We are all facing the most difficult fiscal challenge of our careers—libraries and information providers alike. Indeed, the recent economic events are unprecedented for anyone born in the last 75 years. The primary fiscal concerns for library managers in my 35 years in the profession—concerns about annual price increases in acquisitions in excess of inflation and other similar experiences—seem like small bumps in the road. I will address a distinct slice of the library world, that of North American research libraries, but it goes without saying that what happens in the Association of Research Libraries (ARL) alone will have a major impact on the world of scholarly publishing, if for no other reason than collectively our 113 university members have annual expenditures totaling $3.1 billion, and $1.3 billion (42 percent) of that is spent purchasing information. That excludes the 10 non-academic members such as New York Public Library and Boston Public Library and the national libraries of both the United States and Canada. If one adds to that the thousands of other academic libraries in North America and elsewhere, the impact may well be profound. Any large reduction in their collective expenditures, indeed even flat funding, will have a significant impact on the market. A hopeful phenomenon that we see emerging in the ARL member libraries is that they are using their limited funds wisely—not merely to hang on and muddle through but to seed the future. My topic is not only the near-term impact on fiscal behavior due to the recession but also the longer term transformation that we will see in libraries. This future will be explored after a discussion of the unpleasant here and now.

It is rather in the nature of dealing with such crises that there is an impetus to identify the causes in order to avoid them in the future, as was the case in the aftermath of the Great Depression. There is also a desire to punish the guilty, as demanded by the recent populist outcry not to mention massive amounts of "bloviation" in the media in the United States and elsewhere. On the other hand, it is also valuable to understand the causes in order to estimate the duration of the current crisis. Any reasonable list of causes would include those most recently enumerated by Jacob Weisberg of Newsweek. The
bursting of the U.S. housing bubble in 2007 precipitated a series of events, but the root causes lie in what Weisberg calls "plausible necessary and enabling conditions":

- The policies of Federal Reserve Chairman Alan Greenspan
  - Low interest rates 2003–2005, spurring the bubble
  - Long-term aversion to regulation, turning innovative financial products into lethal weapons
- Global savings imbalances
- Misjudgment by bond raters
- Lack of transparency about banking risks
- Excessive reliance on mathematical models
- Flawed compensation models that encouraged excessive risk taking by traders and financial firms

I would add my own personal favorites to the list—the repeal of the Glass-Steagall Act, which had separated investment and commercial banking, and the attendant rise of unregulated derivatives, along with the lending policy of quasi-governmental mortgage agencies Fannie Mae and Freddie Mac.

As we look at the rebounding markets in 2009–2010, we should definitely not take heart. The de-funding of North American research libraries, I believe, is the "new normal." In order to understand why, we need to look at the sources of income for higher education as a whole. They are similar in both the United States and Canada. There are three main sources of income among our academic ARL members:

- Institutional allocations
  - Tuition/student fees (private and public)
  - Tax-based funding (public)
- Gifts and endowments
- Auxiliary funds, grants, and contracts (overhead)

A recent private survey of ARL by Carla Stoffle (University of Arizona) gave us granular detail on the mix of revenues upon which our individual member institutions depend. On average, funding for libraries in public institutions is based on about 90 percent institutional allocations, with the balance from endowments and grant income. By contrast, research libraries in private institutions, on average, receive slightly over 83 percent of revenue from institutional funding, nearly 14 percent from endowment, and
just under 6 percent from auxiliary, grant, and contract funds. There are, of course, a few significant exceptions in ARL, such as a public institution that is more than 90 percent dependent on student fees and a private institution that is in excess of 54 percent dependent on endowment. Today, the only ARL member universities that are not at apparent risk are the few that are private and principally tuition- and research-revenue based. The revenue mix for most of our members is based on highly vulnerable income sources—tax revenues, endowments, or both.

There is plenty of external data to verify what ARL has learned from surveying its membership, and it is worth looking at this briefly to understand the condition of the universities of which our member libraries are a part. A recent survey of members of the Association of Public and Land-grant Universities (APLU),"Coping Strategies of Public Universities During The Economic Recession of 2009," provides the data to give some important insights into the long-term nature of the problem for tax supported institutions.

Governors and state legislatures, working with unprecedented declines in state revenues as the result of the global economic recession, faced significant budget gaps for fiscal years 2009 and 2010. Most states closed the 2009 budget gap with a combination of service reductions, revenue increases [such as fee and tuition hikes], and appropriation rescissions [sic]. Despite the presence of $53.6 billion in stabilization funds from the American Recovery and Reinvestment Act for the 2010 budget cycle, states again were forced to cut programs and services. Appropriations for public universities and student financial aid were not spared in most states.

