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LIBRARIES DEALING WITH THE FUTURE NOW

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Introduction

As the realities of reduced resources and increasing expenses continue, many college and university leaders are struggling to find viable solutions for maintaining the vitality of their campuses. Their actions, however, are constrained by the assumption that their fiscal difficulties are short-term (one to two years) and, therefore, these leaders—with the support of faculty and staff—seek short-term solutions. The result, as emphasized by Guskin and Marcy in a recent *Change* article, is what they call "muddling through."

> [A] time-honored practice for dealing with recurring fiscal problems in higher education....the immediate response to an annual budget shortfall is to balance the budget by draining all available unspent dollars from existing accounts, making across-the-board budget reductions, and protecting faculty and staff positions.[1]

Yet, they ask, what happens when fiscal problems continue? Can such "muddling through" and the assumed fiscal turnaround be justified in the present and projected fiscal environment? Can we afford to continue pursuing short-term solutions if the fiscal problems we are facing are long-term (that is, five to ten years)? Guskin and Marcy maintain that

> if this analysis is correct, then the 'muddling through' approach, far from protecting institutions, may actually *undermine* the nature of the academic profession....Over time, this will eventually mean that academic offerings will be less and less challenging and that the quality of learning will be seriously diminished.[2]

To deal with a future fiscal condition of diminished resources over the next five to ten years, Guskin and Marcy propose an alternative to "muddling through" that emphasizes the need for college and university leaders to transform their institutions. They propose a set of organizing principles and transformative actions "that can ultimately offer a more hopeful future for both the quality of student learning and the nature of faculty work."[3]

Guskin and Marcy are part of the Project on the Future of Higher Education (PFHE),[4] a focused initiative that brings together leaders in American higher education to answer the question: "Given what we know and likely future social, technological and economic realities, if we were creating a college or university today, what would it look like?" To respond to this question, the project is developing models that maintain faculty vitality and enhance student learning in a climate of restricted resources. Project members challenged themselves to "imagine a more flexible system in which the educational roles of faculty, librarians, student affairs professionals, and students themselves were redefined in a way that deployed them more efficiently as educational resources."[5]

As librarians, we have seen and practiced the "muddling through" response. We also share Guskin and Marcy's perspective that the present fiscal reality is not a short-term problem.

We find the project's challenge compelling. Not only can we imagine how librarians could transform their own campus roles and units, but we can imagine how they could make significant contributions to the transformation of their parent institutions. We decided to pursue such questions as the following: What are the implications of this shift in perspectives for the future of the academic library? What would it

mean for the academic library not to "muddle through" but to become a transformed library of the future within the context of the principles and actions proposed by the PFHE? How can librarians help to break down existing silos and create a cooperatively managed campus environment, one focused on student learning, quality of faculty work-life, and reduced costs per student?

To begin addressing these questions, a small group of librarians (see accompanying list) from different types and sizes of libraries held a retreat in Tucson, Arizona, in September 2003 and developed a proposed set of changes to begin what we hope will become a national conversation. These proposed changes afford libraries an opportunity to restructure their organizations around partnerships with faculty and other campus professionals, and with other institutions to develop new learning environments, teaching methods, resources, and technologies.

To help guide our thinking, the group articulated a list of assumptions about higher education institutions. These assumptions are those we found either explicit or implicit in Guskin and Marcy's article, heard from roundtable discussants during a presentation by Guskin at the ACRL 2004 conference[6], and generated by participants in the Tucson retreat.

Assumptions about Institutions of Higher Education

1. Institutions of higher education will experience a significant, long-term loss of budget and purchasing power over the foreseeable future.
2. Because we face a long-term problem, continuing to "muddle through" with a short-term strategy will only erode educational quality and demoralize faculty and staff. "Muddling through" is not a viable long-term strategy.
3. By implementing the transformative model described in the Guskin and Marcy article in Change, higher education will maintain the quality of education and faculty and staff work-life, while at the same time reducing the cost per student.
4. Essential to success will be our institutions' ability to assess student learning outcomes wherever learning occurs.
5. Institutions will employ multiple instructional strategies, such as technology-based formats, learning communities, residencies, experiential/service learning, learning with peers, and individual learning.
6. Faculty and other campus professionals will take on new instructional roles, as they create new environments to support student learning.
7. Over time, student characteristics will change. We will see evolving differences in the preparation, abilities, preferences, and behaviors across student cohorts.
8. Transformation will be "messy."
9. For change to occur, faculty and staff must perceive the likely future pain of an untransformed institution to be greater than the pain associated with making the transformation.
10. Transformation will require strong leadership, risk taking, and a revolutionary vision.
11. Institutions must transform their organizational systems, including how and what they count, how they reward and allocate, whom they serve, what they provide, and how they are structured to do this.
12. Institutions will be looking for ideas and models to deal with the problems they face. Libraries are in a unique position to contribute leadership, ideas, and skills to this transformation.

Background

While all campus units face reduced budgets, academic libraries suffer additional pressures due to a unique set of economic factors affecting our budgets. Libraries are experiencing record increases in the cost of scholarly information, with six to twelve percent annual inflation in the price of journals alone. Complex licensing agreements with publishers of online journals and indexes often force the purchase of expensive packages of titles, or of duplicate print versions. Academic libraries have an imperative to invest in a technology infrastructure that will support the delivery of digital content and create high-tech, student-friendly environments. Critical shortages in trained librarians drive up costs for recruiting and retaining professional staff. Together these elements are "adding, not reducing, personnel and operational costs."[7] As Stoffle, et al., have written, "We are under considerable pressure from our institutions to reduce staff size while increasing services and access....How will we address these changes?"[8]

Muddling through versus Transforming

Our Tucson-assembled group began to address how libraries could respond to these issues by using a "muddling through" chart presented as part of Guskin and Marcy's argument to help us distinguish behaviors that we saw as muddling through and those we saw as transformational. These two categories prompted us to consider the strategies we had taken at our libraries or had seen other libraries take in response to pressing issues. We also took into account the statements in *Review of Organizational Responses to Budget Cuts* prepared by Cornell University Library.[9] We organized all of these ideas into two columns. This exercise highlighted the need to add another column for a middle stage between muddling through and the transformed library. The following lists show responses that are characteristic of each stage.

Transformation Model for Academic Libraries: Recognizing Muddling-through Strategies, Taking Actions to Transform

Muddling through

- Defining "good service" as what we currently provide and measure.
- Chipping away at service and resource levels each year, e.g., hours, serials; closing during slow periods, such as intercessions.
- Cutting whole services, functions, or popular services to get attention and using faculty as an excuse for not doing things.
- Cutting all services across-the-board.
- Protecting the collections budget and continuing to put majority of resources into preserving and maintaining current collections, rather than redirecting dollars to future priorities (i.e., digital resources and services).
- Renting out library facilities, such as meeting rooms, to generate revenue around the margins.
- Continuing mediated services, rather than allowing students to be self-determining.
- Providing more staff to meet demand at service points, rather than developing less-costly alternatives.
- Continuing consortial efforts and remote storage that keep us from making revolutionary change.
- Buying materials "just in case," rather than "just in time."
- Believing digital is "just another format."
- Continuing to place value on static job descriptions rather than flexibility and change in the workplace.

