research, I feel that busy librarians and archivists interested in this topic would make better use of their time by following electronic discussion lists and blogs, attending sessions on digital preservation at conferences, and taking the online Cornell Digital Preservation Management Tutorial or five-day workshop,[4] as all are likely to provide considerably more up-to-date information.—*Rachel I. Howard (rachel.howard@louisville.edu), University of Louisville, Ky.*

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***Sound Savings: Preserving Audio Collections***. Ed. Judith Matz. Washington, D.C.: Association of Research Libraries, 2004. 158p. $45.00 softcover (ISBN 1-59407-663-4).

*Sound Savings: Preserving Audio Collections* is a compendium of papers that were presented at the symposium of the same name held in Austin, Texas, July 24–26, 2003. The symposium was co-sponsored by the School of Information, Preservation and Conservation Studies, University of Texas at Austin, the Library of Congress (LC), the National Recording Preservation Board, and the Association of Research Libraries. For two-and-a-half days, experts on many facets of audio preservation gave presentations on topics ranging from assessing the preservation needs of audio collections to creating, preserving, and making digitized audio available to the public. The attendees came from across the United States, and most represented audio collections housed in universities and colleges. They came seeking information on how to best deal with the deteriorating tapes and lacquer discs that have become a part of almost every institution housing a large sound archive. I attended the symposium representing the Institute of Jazz Studies at Rutgers, the State University of New Jersey and found the gathering very helpful at the time. Reading the papers five years later, I was struck by how much from that symposium is still relevant today.

"Review of Audio Collection Preservation Trends and Challenges" was presented by Samuel Brylawski, at the time head of the Recorded Sound Section of the Motion Picture, Broadcasting, and Recorded Sound Division of LC. He talks about the death of analog preservation methods and the adoption of digital formats to preserve audio. He goes on to talk about digital repositories and mentions LC's creation of the National Audio-Visual Conservation Center in Culpepper, Virginia. Of course, today that facility is now up and running. Brylawski proposes collaboration with other institutions as a way to ensure that the vast amount of audio material held in the different archives will be digitized and stresses how these "archives should be exploring legal, as well as technical, methods to collaborate on preservation projects and share the products of those projects" (25). He mentions that Congress has charged the Library of Congress with building the National Digital Information Infrastructure and Preservation Program (NDIIPP) to help provide the legal and technical blueprint for institutions looking to establish legal means to share files as well as establish and administer storage and server networks. NDIIPP currently has more than ninety partners in its growing digital preservation network, which includes institutions both in the United States and abroad.

The chapter "Surveying Sound Recording Collections" by Hannah Frost provides a very useful guide to documenting audio collections and offers advice on how to proceed in preserving collections. Five years later, this paper is still useful for those doing a survey of their collections with the intent of launching a preservation program.

"Risk Reduction through Preventive Care, Handling, and Storage" by Alan F. Lewis is yet another chapter that holds up today. In it Lewis first lays out what he calls some "basic training," surveying the basic elements involved in machine-based audiovisual recording systems. Using laymen's language, he talks about audio recordings (or as he calls it the "stuff on the shelf"), the playback equipment, and the standards developed as a part of the invention of the system. After a brief discussion on the components of a typical audio recording medium, he launches into his "Nineteen Conservation Concerns." Without listing every concern, I can attest that such things as environment, physical security, and fire and water protection, are of great concern to any audio archive.

"The Case for Audio Preservation" by Karl Miller also addresses a number of concerns that confront audio archives today, the most important of which centers around the economics of audio preservation. For a multitude of reasons, today's economic climate is a lot bleaker than it was in 2003. Lack of financial support from the federal government and many state governments has resulted in cuts and layoffs in many colleges and universities dependent on those funds. More and more institutions are vying for grants from agencies like the National Endowment for the Arts and the National Endowment for the Humanities to fund audio preservation projects. Mr. Miller intelligently presents the economics of audio preservation by talking about essentials like hiring qualified staff to operate and maintain playback equipment, building a proper work space to do the transfer work, standards for audio storage, equipment, and the possible decision to outsource the work to a professional sound studio. Like the previously cited papers, this one also can be quite useful because the information is as valid today as it was in 2003. For example, Miller cites figures for outsourcing as costing between $90 and $100 an hour. Remarkably, according to one of my sources (Seth Winner Sound Studios) those figures have not changed much at all. Under the section on standards Miller states, "There are no mutually agreed upon standards for audio storage" (85). That may have been true five years ago, but in the interim the International Association of Sound and Audiovisual Archives' Technical Committee, IASA-TC04 has produced Guidelines on the Production and Preservation of Digital Audio Objects: Standards, Recommended Practices, and Strategies.[1]

As I stated in my opening paragraph, I am pleasantly surprised at how much of the information contained in the various papers that comprise *Sound Savings: Preserving Audio Collections* is still relevant to the field of audio preservation today. It is an essential contribution and a useful document that should be on the shelves of all audio archives.—Vincent Pelote (pelote@andromeda.rutgers.edu), Rutgers University, New Brunswick, N.J.