Decreasing state appropriations are not a new experience for public universities. State contributions to public research universities have steadily declined in real terms by more than 15 percent in the last 20 years. However, the current financial situation is especially precarious due to the magnitude of the recent cuts and the cumulative effects of decades of declining financial support.³

ARL institutions are also retrenching because of relative dependence on endowments (see figure 1)⁴. Recent media reporting on the annual National Association of College and University Business Officers (NACUBO) survey of endowments in U.S.
colleges and universities paints a grim picture. Among the hardest hit are the top ranked universities with the largest endowments—all reporting losses greater than 10 percent. Among the top 20 ranked ARL institutions, five had declines in their budgets of more than 25–30 percent; eight had more than 20–25 percent; six had more than 15–20 percent; and only one had a decline of less than 15 percent. For all of these institutions, the size of their endowments has been a vital factor in sustaining their ranking, not to mention quality. They are not unique in experiencing these declines when compared to the whole membership of ARL. Among private institutions, this has had a large impact on one of the main source of revenues. Of course, public institutions in ARL also suffered sharp endowment declines, albeit they were not as dependent on this income as the private institutions.

We do not expect the major sources of revenues for our institutions to recover soon, since state tax funds are declining and endowments will remain submerged for up to two years. Thus, recovery—that is, getting back to where we were in 2007—will be a long slog. "The long-term implications of the funding cuts and the impact on public [and private] universities in North America are of consequence beyond the higher education community. …It is clear public [and private] universities provide significant
contributions to the national economy and the well-being of [US and Canadian] citizens. They are also a significant market for all manner of commercial interests—no less so their libraries.

The data results of surveys of ARL member libraries taken over the last two years are significant. In the summer of 2008, ARL began getting many questions about how its members were faring in the emerging budget crisis. As time passed, it became apparent that we had much anecdotal and no empirical perspective on exactly what was happening. This lead us to develop the "ARL Survey on Base Budgets, 2008–2009" that was administered March–April, 2009. Out of 123 members, 100 responded; and they were emphatic about repeating the survey for FY2009–2010. We opened this second survey in September 2009. In this round the responses were slower in coming because budget conditions had grown more unstable, and the impact of the recession was broader. We had a total of 93 responses from our 123 members. This was a smaller return than the 100 received last year and indicative that some were unable to give stable numbers well into the fiscal year. In fact, 26 percent of the respondents did not even have final budgets at the beginning of the fiscal year, which for most was July 1, 2009.

It is useful to compare data for the two fiscal year cycles (table 1). A total of 84 member libraries responded in both years, and we asked for a look back at the experience for last year in the current survey (2009–2010). This allowed us to compile a comparison of the experience of 90 member libraries for these two budget cycles from the two separate surveys. Those that had cuts of less than 5 percent (row one) in year one did not fare as well in year two. Similarly, if year-one cuts were higher than 5 percent (rows two and three), the year two experience was—with one exception—as bad or worse, with cuts clustering between 5–10 percent or above 10 percent. For those that had no cuts in year one (row four), the picture generally turned ugly in year two. Clearly, for this group, the delayed budget challenges have now emerged strongly in the second year of the recession. However, it is worth noting that, for a small group of 13 libraries that had no cuts last year, things have not grown worse, and they received increases this year. These are the lucky few with the revenue mix discussed earlier. Their revenue is based on tuition and research overhead with little or no dependence on endowment and none on tax funding.
The hard data we have for our FY 2009–10 is based on the 93 responding ARL member libraries. The broad-brush picture indicates that over 79 percent had flat or reduced budgets from year one. Among the 57 libraries that gave us details about the real dollar budget reductions, the maximum budget cut was a striking -22 percent, the mean was -5.00 percent and the median was -4.49 percent (table 2).