Transitioning

- Streamlining existing processes and eliminating work that can be outsourced or given up.
- Consolidating library units and reallocating staff.
- Changing what we count/measure and what we value.
- Joining campus conversations concerning curricular design and delivery, both at the organizational level and the individual level.
- Integrating services across campus.
- Increasing outreach and education to faculty regarding scholarly communication issues.
- Creating a national network of regional repositories and libraries of record for print.
- Reducing costs for processing collections (e.g., outsourcing cataloging, decreasing scope of binding program).
- Better preparing current staff for change by educating them about trends and directions.
- Communicating vision of future library with staff and invite input into developing a work environment that is responsive to change.

Transformed Library

- Provides a work environment that allows staff to be flexible and responsive to continual change in an environment that changes quickly. Staff serve the mission, rather than a specific job description.
- Continually assesses its contribution to learning and other institutional outcomes.
- Provides both physical and virtual spaces to access information any time, any place.
- Partners with other campus agencies to achieve the collective university goals.
- Serves as a change agent in higher education due to institutional connections, academic values, and cooperative ventures with other libraries.
- Develops new and innovative learning environments and activities through collaboration with other academic and campus units.
- Provides community spaces for inquiry-based learning and out-of-classroom activities, including the creation and design of products by students.
- Develops robust collaborative frameworks for the management, access, and preservation of information resources in all formats.
- Manages a broad range of materials, including traditionally published scholarly materials as well as nontraditional materials like preprints, instructional objects, and data sets.
- Active and influential in the social policy arena, including helping bring about significant changes to the scholarly communication process, copyright laws, licensing practices of information vendors, and intellectual property policies.

Each list gives examples for dealing with budget cuts in that category, rather than showing a progression or one-to-one correspondence of strategies from one stage to another. However, there are some scenarios for which a strategy can progress across the stages of change. Take the following example of serials cuts.

SERIALS CUT SCENARIO
MUDDLE THROUGH OR TRANSFORM?

- The library needs to cut 10% of its serials budget.
- Serials prices have been steadily inflating at 7% each year.
- Some serials prices have been inflating more than 12% each year.

What does the library do?

"Muddling through"
- Cut all subject-area budgets across the board.

Transitioning
- Use multiple criteria for cuts, but target those journals with histories of high inflation.

Transformed
- Reallocate some of the serials budget to fees for campus authors to publish in open-access journals (e.g., *BioMed Central*).
- Partner with other libraries to offer open access to articles through a federated network of institutional repositories.

Our intention is that library professionals identify the strategies they have taken in the past and consider whether they were transforming or muddling through. If they are muddling through, the list above identifies actions that could be taken. Yet, if the status quo were working, why would a library take a more transformative approach? We believe that if libraries continue to muddle through, they will not ensure their viability on campus, nor will they be seen as leaders in transforming the campus, a role that we need if we are to effect change in scholarly communication and student learning. We also agree with Guskin and Marcy that most state-funded institutions will need to change if they are to keep student-costs low and maintain quality of faculty work-life. Each of these ideas is discussed in more detail later in this paper.

We also intend to encourage discussion among librarians so that we can identify additional actions and come to some agreement on what actions are needed to transform our libraries.

Assumptions about the Transformed (or Transitioning) Library

The Tucson retreat group had to grapple with how to articulate, as well as maintain, professional principles and values in what we called the "transformed library." During this conversation we acknowledged that there would be a potentially lengthy transitional or transforming stage. We developed a list of assumptions about the transformed library, with the concession that no one list will apply completely across all institutions. Each library will need to consider its own mission, values, institutional setting, and resources in choosing a path forward. It would be easy, however, to dismiss out of hand those assumptions that do not completely reflect past practice. We encourage all librarians to pause before doing so, and ask these two questions about each assumption: What if this were true? How would this change our course of action?

1. Libraries provide information that is just enough, just in time, and just for me.
2. Library staff serve the mission of the higher education institution, rather than a specific job description.
3. Library staff are rewarded for giving up old work to take on new initiatives. (Example: staff purchase records "as is" for mainstream materials in order to reallocate staff time to managing records creation for locally created materials.)
4. For mediated services, people at service points have been replaced with automated systems whenever the human interaction adds little or no value. (Example: using self-checkout machines instead of staff at circulation desks.)
5. Library services are integrated with similar campus services whenever this is feasible and

advantageous to students or faculty. (Example: using virtual reference software and staffing to answer student questions about all campus services, not just reference or library questions.)

6. The library collaboratively creates learning environments that help students become self-directed and allow faculty to teach in new, more productive ways.
7. Information fluency is co-owned by the entire campus. Librarians spend less time in front of classes, and more time partnering in curricular and instructional design, and in the assessment of learning.
8. Libraries will support hybrid format environments for some time, but in new materials there will be a continuing shift to digital from paper and other tangible formats. Libraries spend as little money as possible on adding to print collections.
9. Libraries have developed robust collaborative frameworks for the creation, management, access, and preservation of information resources in all formats, including locally created learning objects, preprints, research reports, data sets, gray literature, and institutional data.
10. Librarians are active and influential in the social policy arena, having helped bring about significant change to the scholarly communication process, copyright laws, licensing practices of information vendors, and intellectual property policies.
11. As part of our mission, libraries are committed to continuously assessing our contributions to student learning and other goals of the parent institution.

Libraries are Positioned Well for Transformation

The economic challenges described above cannot be addressed by relying completely on muddling-through strategies. We do not believe our journey is complete by any means, but libraries have had tremendous success in using technology to transform many basic library services. Librarians have improved their processes, reallocated their budgets, and restructured their organizations to keep pace with the rapidly changing environment in which they live. We were delighted and humbled by the recognition of librarians' efforts in a recent *EDUCAUSE Review* article by Ayers and Grisham who state:

> If you had told people ten years ago that card catalogs would virtually disappear over the next decade, to be replaced by the systems we now enjoy for the management of all forms of information, they would not have believed you. The real heroes of the digital revolution in higher education are librarians; they are the people who have seen the farthest, done the most, accepted the hardest challenges, and demonstrated most clearly the benefits of digital information. In the process, they have turned their own field upside down and have revolutionized their own professional training. It is a testimony to their success that we take their achievement for granted.[10]

Librarians have a great deal of experience and expertise in collaborating and building partnerships across traditional boundaries. Typically, libraries are organized for effective liaison with each academic department on campus in order to assess needs and provide appropriate collections, instruction, and reference support. Because libraries touch all departments and cross both academic and student services, they

> reflect a context in which these issues [of institutional change] converge. This presents them with a challenge of unusual scale and complexity. In response, libraries have embraced new technologies and adjusted to the program priorities of their parent institutions....libraries have also demonstrated broader leadership in bringing their intellectual and service missions to bear on the issues raised.[11]

This ability to step outside silos and communicate across disciplines and units will be crucial for institutional transformation. Librarians also have tremendous experience managing budgets, personnel, collections, services, and facilities. We believe that this combination of a strong campus position, the vision of an integrated higher education environment, significant experience with evolving technologies, and our skills as management and information professionals positions us to be active change agents in campus partnerships. Following are some examples that illustrate these strengths.