### Reference

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***Subject Access to a Multilingual Museum Database: A Step-by-Step Approach to Digitization Process***. By Allison Siffre Guedalia Kupietzky. Westport, Conn.: Libraries Unlimited, 2007. 165p. $45.00 softbound (ISBN 978-1-59158-444-5). Third Millennium Cataloging.

*Subject Access to a Multilingual Museum Database* is a guide to automating the collection management and cataloging functions for collections of artifacts that offers a survey of the environment and a detailed case study helpful to any museum or other cultural heritage institution at any stage of the automation process. The compact work "contains the 'whos, whats, wheres, whys, and hows' of choosing

and implementing the right computer system to manage museums' holdings, with specific emphasis on how to accomplish this in a multilingual setting" (1) for medium and large museums—what we would call automation in a library setting. As such, it is best approached as a project management handbook and should not be confused with a guide to subject access or digital imaging as the title suggests.

Allison Siffre Guedalia Kupietzky sets the stage by examining the differing approaches to description in libraries, archives, and museums. A brief preface illuminates the specific challenges of the museum community that have hampered efforts to automate and standardize collections data, including a necessary oriented to the "one-of-a kind distinctiveness" expressed through "subjective description" (x). The first two chapters lay the ground work by examining the challenges posed by the automation of museum collection records and touching on examples, both successes and failures, in conversion to computerized systems. The remaining chapters tackle the practicalities of a project to select and implement a museum collection management system.

In the opening chapters, Kupietzky raises many questions about standardization of museum data structures and content as a major challenge, but provides only a cursory survey of ongoing work and more recent developments in this field. Similarly, she frequently mentions the need for multilingual representation of data—noting, for example, the need for a database structure that allows for a multilingual lexicon—but does not provide the more extensive theoretical or practical examination of this topic I was expecting from the title. Instead, she focuses on the selection and implementation of software for the remainder of the book.

Kupietzky introduces a systematic approach for automating a museum collection she calls the Six-Step Activation Guideline for E-Kulture (SAGE-K) Process (93). The process includes the steps that precede full implementation: needs assessment, system selection, preparing the institution for change, preparing the data, piloting, and adjusting on the basis of outcomes. The process is designed to ensure that her three requirements for success are met. These requirements are that the correct software is selected, the software is well supported, and the automation project is managed by someone knowledgeable about software and museums.

The process is detailed through a case-study of the Israel Museum, where the author serves as collections database manager. I found it important to remind myself that this is a case study, as the steps and some of the details are presented generically and in the present tense, although it is clear that she is referring to the specific case of the Israel Museum in many passages. As Kupietzky leads us through the process, she provides valuable insights and practical considerations.

This practical approach is the highlight of many of the sections, which deal with technical, logistical, and organizational aspects. Kupietzky covers defining technical requirements for the software, a useful section for a systems novice. Unfortunately, this section also reveals the dated references throughout the book, with several cited items about computer systems dating back to 1999. In the logistical area, she explains the RFP process, illustrating it with an excellent table showing scoring of competing proposals.

While many works are idealistic about the condition of existing data or the possibilities for repurposing and modifying data, Kupietzky offers a more pragmatic approach. Several types of data were analyzed for conversion, and in some cases manual rekeying was identified as the best solution. Similarly, they determined that existing curator's catalog cards should be transcribed as written because the cost for normalizing that data would be too great. She also delves into the less-tangible conditions for success, in particular what she terms "socialization of the idea" (37) so that the organization will be able to accept and integrate the new processes once automation is achieved. Staff and staff training are stressed as crucial to project success. Kupietzky is particularly sensitive to the immense amount of staff time and associated cost necessary for a successful automation.