**If your BUDGET experienced a reduction or increase, enter the percentage net change.**

<table>
<thead>
<tr>
<th>2009-2010 Budget Change</th>
<th>% N</th>
<th>Range Minimum</th>
<th>Range Maximum</th>
<th>Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Decrease</strong></td>
<td>77</td>
<td>-0.01%</td>
<td>-22.00%</td>
<td>-5.00%</td>
<td>-4.49%</td>
</tr>
<tr>
<td><strong>Increase</strong></td>
<td>23</td>
<td>+0.45%</td>
<td>+6.90%</td>
<td>+3.00%</td>
<td>+2.59%</td>
</tr>
</tbody>
</table>

Table 2

As indicated earlier, the serious impact on endowment income was caused by
portfolio declines. For libraries that provided detailed figures (table 3), we can see the stark reality; but, again, it is important to remember that these data refer to income not the endowment corpus. The most draconian decline for income was 100 percent, and the average was lower but still a dispiriting decline of 16 percent. As you can imagine, such reductions cause drastic action and rethinking of the way research libraries do business. If one includes income that was flat, the overall picture for endowments is more instructive. Of the reporting institutions, 85 percent experienced flat or reduced endowment income. There is an attendant problem. When endowments go underwater—that is, when the book value declines to an inflation-adjusted amount that is less than the original benefaction—as a matter of common practice, endowment payout ceases. Even with the rebounding markets, some institutions have made strategic decisions not to take a draw on endowments so that they may recover lost ground fully, but this is at the expense of serious retrenchment; and the impact falls hardest on a significant number of ARL private institutions. Of the 19 private institutions reporting, 12 (63 percent) indicated that a significant part of their budgets came from sources other than institutional allocation. The amount ranged from 15–54 percent, and this translates into significant cuts when the endowment spigot is turned off.

**If your ENDOWMENT income experienced a reduction or increase, enter the percentage net change.**
Total Responses = 59

<table>
<thead>
<tr>
<th>2009-2010 Endowment Change</th>
<th>% N</th>
<th>Range Minimum</th>
<th>Range Maximum</th>
<th>Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decrease</td>
<td>80</td>
<td>-0.20%</td>
<td>-100.00%</td>
<td>-16.00%</td>
<td>-16.00%</td>
</tr>
<tr>
<td>Increase</td>
<td>20</td>
<td>+2.54%</td>
<td>+145.06%</td>
<td>+20.15%</td>
<td>+5.00%</td>
</tr>
</tbody>
</table>

Table 3

It is informative to observe where members adjusted their budgets using the rough categories of staff, acquisitions, and other operations (see table 4). Here we see illustrated how the three budget components were used to meet cuts. Staff budget adjustments ranged from -14 percent to +4.3 percent, but the mean was -2.74 percent, and the median
was -2.50 percent—indicating that staff numbers are declining for a second year in a row. Likewise, the mean for operations was -5 percent, and the median was -3 percent. However, unlike year one, fewer members were able to completely ameliorate the impact on acquisitions expenditures, and cuts reached a maximum of -25 percent of some acquisition budgets.

**If you can, indicate the percentage net change for base budget hard funding.**
Total Responses = 73

<table>
<thead>
<tr>
<th></th>
<th>2009-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Range Minimum</td>
</tr>
<tr>
<td><strong>Staffing</strong></td>
<td></td>
</tr>
<tr>
<td>change N=65</td>
<td>-14.00%</td>
</tr>
<tr>
<td><strong>Operations</strong></td>
<td>-41.00%</td>
</tr>
<tr>
<td>change N=62</td>
<td></td>
</tr>
</tbody>
</table>

Table 4

But it is more illuminating, perhaps, to look at the shifting strategies across these categories for both years (see table 5). In 2008–09, there was a decided effort to take reductions principally from staff and operations, sparing acquisitions; and over 63 percent of libraries made all cuts here, while 37 percent, nonetheless, were forced to make some cuts in acquisitions. Exempting acquisitions is difficult to do repeatedly; and, in 2009–10, 59 percent of the cuts involved staff and operations alone, while 41 percent included acquisitions. This shifting ratio is reflected in what members tell us about the expectations for the remainder of the fiscal year. Only 44 percent of the libraries will be able to spare acquisitions the remainder of the current year if there are additional cuts. Let me underscore that this means there is approximately a 20 percent shift in libraries that have been forced to turn to their acquisitions budgets for reductions in the last two years. Cutting acquisitions late in the year is almost unprecedented. Keep in mind, though, that lack of budget reductions for acquisitions does not mean that there will be no reductions in purchases because even libraries with flat acquisitions budgets have to adjust book, serial, and database purchases to meet publishers' price increases. Research libraries have never adjusted to price rises with uniform cuts across all material categories and
publisher lists. I do not think they will do so now; therefore, different parts of the scholarly publishing industry will suffer differentially.