Current Initiatives and Future Directions

Information: Creation, Dissemination, Access

The traditional library responsibility for collection development is broadening to one of information management. The days of purchasing materials "just in case" someone will need them are giving way to providing access to materials "just in time" to meet a particular need. This shift is critical as a recent study estimates that new stored information grew about 30 percent per year between 1999 and 2002, mostly in digital formats.[12] As William Wulf stated in a recent *EDUCAUSE Review* article, "instead of being a hoarder of containers, the library must become the facilitator of retrieval and dissemination."[13] In the future, librarians will "manage all types of information, not just

the structured, published information we have traditionally been asked to collect, organize, and preserve in the past."[14] Information management extends far beyond the stewardship of traditional print collections; it includes providing intellectual control, standards, and lasting digital environments for a universe of materials that were previously outside the library's purview. Examples include locally created learning objects, preprints, research reports, data sets, gray literature,[15] and institutional data. This change in focus is not a choice for libraries, but an imperative. Individual libraries will still maintain unique and wonderful special collections, but our primary investments for the future will be in access systems.

Scholarly Communication

"What do we want our system of scholarly communication to look like in 2010?" was the question posed to John Unsworth and Pauline Yu recently at a Committee on Institutional Cooperation summit. Their description of the ideal system of scholarly communication is this:

> In a better world, high-quality, peer-reviewed information would be freely available soon after its creation; it would be digital by default, but optionally available in print for a price; it would be easy to find, and it would be available long after its creation, at a stable address, in a stable form.[16]

The authors go on to make the case that it will be difficult to ensure stability unless libraries are charged with managing this information. Libraries can also provide the value-added mechanisms that will make information easy to find. Libraries are already supporting new directions in scholarly communication such as open-access publishing and self-archiving; partnerships between libraries, university presses, publishers and software developers; and the creation of institutional repositories.

Institutional Repositories

The development of institutional repositories has recently emerged as a new strategy for institutions of higher education to intervene in the traditional path from scholar to commercial publisher. A campus-based institutional repository is defined by Clifford Lynch as a set of services and a long-term commitment that an institution offers to its community for the management and dissemination of digital materials created by the institution and its community members.[17] As Joseph Branin, Director of the Ohio State University (OSU) Libraries, describes in his discussion of the university's decision to create an OSU Knowledge Bank,

> What is most important about our story is that a group of senior administrators recognized the need to manage the university's digital assets and acknowledged the library's expertise and experience to lead the effort. In essence, we are now taking on new roles as knowledge managers and creating an enterprise-wide knowledge management system for the university.[18]

While this movement has begun in universities, creative projects such as DSpace, an open source, institutional repository system developed by MIT Libraries and Hewlett-Packard, will help to ensure that the technology is openly available to institutions of all sizes in the future. DSpace is a "digital library system designed to capture, store, index, preserve, and redistribute the intellectual output of a university's research faculty in digital formats."[19] While originally deployed by MIT to store research, this software works equally well for housing collections of learning objects or valuable institutional data. Because DSpace is open source and can be used by any institution, it is easy to envision a federated system of shared information in institutional repositories.

Creating New Knowledge Products

Beyond managing access to existing information, librarians are working with faculty and other content experts to facilitate the creation of new digital information and instructional objects. Below are two of many examples that illustrate this work.

The Tree of Life is an ambitious, collaborative Web project to building an encyclopedic resource on the phylogeny and biodiversity of all species.[20] Organized in a cross-referenced taxonomy, the content is peer-reviewed and continually expanded and updated by scholars from around the world. Over 350 biologists have already created 2,600 pages of content that are managed through a system produced by programmers and metadata librarians. It seems relevant to note that a librarian served as Co-Principal Investigator on this project.

The Geotechnical, Rock and Water Resources Library (GROW)[21] introduces students of all ages to civil engineering through the development, collection, and dissemination of reviewed and ranked interactive learning resources continually enhanced by new technological innovations. GROW was created by a team of civil engineers, librarians, and computing professionals.

Information Access Systems

Library Online Public Access Systems (OPACs) currently provide access to a wide variety of materials through a number of different interfaces. Researchers can select from a library's online catalog, commercial indexes and databases, and freely available Internet resources. Choosing resources can be confusing, and often multiple searches are required to satisfy a single query. Libraries will continue capitalizing on new technologies, building the capacity for users to select and search across systems,

create personal individual profiles, annotate and store results, and even contribute comments to the public record. As these interfaces are perfected, librarians will be freed from repetitive, triage-type transactions and will redirect their time into value-added work.

The Scholars Portal is one example of a current initiative with a goal of transforming information access.[22] A consortium of seven libraries, working with a commercial vendor, is developing a Web portal that integrates end-user searching of diverse resources. The Web-based software provides an individually customized search interface and quick links to content along with other valuable features. Libraries can build expert guidance into the portal by bundling resources and databases for specific needs and audiences, and by providing context-sensitive online help. The portal offers libraries the opportunity to give academic shape to the flood of Web content and to integrate it with traditional scholarly materials. The shared development of Scholars Portal promises cost-efficiency for participating institutions.

The transformation occurring in libraries will create new environments and resources for learning, scholarly communication, and information access.

In its broadest conception, providing access to information will also expand the boundaries of traditional library services. As libraries concentrate print collections in analog repositories, library space will become available for the creation of collaborative learning environments, shared faculty development areas, writing centers, advising, tutoring, instructional computing, and other integrated student services. Integrating these different service functions into a common space allows traditional library services such as reference to grow into one-stop shopping for students who can get help from librarians, computing center staff, and student services professionals, both in-person and virtually.

Teaching and Learning

One of the transformative actions described by the PFHE is to redefine the educational roles of faculty, librarians, other campus professionals, and students themselves to use everyone more efficiently as educational resources. Libraries have been transitioning from storehouses and study halls to networks and services that support an evolving curriculum and pedagogy. We have the potential to play a vital role in fostering student learning. An example of this potential can be seen in the University of Arizona's Teaching Teams Program (TTP).[23] Einstein's Protégés—a program within TTP—brings together staff from many campus units, including the library, office of assessment, learning center, teaching center, writing program, and faculty from across campus. These staff and faculty members work together to prepare student teachers to work with students enrolled in assigned courses.

Although librarians have a long history of offering bibliographic or library instruction to the campus community, there is an emerging need for students to reach well beyond understanding bibliographic access to information. They need to recognize when they have an information need, know how to find information, and, particularly, how to evaluate the information they find. Beyond this, students need to synthesize and analyze information to create new knowledge. The language to describe this collection of skills has not been standardized yet, and a variety of terms are currently in use including "information literacy" and "information competence." We prefer the term "information fluency" to describe this set of lifelong learning skills. Students who are very fluent can recognize the limits of existing knowledge and the need for continuous learning and skill development. Through the various mandates being handed down by accrediting bodies and the national trend to assess competence among college students, it is clear that information fluency has become a critical competency in higher education.

Our society depends on the skillful access, evaluation, and use of information for good citizenship, workplace success, and personal fulfillment. Information fluency is a powerful pedagogical framework for pursuing the development of lifelong learning and critical thinking. Faculty who are very familiar with information fluency can transform their teaching from content-based approaches to learner-centered approaches, with librarians and other campus professionals as strong partners. With everyone working in concert, we can create a variety of educational pathways for students that will include traditional courses, learning communities, peer-tutoring, self-mastery, and service-based learning, all enhanced by innovative uses of technology.