Chapter 10 is something of an epilogue addressing public access to the collections database after the SAGE-K process and implementation have concluded. Kupietzky points out the issues including the confidential nature of some information and the need to edit and package curatorial data for public viewing. Echoing the implementation process, she addresses the direct costs of paying staff to prepare date for public consumption and infrastructure costs of hardware and software. Kupietzky mentions a variety of methods of public access, from digital exhibitions to full access to the collection catalog, along with some more forward-looking ideas such as geographic information systems (GIS) integration or virtual reality. This chapter also includes the obligatory, but important and straightforward, coverage of copyright issues.

The eleven appendixes that follow the concluding remarks add to the practical orientation. From an annotated guide to monolingual thesauri to detailed instructions for manipulating spreadsheet data through Microsoft Access, there are many details of potential value to the museum system manager. I wish the glossary had been more comprehensive, particularly in regard to the Kupietzky's own usage, as many terms used have multiple interpretations and were not defined within the text.

In sum, Kupietzky covers the entire process of moving a museum

from being paper-based to using a comprehensive information system in great breadth, although generally not in depth, making this a useful survey. However, this wide-ranging approach is a drawback because the focus and coverage is not consistent throughout the book. In some sections, "digitization" appears to mean the "computerization" (15) of collections information, yet at other times "digitization" refers to digital imaging and preservation of digital files, such as in chapter 7. Although data automation and digital imaging may go together, each has its own set of requirements that bear separate and detailed consideration before being linked together. This book might have benefitted from focusing more tightly on the information systems aspects of museum automation. Nevertheless, Kupietzky raises important issues and provides a roadmap for decision making, and her bibliography provides many leads for the in-depth study on specific aspects of museum collection records automation. *Subject Access to a Multilingual Museum Database* should be read by museum automation project managers and serves as a good overview of the complexities and potential rewards of museum collection management systems for professionals involved with object collections.—*Morag Boyd (boyd.402@osu.edu), The Ohio State University, Columbus.*

***UNIMARC and Friends: Charting the New Landscape of Library Standards: Proceedings of the International Conference Held in Lisbon, 20–21 March 2006***. Ed. Marie-France Plassard. Munich: K. G. Saur, 2007. 133p. $95.00 (IFLA members $67.00); hardbound (ISBN 3-598-24279-4). IFLA Series on Bibliographic Control 30.

This volume brings together the texts of papers delivered at a special 2006 International Federation of Library Associations and Institutions (IFLA) conference, "to actively contribute to [the] important discussion on challenges and future directions of bibliographic standards, thus following IFLA strategic directions" (10). Twelve papers appear in these proceedings—although the preface claims "eleven excellent papers were presented" (11)—describing current and evolving activities in IFLA, national libraries, and affiliated institutions related to resource description.

The welcome address by José Afonso Furtado of the Calouste Gulbenkian Foundation, co-sponsor of the conference, sets the stage appropriately by stating, "The international agenda involving library standards encompasses more than just the latest topics of IT related standards," but also "a much larger wave of activity is taking place, in rethinking the conceptual and normative foundations of libraries" (13).

The proceedings are divided into three sections. The first, "Cataloguing Standards: Challenges and Future Directions," contains five papers. The first paper in this section, by John D. Byrum, chair of the International Standard for Bibliographic Description (ISBD) Review Group, describes work to revise and consolidate the individual, format-specific ISBDs. This entry describes the history and review process of the ISBDs in great detail, but is woefully short on detail regarding how ISBD is thought of as relating to content standards and data structure standards in use in libraries. The need to clarify the relationship of ISBD to the IFLA Functional Requirements for Bibliographic Records (FRBR) is referenced, but the only tangible result of this need described is a separate ISBD/FRBR mapping document, rather than any effect on the revised ISBD itself. Similarly, Resource Description and Access (RDA), the new Anglo-American cataloging code under development, is mentioned as likely to not require ISBD punctuation, but no effects of RDA development on ISBD are discussed, nor is the underlying issue of why ISBD would continue to prescribe punctuation at all in the current technological environment in which it is standard practice to separate data from its presentation. The second paper in this section, by Barbara Tillett, describes the activity of the IFLA Meeting of Experts on an International Cataloging Code (IME ICC) to develop a "code for code makers" (31), provides an overview of the FRBR model, and summarizes work to date on RDA. Tillet discusses how FRBR concepts and terminology fed into work on the IME ICC, but strangely does not indicate to what degree the IME ICC activity informed work on RDA, beyond stating that RDA will "refer to" IME ICC (37). The next paper, from Patrick Le Boeuf of the Bibliothèque nationale, describes FRBR and related initiatives, along with other conceptual models arising from the cultural heritage community. The final two contributions to this section, by Glenn Patton and Mirna Willer, describe the FRBR follow-on activity of the Functional Requirements and Numbering of Authority Records (FRANAR) Working Group, including the release of a draft report titled *Functional Requirements for Authority Records (FRAR)*, and changes to the UNIMARC Authorities format suggested by the *FRAR* draft.