**Reduction Impact on Budget Categories**

<table>
<thead>
<tr>
<th>Categories</th>
<th>2008-2009 N=49</th>
<th></th>
<th>2009-2010 N=59</th>
<th></th>
<th>Future N=72</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Staffing and/or Operations</td>
<td>31</td>
<td>63%</td>
<td>35</td>
<td>59%</td>
<td>32</td>
<td>44%</td>
</tr>
<tr>
<td>Staffing, Operations and/or Acquisitions</td>
<td>18</td>
<td>37%</td>
<td>24</td>
<td>41%</td>
<td>40</td>
<td>56%</td>
</tr>
</tbody>
</table>

Table 5

On the other hand, there are a number of standard strategies for reducing acquisition expenditures (see table 6). The first thing to note among the 56 libraries that reported details is that less than 10 percent avoided reductions in acquisitions. It should be noted, too, that the categories of "action taken" are not mutually exclusive, and most libraries adopted more than one of these strategies. Among the strategies employed, journal cancellation was most common and used by 54 percent, followed closely by 41 percent reducing monograph purchases, and 30 percent eliminating databases. Since around the year 2000, libraries have moved from purchasing print and e-versions to e-only; and 21 percent used the strategy this year when it could reduce serial subscription cost.

**Acquisition Reductions – 2009-2010 Strategies**

Total Responses = 56

<table>
<thead>
<tr>
<th>Action Taken</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced monograph purchases</td>
<td>23</td>
<td>41%</td>
</tr>
<tr>
<td>Cancelled serial/journal titles</td>
<td>30</td>
<td>54%</td>
</tr>
<tr>
<td>Cancelled databases</td>
<td>17</td>
<td>30%</td>
</tr>
<tr>
<td>Shifted journals – print to e-only</td>
<td>12</td>
<td>21%</td>
</tr>
<tr>
<td>Miscellaneous strategies</td>
<td>14</td>
<td>25%</td>
</tr>
<tr>
<td>Insufficient description of strategies</td>
<td>9</td>
<td>16%</td>
</tr>
<tr>
<td>No reductions needed</td>
<td>5</td>
<td>9%</td>
</tr>
</tbody>
</table>
Let me turn to some details of what we know about staff reductions. It is not surprising to see staff budgets become a target for reductions in two consecutive years, given the proportion they take of a typical research library budget. The average is 45 percent of the total budget among ARL institutions. However, a significant number of institutions were able to give raises this year (see table 7). It may seem inconsistent that, in 47 percent of our libraries, staff received modest pay increases, and librarians did in 45 percent of the cases. But this is more apparent than real, since the increases averaged less than 3 percent in over three-quarters of those libraries giving them. Moreover, union contracts required some increases. In addition, those lucky few libraries that received budget increases all rewarded their staff and, therefore, skew this statistic.

**Staff/Librarian Pay Increases**

<table>
<thead>
<tr>
<th></th>
<th>Librarians N=92</th>
<th>Other Staff N=90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merit/ATB Increase</td>
<td>41 (45%)</td>
<td>42 (47%)</td>
</tr>
<tr>
<td>No Increase</td>
<td>51 (55%)</td>
<td>48 (53%)</td>
</tr>
</tbody>
</table>

*Table 7*

At the same time, reductions in force usually accompanied pay increases and were the de facto source of the funding for salary improvement (see table 8). In most cases, there was an attempt to protect currently employed staff by eliminating vacant positions in 66 percent cases and/or hiring freezes in 43 percent. However, to achieve reductions in staff force, 28 percent of ARL libraries turned to layoffs, 25 percent to early retirement programs, and 10 percent to furloughs; and straight salary reductions were used by 5 percent. These are not normal times.
What did members say about expectations for the remainder of this fiscal period (see figure 2)? Of our 93 total respondents, 90 were able to make some observations about how things looked, based on the current state of campus planning. Around 51 percent expect to see no further cuts this year, but 49 percent are either actively planning for cuts or have been warned to expect them. As we have seen, these further reductions will likely be taken from all sources; and it is clear that, unlike last year, acquisitions will not be well protected.