Examples of specific library-driven initiatives include the intra-institutional collaboration used to develop and implement the concept of the "information commons"[24] on many campuses. The information commons leverages the library's centrality of place and typically long hours of service, permitting institutions to build large, attractive facilities for student research, study, and collaboration. These learning centers provide just-in-time help with a range of academic and developmental needs: libraries providing reference assistance; computing centers supporting multimedia and other specialized services; tutoring, advising, and writing centers providing consultation and counseling.

The information commons architecture is built for collaboration—a theme mirrored in the integrated management of services.

Two other library initiatives are the development of extensive online tutorials and the use of online chat programs to provide virtual reference service. The Texas Information Literacy Tutorial (TILT) is an acclaimed Web tutorial that teaches library research and information fluency.[25] The design is attractive, modular, and based on active learning principles. Its creators at the University of Texas at Austin Library provide a free, open license for other libraries to adapt the tutorial (and the underlying technology) for local needs. Tutorials such as these are available to students 24 hours a day, 7 days a week. They can be used by faculty as course units, or consulted by students as independent study aids.

Virtual or online reference services provide individual help at time of need, no matter where a student is located. Experiments are underway that coordinate this service among libraries in different time zones, in order to extend the hours of service without having to add local staffing. In other experiments, libraries are sharing this software with other campus units like student services to increase the types of questions students can get answered online.

The integrated teaching and learning space that we have outlined here has the potential to extend the library's educational role throughout the curriculum and provide learning opportunities for students that are not tied to seat time in a course. Additionally, it will leverage the library's investment in digital resources by making these resources more visible and easily available to the learning community.

Guskin and Marcy suggest that by focusing on institution-wide common student learning outcomes as the basis of the undergraduate degree, schools can recognize and assess learning *wherever it occurs*, whether it be as a result of service learning, internships, independent study, peer tutoring, online instruction, or other learning experiences. Such an educational delivery model would improve the productivity of student learning at a reasonable cost. Libraries are also committed to assessing our contributions to student learning. In order to address the American Association for Higher Education's conclusion that "assessment fosters wider improvement when representatives from across the educational community are involved," some libraries and library associations are designing measures that will establish institution-wide, student learning outcomes in information fluency as an important component for the undergraduate degree.[26] One such example is the Project for Standardized Assessment of Information Literacy Skills (SAILS).[27] This project is developing an instrument to measure information fluency, gather national data, provide norms, and compare information fluency measures with other indicators of student achievement.

Conclusion

Faced with continuing reductions in real dollars (i.e., inflation-adjusted dollars), higher education institutions and their libraries need to be fundamentally restructured to survive as vital, high-quality entities that continually enhance student learning while maintaining quality of faculty and staff work-life. Existing processes will be streamlined or eliminated. Libraries will accomplish this by empowering individuals to work more independently, cooperating with each other to develop shared print repositories, working with vendors to receive shelf-ready books, increasing the amount of information available electronically, and reducing staff at service points. The transformation occurring in libraries will create new environments and resources for learning, scholarly communication, and information access.

Academic libraries have both a vital interest in transforming the campus as a whole and a base of expertise from which campuses can profit. We also have a passionate belief that true transformation will only happen with all campus units working in concert toward a common goal. However, whether or not campuses choose to change, libraries will not have a choice. We cannot continue to conduct business as usual. The rising costs of information, the need to continue building a technological infrastructure, the complexity of finding a balance between print collections and true digital environments compel us to seek a transformative approach to resource management. Libraries must transform because librarians recognize the role libraries have, regardless of mission or size, in continually enhancing student learning using the best available technologies and techniques.

[1] Alan E. Guskin and Mary B. Marcy, "Dealing with the Future Now: Principles for Creating a Vital Campus in a Climate of Restricted Resources," *Change* 35, no. 4 (July/August (2003): 13–14, <http://www.pfhe.org/>.

[2] Ibid., 14.

[3] Ibid.

[4] Project on the Future of Higher Education, <http://www.pfhe.org/>.

[5] Edgar Beckham, Speech to the Appalachian College Association Summit, Johnson City, Tennessee, November 14, 2003.

[6] Alan E. Guskin and Carla Stoffle, "Enhancing Student Learning and the Vitality of Academic Professionals in a Climate of Budget Cuts," presented at the Association of College and Research Libraries 11th National Conference, Charlotte, North Carolina, April 12, 2003.

[7] Carla Stoffle, Barbara Allen, David Morden, and Krisellen Maloney, "Continuing to Build the Future: Academic Libraries and Their

Challenges," *portal* 3, no. 3 (July 2003): 365, <http://muse.jhu.edu/journals/portal_libraries_and_the_academy/toc/pla3.3.html>.

[8] Ibid.

[9] "Cornell University Library: Review of Organizational Responses to Budget Cuts," April 14, 2003, <http://www.library.cornell.edu/staffweb/strategy/documentation/SurveyResponsestoBC.pdf>.

[10] Edward L. Ayers and Charles M. Grisham, "Why IT Has Not Paid Off As We Hoped (Yet)." *EDUCAUSE Review* 38, no. 6 (November/December 2003): 43, <http://www.educause.edu/pub/er/erm03/erm036.asp>.

[11] Wendy Pradt Lougee, "Diffuse Libraries: Emergent Roles for the Research Library in the Digital Age" (Washington, D.C.: Council on Library and Information Resources, August 2002): 1, <http://www.clir.org/pubs/reports/pub108/pub108.pdf>.

[12] Peter Lyman and Hal R. Varian, "How Much Information?" 2003, <http://www.sims.berkeley.edu/how-much-info-2003>.

[13] Wm. A. Wulf, "Higher Education Alert: The Information Railroad Is Coming," *EDUCAUSE Review* 38, no. 1 (January/February 2003): 16, <http://www.educause.edu/pub/er/erm03/erm031.asp>.

[14] Tom Storey, "University Repositories: An Extension of the Library Cooperative." *OCLC Newsletter*, no. 261 (July 2003): 7.

[15] "The U.S. Interagency Gray Literature Working Group, 'Gray Information Functional Plan,' 18 January 1995, defines gray literature as 'foreign or domestic open source material that usually is available through specialized channels and may not enter normal channels or systems of publication, distribution, bibliographic control, or acquisition by booksellers or subscription agents.'" From GrayLIT Network, accessed November 10, 2003, <http://www.osti.gov/graylit/whatsnew.html>.

[16] John M. Unsworth and Pauline Yu, "Not-so-Modest Proposals: What Do We Want Our System of Scholarly Communication to Look Like in 2010?" presented at the Committee on Institutional Cooperation Summit on Scholarly Communication, Park Ridge, Illinois, December 2, 2003, <http://www.iath.virginia.edu/~jmu2m/CICsummit.htm>.

[17] Clifford A. Lynch, "Institutional Repositories: Essential Infrastructure for Scholarship in the Digital Age," *ARL Bimonthly Report*, no. 226 (February 2003): 1–7, <http://www.arl.org/newsltr/226/ir.html>.

[18] Storey, "University Repositories," 7.