The second section of this volume focuses on "MARC Portability and Reuse in the Open Web Environment." Michel Bottin introduces the BiblioML/AuthoritiesML languages, although does not comment on their obvious similarity to the Library of Congress's Metadata Object Description Schema (MODS) and Metadata Authority Description Schema (MADS). Vladimir Skvortsov's contribution describes the MarcXchange XML format (ISO25577), which provides for the embedding of fields allowed in UNIMARC but not in MARC21, and therefore expands upon MARCXML. The next entry, from representatives of the National Library of Portugal, sum-

marizes the Library's use of XML for encoding UNIMARC records, managing UNIMARC documentation, and preserving and sharing UNIMARC records. This paper presents an ironic twist for a volume devoted to information standardization, when describing their decision to develop a new XML markup language for UNIMARC documentation rather than adopting an existing standard technology. The final paper in this section presents OPAC software built on open-source tools and using UNIMARC records in XML. While this system is built on open-source tools, it does not appear itself to have been released as open source, a pity.

The third and final section in this volume is "Evolving Standards for Bibliographic Data Handling: The IFLA's Role." Sally McCallum of the Library of Congress outlines her library's activities related to "MARC 21 and its derivatives, metadata, search protocols, and identifiers" (110) as they relate to the IFLA-CDNL Alliance for Bibliographic Standards (ICABS) work agenda. Renate Gömpel expands on the work of ICABS, describing specific contributions of its various partners and how the coordination of their activities relates to IFLA initiatives. The final paper of the conference, by Alan Hopkinson, chair of the Permanent UNIMARC Committee, looks forward to the future of UNIMARC, thinking about keeping current with evolving technologies, providing documentation in multiple languages, and sharing of records. The tone of this paper is unfortunately somewhat reactive, however, taking the approach of keeping up with change rather than being its agent.

As with most conference proceedings compiled and published following the conference rather than in advance of it, this volume suffers from the delay introduced as part of the publishing process. At the time of this writing, more than two years after the conference, already much of the information presented is out of date. For example, the consolidated ISBD was published in 2007, the IME ICC was released as a draft for review in 2008, the proposed structure and timeline for the development of RDA have been significantly revised, and the *FRAR* report was reissued in a second draft in April 2007 known as *Functional Requirements for Authority Data (FRAD)*.[1]

While the purpose of this volume is to document the papers that were presented at the conference, to an American audience more interpretation of the topics presented and their relationship to U.S.–based initiatives would be beneficial. A brief preface from the director of the UNIMARC Core Activity within IFLA introduces the papers, providing context for the conference theme. A similar and parallel wrap up following the papers and tying them together would have been a welcome addition to this volume, responding to the call in the conference's welcome address to not just consider the technological issues involved but also those related to the core missions of libraries.—Jenn Riley *(jenlrile@indiana.edu)*, Indiana University, Bloomington.

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## Index to Advertisers

# Index

## Volume 52 2008

### Compiled by Edward Swanson

General Procedures Used in Compiling the Index
The following types of entries are included:
a. authors—of articles, reviews, and letters
b. titles—of articles and of articles about which letters were published
c. subjects—of articles and of books reviewed

Subject entries for individuals and corporate bodies are identified by "*about*"; letters are identified by "(*c*)." Reviews are indexed by name of reviewer and by subject of the work reviewed, identified by "*reviews.*" They are also listed by title under the heading "Books Reviewed."

Subject headings are based mainly on *ASIS&T Thesaurus of Information Science, Technology, and Librarianship,* 3d ed., edited by Alice Redmond-Neal and Marjorie M. K. Hlava (Medford, N.J.: Published on behalf of the American Society for Information Science and Technology by Information Today, Inc., 2005).

Paging of Volume 52:
Pages 1–72 = Number 1 (January)
Pages 73–144 [1-72] = Number 2 (April)*
Pages 145–216 = Number 3 (July)
Pages 217–284 = Number 4 (October)

***Note:** Due to a production error, the page numbers in Number 2 are incorrect. The correct page numbers are 73 through 144, instead of 1 through 72. The correct page numbers are given in the entries in this index, followed in brackets by the numbers that actually appear in the issue, e.g., 75–83 [3–11]

**T**



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**W**



**X–Z**

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