[19] DSpace Federation, <http://www.dspace.org/>.

[20] The Tree of Life, <http://tolweb.org/tree/phylogeny.html>.

[21] Geotechnical, Rock and Water Resources Library, <http://www.grow.arizona.edu/>.

[22] Scholars Portal, <http://www.arl.org/access/scholarsportal/>.

[23] University of Arizona Teaching Teams Program, <http://hal.lpl.arizona.edu/teachingteams/>.

[24] The information commons is probably best understood as part of the larger concept of collaborative facilities. Collaborative facilities integrate the services of information technologists, librarians, instructional technologists, multimedia producers, and many others to serve a wide range of faculty and student needs. The organization and functions of these facilities vary widely, but all include a distinct physical space, participation by at least two separate campus units, and staff members dedicated to collaborative work. Collaborative facilities range from information commons that provide students and faculty with equipment and reference services to distance-education offices that address institutional concerns to centers that assist faculty in integrating teaching and new technologies.

[25] Texas Information Literacy Tutorial, <http://tilt.lib.utsystem.edu/>.

[26] American Association for Higher Education, "9 Principles of Good Practice for Assessing Student Learning" [2003], <http://www.aahe.org/principl.htm>.

[27] Project SAILS, <http://sails.lms.kent.edu/>.

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LIBRARIES INVESTING IN THE FUTURE FIRST—SOME PRACTICAL SUGGESTIONS

by Margaret M. Landesman, Librarian, University of Utah Library

"Muddling through" is what we mostly do most of the time. It is a reasonable strategy for bridging the gap between present resources and future expectations—providing expectations are in a reliably upward direction.

"Muddling through" is problematic though if we are entering a period of diminishing resources. The short-term result is unsatisfactory and—since it consumes resources leaving little to invest in longer-term solutions—ensures a poor outcome for the long run as well.

The Project on the Future of Higher Education anticipates significant loss of budget and purchasing power over the foreseeable future—five to ten years.[1] Some of our colleagues gathered in Arizona in 2003 to consider what the project's findings mean for research libraries. In an article on their deliberations, our Arizona colleagues urge us to think carefully about which courses of action are "muddling through," as opposed to those that can be seen as "transitioning" and those that may lead to a "transformed" library.[2]

This essay offers some practical suggestions for implementing transformative strategies for libraries, with a focus on using the materials budget as an investment fund.

To ensure that mediocrity does not become an ever more apt description of our collections, and to meet the needs of present and future users, libraries must move transitioning and transformative options to the top of the priority list. These options look expensive only if judged against the marginal increases in our materials budget—if weighted more correctly, as an amount judged in the context of the total costs of research collections, they loom less large.

THINK ABOUT LIBRARY MATERIAL PRICES IN THE BROADEST CONTEXT

Compare price increases in dollars, rather than as percentages

We need to think very clearly about what things cost. It is difficult and labor-intensive to deal with very long lists of relatively small numbers, such as serials lists. Decision makers are tempted into generalizations, and it becomes most manageable to talk about prices in terms of the percentage increase each year. This is a mental model that can lead to faulty reasoning in cancellation decisions.

On this model, the price of a $1,000 journal with a $50 increase appears to have gone up less than a $300 journal with a $25 increase. Libraries may come to the decidedly odd conclusion that a $1,050 journal is not part of the problem, but a $325 journal may be. We need to explicitly remind ourselves that a $50 increase is twice as big as a $25 one. And that the money we spend for a $1,000 journal would purchase three $325 ones.

This temptation to think in percentages is seldom a problem in personal finances. Tickets to the local opera cost just what they've cost for some years. Movie tickets have gone up substantially. I am not, however, tempted to believe that the fact that the opera did not increase its price makes it the more fiscally conservative choice.

Focus on total cost and project costs for the future

The problem is the price, not the price increase. Because the library is already paying the base price—whatever that is—but needs new funding for the increase, we look at the increase rather than at the total cost. If a $1,000 title goes up by $50, we know where to find the $1,000—it was already in last year's budget. So we focus on the $50 of new money. We should focus instead on the fact that this title costs $1,050 and ask whether or not it is worth $1,050.

Looking only at the increase obscures the fact that libraries purchase essential titles (or collections that include them) that would be priced lower if produced by other publishers.

We need to scrutinize the price increase, but must not confuse it with the price. Paying high dollar increases on a few thousand titles penalizes publishers who kept prices low and now find cancellations rising because libraries have little funding left after the big bills are paid. It also reinforces the (at this point, justified) belief that libraries will complain, but will not cancel.

Turn ongoing costs back into (mostly) one-time costs

The transformation of one-time costs, especially for reference materials, into ongoing costs is increasingly problematic for libraries. The number of titles we can afford drops dramatically as we pay every year for the same titles over and over again.

To regain flexibility in our budgets by moving some of these expenditures back to one-time costs would be highly desirable. Though there is no such thing as a library acquisition that is one-time only—even books require continued expenditures for buildings, shelves, and staff—it is possible to turn the bulk of some expenditures back to one-time.

There is currently a proposal that libraries come up with enough funding over the next three years to endow the *Stanford Encyclopedia of Philosophy* to ensure that it will remain an open-access tool. Even reasonably priced subject encyclopedias cost large institutions a few thousand dollars per year apiece and are inaccessible to many small institutions. Endowing this and similar titles would save libraries money in the long run.

The proposal from ARL to digitize retrospective U.S. government documents would have a similar outcome—the expenditures are not one-year costs, but, like purchasing a set of books on a standing order, they do eventually end and you do receive new content each year for your investment.

Be aware of the dangers of tying library budget requests to journal price increases

It is troubling that so much of our analysis focuses on price increases. One might suppose that if prices stopped rising, academic library collections could meet user needs without further funding increases.

This focus also feeds the perception that the library is a "black hole." Campus administrators despair of effecting long-term improvements in their libraries because, no matter how often money is found, the library needs more the next year.

We need to scrutinize the price increase, but must not confuse it with the price.

There has to be a return to our institutions beyond simply stopping cancellations. We need to look for ways to show that the investment of new funding brings new titles and/or a new level of service.

Consider the cost to the institution as a whole

The institutional cost is not just the library's subscription cost. The cost is what is being paid across campus. In some cases, the institution is paying both page charges and a subscription price. In others, the institution may pay for multiple copies across campus—with titles such as *Nature* and *Science*. A campus license that moves all of these expenditures onto the library budget may or may not be more expensive for the university than scattered print subscriptions.

There are also new types of titles such as *ARTStor*, which in effect outsources the provision of images for teaching art history classes from the art department to the library—and which may or may not be a more expensive way for the institution as a whole to provide this function.

Buy bundles only when they contain quality content and are cost effective by saving staff time

"Bundles" of serial titles are a mixed blessing. If the bundled titles are high value and inexpensive, it is cost effective to handle the titles as a bundle—to pay a one-line invoice and enter one set of MARC records. This is true whether the bundled titles are serials, e-books, music scores, art images, or any other format.

But if the titles are expensive, a bundled contract is a very serious investment. In each year that budgets are flat and prices go up (even by a small percentage) the bundle consumes an ever larger share of the budget. There has been much argument about whether or not the titles added in "big deals" are worth the cost. It is pointed out that users do use the new titles made available as part of the bundle. However, the concomitant change is that libraries cancel journals from other publishers to cover the price increases in bundles. Do we know how many uses this prevents? Are we sure the new titles in big deals are more important to users than the titles canceled to fund bundle price increases?

The effects of bundling are known. The advent of aggregated general journal packages has made that clear. Aggregated packages added titles to everybody's serial list and caused the number of subscriptions some research libraries report in the *ARL Statistics* to grow by several thousand titles. These packages did not, however, seem to have a concurrent effect on user satisfaction, perhaps because many of the "new" titles in the bundles were not titles we would have chosen.

There is a store in Albuquerque selling American Indian arts and crafts. For the past 30 years, it has prominently displayed a sign that says, "All prices half off all the time." Two for the price of one is a good deal when you were planning to buy both items. But if it entices you to spend more money than you can afford on desirable but not first-choice purchases, it's a dubious "bargain."

Support all publishers who demonstrate good practices

Commercial publishers are not the problem—the great majority has produced outstanding and reasonably priced serials for many years. Libraries need to support such publishers as wholeheartedly as they do new scholarly communications initiatives from the nonprofit sector.

Libraries use the term "commercial" as shorthand for a group of publishers that one of our librarians has named Elseviley Verlag. This is a subset of the commercial world whose prices are noticeably higher than those of most other publishers. Different publishers are likely to be listed by different librarians as belonging to this group, but we all agree that there are a great many commercial publishers who are not part of the problem.

Nor does it follow that every not-for-profit publisher is part of the solution. Some nonprofits seem in their pricing practices ever closer to joining the Elseviley Verlag group.

The most troubling aspect of the current situation is that new titles are being started by the wrong players, and that scholarly societies needing assistance with their journals are finding help in the wrong places. Large and well capitalized publishers are well positioned. Their representatives visit faculty seeking salable ideas for titles and they can afford to develop new titles and sell them at a loss for some years until they become established and can support themselves.

Publishers of lower priced journals are not in a position to compete. They lack capital, staff, and infrastructure to start new journals, or to offer new homes to established journals whose editorial boards would like to move, or to become part of a larger group to handle the digital demands now being made of them.

Libraries complain about all price increases, even those that are high as a percentage of the journal price,

but low in dollars. This deprives less expensive publishers of the opportunity to grow. It is bad for libraries when the big guys can grow and the small ones can't.

Invest in transformative initiatives that need to grow to realize their full potential

Libraries have been right in encouraging transformative initiatives that can show the way to affordable models of scholarly communication. But this support needs to be sustained long enough for new initiatives to realize their potential.

For example, Public Library of Science and BioMed Central are marketing "institutional memberships" to libraries. Are such memberships the ultimate form that institutional sharing of costs with funding agencies might take? No one yet knows. Until the norm becomes clear, membership programs are a worthy experiment.

Realize that canceling print subscriptions penalizes publishers differentially

Libraries asked publishers to decouple subscriptions for print and electronic serials and many did so. Big publishers "flipped" to a pricing model in which the bulk of the price is for the electronic version and the print is an incremental add-on. Smaller societies agreed to put electronic versions of their journals into larger bundles from aggregating agencies. The price of such bundles covers only the add-on electronic costs, and the bulk of the society's income continues to lie with print subscriptions.

Only now are we realizing that there is a critical difference in the impact the cancellation of print copies has on these two sorts of publishers.

When the library cancels print copies of titles included in large single-publisher bundles, we know what happens. The library does not save much money and the publisher does not lose much income. Since the publisher can then each year raise prices by large dollar amounts but small percentages, the publisher does not face a loss of income in the long run.

When the library cancels the print copy of a BioOne journal, on the other hand, the library saves the entire subscription cost of the print journal. The publisher, of course, loses that same amount. The small add-on that the publisher receives from BioOne does not and will not in the foreseeable future replace that income.

For libraries, groups such as BioOne and MUSE constitute one of the very best long-term investments. We need to give them the capacity to keep working with small society publishers to make the transition to a new business model and for the e-services to expand by adding new titles as quickly as possible. We need to take print subscriptions from such publishers off our cancellation lists until we can safely cancel without endangering the survival of the enterprise. And we need to tell BioOne and MUSE that it is fine with libraries for them to raise their price to cover adding as many titles as they can convince to join them.

Help scholarly societies directly

Faculty find scholarly societies important to their professional lives—a philosopher I know says of the American Philosophical Association, "If it didn't exist, it would have to be invented." Unfortunately, with the decline of print journals as a motivation for paying dues, it is now possible to enjoy most of the benefits of a scholarly association without actually joining.

Societies are understandably worried by the combination of falling memberships and print journal cancellations. They may prefer to publish with a library-friendly initiative, but an offer from a more well-to-do publisher with its attendant fiscal surety can be hard to resist. It is in the best interests of libraries to find ways to help them resist such attractive offers.

Libraries object to subsidizing journal production with the acquisitions budget, but our institutions must find a way to support the scholarly societies that our faculty need. Wayne Peay, the Director of the Eccles Health Sciences Library at the University of Utah, suggests that we might consider directly helping these societies—offering to pay a membership fee—and in return asking for a direct voice in the planning and production of the society's journals. In a way, this strategy is just another example of viewing the prices of library materials in the broadest context, considering the costs to the institution as a whole now and in the future.

Recognize that some new options will seem strange from a library-oriented view

Publishers are trying new options that I suspect librarians would not have suggested. For example, hybrid approaches that combine the open access publishing model with the subscription model. Oxford University Press, hearing from some of its authors of their support for open access (and hearing from others about their disinterest in it), polled authors and, in accordance with their wishes, is experimenting with open access in *Nucleic Acids Research*, with some issues open access and some not, and even with some of the articles in a single issue open access and some not. The *Proceedings of the National Academy of Science* is also experimenting with open access for individual articles.

In the best of all possible worlds, faculty, as well as researchers outside academia, would publish where they wish—and the journals they choose would be journals libraries can afford for the long run. Some of these journals would be open access. Others would likely charge a subscription for current issues and open back files freely after a reasonable period. Others will be new sorts of emerging intellectual entities shaped more by the processes of scholarship and less by the demands of the distribution technology.

Recognize that the answer to meeting user needs may not be more subscriptions

The answer to user complaints about lack of access to a specific journal may be to subscribe if possible. But it does not follow that the answer to lots of user complaints about access to the journal literature is to subscribe to lots of new journals. The first may be right—the second is not.

We are increasingly aware that user frustration over finding articles is a serious part of the problem. Twelve to fifteen percent of our ILL requests are for articles that we own. Users may cope well with familiar titles—where they are confident of recognizing what they want when they find it. But many have difficulty navigating outside this domain. They really only know that if they find a citation, sometimes there is a button to click for full text and sometimes there is not. If the button isn't there, they are increasingly unclear about their options.

Because the problem lies at the intersection of several systems—the catalog, the serials list, the digital resources list, the linking program, the indexes, the Scholars Portal—it will not be solved soon, at least not by libraries alone.

To find the *Journal of Philosophy* from my desk I have two options. One is to Google the title, which takes me directly into JSTOR and seamlessly into the content. The other is to figure out whether I should click on *Catalog*, *Article Databases*, *Electronic Journals*, or *Digital Resources* on the library home page. When I find a title this way, multiple databases are often listed and each database often gives two entries for each title—one for the backfile and one for more current issues. Sometimes, JSTOR makes yet another entry.

There are other barriers along most paths for most users. For instance, if we have a print-only subscription, we are willing to scan the article and e-mail the user a PDF file, but you have to have an account set up on ILL and to get an account you have to know your university ID number and your NID number and....

None of these barriers are high—mostly they are trivial—but there are too many of them and we believe that many users give up in frustration (or with good intentions about figuring it out later on). Increasingly we see the need for a librarian to take over when a user isn't sure what to do next. It's possible we will see as much improvement in user satisfaction from adding a sort of "concierge" service for journals to our ILL department and reference desks as from adding subscriptions.

Consider an institutional repository as part of your investment strategy

It's difficult to see the appeal of adding a whole new operation requiring staffing and technological expertise to already overloaded budgets and to-do lists. It may also, though, be inevitable.

Aside from the issue of actual publications, libraries are increasingly responsible for very large quantities of all sorts of material—raw research data, preprints and postprints, course materials and syllabi, faculty and committee Web sites, educational programming, image collections, and other materials stored in offices and labs. As faculty and staff retire or their filing space reaches capacity, they send their materials to the university archives, which, at least at the University of Utah, is the library. It seems likely that the library will go on being the archives, even as formats change.

Google plans to index educational content in a separate context that will include searching through institutional repositories, out-of-copyright titles, and a range of other materials. Google's new e-mail system can store and index personal collections of articles, a capability which will be attractive to faculty. It might follow logically that we can get closer to open access by telling faculty members to publish wherever they like, but retain their right to post a copy of their article in their institutional repository. Most of them won't know how to do this, and those who do will be unreliable. It follows that libraries will need harvesting mechanisms to gather pre- and postprints from across campus into the institutional repository. Google as a partner is perhaps the new front-end to our collections—it's free, it works, it's all anybody uses anyway.

Though the path ahead for institutional repositories is not entirely clear, it does seem that on many campuses they may form part of a transformed system of scholarly communication.

Librarians are investors

Librarians have always been entrusted to invest our institutions' limited resources wisely so that future libraries will meet future needs. With the changed environment and marketplace however, the time-tested strategies that libraries have used no longer serve us well. We need new mental models for making decisions about how to invest limited resources. Year-to-year decision making no longer works; we need to act strategically for the long term.

Almost all of our electronic purchases are calculated risks. Some of them we "own"—though in what sense this ownership is meaningful is hard to know and varies widely. Viewed as investments, there are a growing number of new ventures that may prove viable, each perhaps in solving a particular small corner of the problem. These are possibilities worth risking quite a lot for. And for the most part, the sums of money we need to risk are not large. But we need to take these risks—even if it is very difficult to find the money. It would be much riskier in the long run not to.

[1] Alan E. Guskin and Mary B. Marcy, "Dealing with the Future Now: Principles for Creating a Vital Campus in a Climate of Restricted Resources," *Change* 35, no. 4 (July/August (2003): 13–14, <http://www.pfhe.org/>.

[2] Joseph M. Brewer, Sheril J. Hook, Janice Simmons-Welburn, and Karen Williams, "Libraries Dealing with the Future Now," *ARL Bimonthly Report*, no. 234 (June 2004): 1–9.

Martha Kyrillidou, Senior Program Officer

SERIALS TRENDS REFLECTED IN THE ARL STATISTICS 2002–03

Serial prices have been at the center of hot debate over the need for change in scholarly communication for the past two decades. Serial unit costs have increased 215% over the past 17 years according to the *ARL Statistics 2002–03*.[1]

The Numbers

In 1986, the average cost of a serial subscription for ARL libraries was $89.77; this cost increased to $283 by 2003 (see accompanying table). During the same timeframe, unit costs for books/monographs rose 82%, from an average of $28 to $52; library expenditures increased 128%; and the Consumer Price Index rose 68%.

As dramatic as these cumulative increases are, we should not overlook the fact that the average annual growth rate for serial unit costs since 1986 has fallen from a high of 10.2% in 1995 to 7% as of 2003. In the past few years, research libraries appear to have gotten more for their serials money than they did during the 1990s, perhaps as a result of canceling their most expensive journal subscriptions as well as purchasing the same content in dual format (print and digital) for an incremental surcharge.

The change in serial expenditures has been relatively level compared to the change in serial unit costs, although the growth rate of expenditures has slowed somewhat since 1995, from 8.6% to 7.8% in 2003. On average, ARL libraries spent $1.5 million on serials in 1986; they are currently spending more than $5.3 million. The cumulative increase in serials expenditures from 1986 to 2003 was 260%. Monograph expenditures increased 66% during the same time period. Libraries spent on average $1.1 million on monographs in 1986; they are currently spending $1.8 million.

Research libraries on average have been buying more serials during the past couple of years than they bought in any year since 1986. Whereas the average number of serials purchased in 1986 was 15,919, this number increased to 17,673 in 2002 and 18,142 in 2003. Also, the number of monographs purchased has rebounded to its 1986 level—about 32,600 books on average—for the first time over this period.

Nonpurchased serial subscriptions make up a growing amount of the content that libraries offer, increasing by an annual average of 6% since 1986. This category consists of a number of types of serials, including government documents, electronic serials made available free of charge with the purchase of print counterparts, and open access journals. The number of nonpurchased serials received by the average ARL library increased from 3,319 in 1986 to 8,873 in 2003.

Libraries are also providing access to more content through interlibrary borrowing and lending. On average, research libraries borrowed 22,146 items last year and lent 33,421 items. In 2002–03, they lent twice as many items as they did in 1986 and borrowed three times as many. These services were provided for roughly the same number of faculty and almost twice as many graduate students as compared to 1986.

Beyond the Numbers

It may be useful to consider these trends within their larger context, which is characterized by the proliferation of electronic serials and economic changes, from a booming economy in the '90s to tougher economic conditions more recently.

During the past five years, libraries have expanded the amount of material to which they provide access by purchasing the same content in new formats and acquiring new content, often through bundling arrangements, as well as by managing the growing amount of content available through open-access mechanisms. The purchase of new and dual-format content via bundling or "big deal" arrangements[2] is probably partly responsible for the recent decline in the growth rate for serial unit costs—libraries have added serial titles to their collections at lower incremental prices. These additional titles are often duplicate subscriptions or titles the library would not otherwise purchase. Depending on the publisher's financial model, some of the additional content may be purchased or some may come bundled or "free" with a subscription to other products.[3] Print was traditionally seen as the primary mode of dissemination in the '90s, with electronic as the secondary mode, but there are signs that authors, publishers, and libraries are ready to experiment with and embrace new models that reverse the balance, making electronic primary and print secondary.

We are still in the early stages of exploring the full potential of born-digital products and services.[4] The bundled packages offered by publishers are not necessarily meeting the changing, high expectations of research library users. Greater awareness of the serials crisis has resulted in faculty and students supporting title-by-title cancellations instead of the big deal. Faculty and students are helping libraries improve their position at the negotiation table with commercial publishers of the scholarly record. And the Create Change campaign,[5] SPARC, and the open access[6] and alternative publishing movements are injecting competition into the serials marketplace.

In the past six months, a number of universities have taken action in support of libraries' decisions to withdraw from the big deal. In December 2003, the North Carolina State University Faculty Senate passed a resolution supporting the libraries' prerogative to "decline highly restrictive offers, such as those recently proposed by Reed Elsevier for its ScienceDirect online product."[7] Also in December, Cornell University's Faculty Senate passed a resolution in support of the

Serial and Monograph Costs and Quantities in ARL Libraries, 1986–2003
Median Values for Time-Series Trends

Year	Serial Unit Cost	Serial Expenditures	Monograph Unit Cost	Monograph Expenditures	Serials Purchased	Nonpurchased Serials Received	Monographs Purchased
(No. of Libraries)	(37)	(102)	(60)	(98)	(37)	(37)	(60)
1986	$89.77	$1,496,775	$28.99	$1,118,931	15,919	3,319	32,679
1987	$105.68	$1,769,960	$31.90	$1,060,754	16,518	3,508	26,240
1988	$117.25	$1,947,559	$36.05	$1,109,845	16,038	3,460	25,238
1989	$128.71	$2,113,976	$38.43	$1,093,858	16,015	3,406	27,082
1990	$134.09	$2,296,910	$40.58	$1,329,950	16,182	4,648	27,546
1991	$152.43	$2,548,687	$42.32	$1,396,566	16,149	4,743	27,524
1992	$173.67	$2,620,832	$43.87	$1,348,786	15,846	5,308	26,344
1993	$188.29	$2,918,569	$42.76	$1,284,116	15,463	5,211	25,188
1994	$200.85	$2,912,495	$44.51	$1,282,569	15,583	5,866	25,341
1995	$214.42	$3,131,033	$44.70	$1,365,046	14,540	6,173	25,707
1996	$222.89	$3,389,118	$46.61	$1,437,028	15,069	6,104	25,911
1997	$249.97	$3,642,541	$46.33	$1,457,789	15,297	5,764	28,576
1998	$245.05	$3,816,497	$47.15	$1,486,436	14,201	7,669	24,447
1999	$269.98	$4,095,934	$47.40	$1,496,687	14,303	6,565	24,355
2000	$303.19	$4,430,812	$47.58	$1,645,248	14,772	8,244	27,469
2001	$282.54	$4,660,349	$48.20	$1,848,622	13,806	8,338	29,989
2002	$296.50	$4,939,225	$50.26	$1,806,964	17,673	8,979	31,079
2003	$283.08	$5,392,007	$52.75	$1,858,280	18,142	8,873	32,649
Average annual percentage change	7.0%	7.8%	3.6%	3.0%	0.8%	6.0%	0.0%

Source: Martha Kyrillidou and Mark Young, *ARL Statistics 2002–03* (Washington, DC: Association of Research Libraries, forthcoming in 2004).

library's decision to forgo renewing the big deal.[8] The Cornell resolution points out that Cornell libraries are buying 930 Elsevier titles [that] represent fewer than 2% of the total number of serials titles to which Cornell subscribes; the $1.7 million [the library spends on these titles] comprises something over 20% of the library's total serials expenditures, including those of the Medical School." Similar resolutions have been passed by University of California, Harvard University, Triangle Research Libraries Network,[9] University of Connecticut, University of Maryland, Massachusetts Institute of Technology, and Stanford University.[10]

In summary, the slowing growth rate for serial unit costs from a peak of 10.2% in 1995 to 7% in 2003, may offer a glimmer of hope that eventually we will be able to contain price increases at a level closer to the general inflation rate of 3%. The slower growth of serials unit costs may be evidence that the academic community is beginning to behave like an informed consumer, looking for good deals that are sustainable and supporting the tailoring of subscription packages to increase value for money.

[1] Martha Kyrillidou and Mark Young, *ARL Statistics 2002–03* (Washington, DC: Association of Research Libraries, forthcoming in 2004).

[2] Kenneth Frazier, "The Librarians' Dilemma: Contemplating the Costs of the 'Big Deal,'" *D-Lib Magazine* 7, no. 3 (March 2001), <http://www.dlib.org/dlib/march01/frazier/03frazier.html>.

[3] In the *ARL Statistics*, nonpurchased serials are not included in the calculation of serial unit cost.

[4] *Electronic Scientific, Technical, and Medical Journal Publishing and Its Implications: Report of a Symposium* (Washington, DC: National Academies Press, 2004).

[5] Create Change is an advocacy and education campaign cosponsored by ARL and the Association of College and Research Libraries to engage the academic community in reclaiming scholarly communication <http://www.createchange.org/>.

[6] Richard K. Johnson, "Open Access: Unlocking the Value of Scientific Research," paper presented at "The New Challenge for Research Libraries: Collection Management and Strategic Access to Digital Resources," University of Oklahoma, March 4–5, 2004, (Washington, DC: SPARC, 2004), <http://www.arl.org/sparc/resources/OpenAccess_RKJ_preprint.pdf>.

[7] North Carolina State University Faculty Senate, "Resolution on Bundled Content and Elsevier," Raleigh, NC: NCSU, December 2, 2003), <http://www.ncsu.edu/faculty_senate/R2-0304.htm>.

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[9] "Libraries Work with Faculty to Cancel Elsevier Titles," *SPARC E-News* (December 2003–January 2004), <http://www.arl.org/sparc/core/index.asp?page=g34#4>.

[10] "Update: Library-Faculty Collaboration to Cancel Elsevier Titles," *SPARC E-News* (February–March 2004), <http://www.arl.org/sparc/core/index.asp?page=g35#4>.

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ARL Calendar 2004
<http://www.arl.org/arl/cal.html>

July 12–14	Library Management Skills Institute I: The Manager *Chicago, Illinois*
July 26–27	**ARL Board Meeting** *Washington, D.C.*
August 16–18	Facilitation Skills Institute *Salt Lake City, Utah*
September 28–October 1	Library Leadership for New Managers Program: Leadership Institute *Washington, D.C.*
October 1–2	New Ways of Listening to Users: Tools for Measuring Service Quality *Washington, D.C.*
October 12–15	**ARL Board and Membership Meeting** *Washington, D.C.*
October 12–15	Library Management Skills Institute II: The Management Process *Los Angeles, California*
October 18–19	Analyzing and Interpreting Your LibQUAL+™ Data with SPSS *Washington, D.C.*
October 27–29	Associate University Librarian Institute *Boston, Massachusetts*
November 8–9	Human Resources Symposium *Washington, D.C.*
December 6–7	CNI Fall Task Force Meeting *Portland, Oregon*

Online Lyceum
Can't make it to our in-person events? Take a look at our Online Lyceum Web-based course offerings at <http://www.arl.org/training/lyceum.html>.

Key Events in 2005
ARL Board Meeting, February 9–10, D.C.

CNI Spring Task Force Meeting, April 4–5, D.C.

ACRL National Conference, April 7–10, Minneapolis

ARL Board and Membership Meeting, May 24–27, Philadelphia

ARL Board Meeting, July 25–26, D.C.

ARL Board and Membership Meeting, October 11–14, D.C.