**What is your expectation for future reductions this fiscal year?**

<table>
<thead>
<tr>
<th>Total Responses = 90</th>
</tr>
</thead>
<tbody>
<tr>
<td>51%</td>
</tr>
<tr>
<td>11%</td>
</tr>
<tr>
<td>38%</td>
</tr>
</tbody>
</table>

Table 8

**Indicate which of the following staffing changes are/will be required for FY 2009-2010.**

| Staffing changes were/will not be needed | 20 | 23% |
| Eliminate vacant positions               | 59 | 66% |
| Hiring freezes                           | 38 | 43% |
| Staff layoffs                            | 25 | 28% |
| Early retirement program                 | 22 | 25% |
| Staff furlough(s)                        | 9  | 10% |
| Salary reductions                        | 4  | 5%  |
| Salary givebacks as charitable contributions | 2 | 2%  |
| Other                                   | 20 | 23% |
All of this bad news supports ARL's early reporting last year. We are not crying wolf as has been asserted by some. Indeed, there is plenty of other evidence that libraries of all types are in crisis. The recently published CIBER report, "The Economic Downturn and Libraries, Survey Findings," which was presented at the 2009 Charleston Conference, assessed budgets for libraries of all types and sizes. Its conclusions are little different from those reported here for ARL. If there is any message that one should take away from our ARL data, it is that there is close to zero tolerance and, more importantly, little capacity for price rises next year and beyond.

What does this mean in the larger ecosystem of research libraries and scholarly communications? We have constant reporting from our members that they are now addressing fundamental change in the way they do business—indeed transformational change that reflects how unstable the research library model has become. I believe, too, that this instability and need to change were in the making already but have been greatly accelerated by the current fiscal crisis. One of the key reasons for this instability is the change in scholarly communication, which is itself caused by market instability, technology, and shifts in funding. Accordingly, among ARL members there is a very high level of interest in how libraries may influence positive change in the current model of scholarly communication.

The magnitude of the challenge that academic and research libraries face is dramatized by what we have seen in the budget numbers. Under the circumstances, it is not surprising that the main theme of the May ARL Membership Meeting last spring in Houston was "Transformational Times," and it was intended to depart from our norm. This spring in Seattle, the theme will be "Globalization of Higher Education and Research Libraries." I believe that these are the beginning of a conversation focused on collaboration that will lead to sustained action and the development of new models useful to academic libraries in general. ARL is a member-driven organization, and so our objective is to move from conversation, to plan, to transformative action. Some of these conversations and actions take place among members in regional consortia, some are bilateral, and some occur within ARL’s committee structure—a structure that is designed to be adaptive and to respond to leading edge issues.

Let me emphasize—I believe that the current economic crisis is accelerating trends that would have emerged more slowly. It is compelling a rapid rethinking of how
we do business in research libraries and, more fundamentally, what a research library is going to be. The evidence is found in the subtle shift in the way members are talking about how they are managing budgets—a shift from the terminology of "cuts" to that of reshaping their organizations to fit not only new economic realities but also fundamental change in the landscape of technology, scholarly communications, teaching, and research. The examples of this shift may not sound too revolutionary or very new. What I hope to make clear is that taken together they are *sui generis*. That is, taken together, their collective force goes beyond incremental, and their increasing momentum will take us rapidly to a place of rethinking the way we respond to the core mission of research libraries.

I classify the adaptive transformations into three general categories. The first is a real movement toward the elimination or at least drastic restructuring and reduction of investment in low-impact activities in order to better utilize human and fiscal resources. In one sense, this is merely a continuation of the long-term efforts to eliminate routines that once were of central importance but that have been overtaken by technology, changes in the processes of scholarly communication, and/or the emergence of new teaching and research strategies. At the same time, I believe we have reached a fiscally driven tipping point. Libraries that are unable to accelerate the rate of adaptation to emerging best practice will risk failure in their mission.

The challenge here often arises from organizational inertia, resulting from historic budget commitments to staffing and collections for which there may still be considerable support. Library staff and faculty especially, but also students, may see any change in the structure of service offerings as a departure from a commitment to what they consider important parts of the library mission, even if they have not used or benefited directly from them. Classic examples are the closing of the catalog, the installation of compact shelving, and the implementation of off-site storage, which often engendered outrage—and about which I can provide a half dozen personal and (in retrospect) amusing war stories. But, let me turn to some obvious current targets that reflect direct experience:

- Technical service routines like copy cataloging that can be outsourced and automated with significant opportunities to reallocate highly valuable staff to vital new work. It makes little sense to invest so much in providing access to commonly held monographs and spend so little to provide effective access to
the electronic resources where use is dramatically greater. The commitment of technical services staff will shift from externally acquired collections to locally created content and special collections. There is new work to be done in technical services—how do we mobilize to do it?

• "Obsessive collection development" (to use a pejorative)
  This is that propensity we see toward collecting that is carried forward by its own inertia. Today, the idea that a journal run ought not be broken may appear laughable, but it once was not. More current is the inertia in changing the way we do business in U.S. government information—for instance, the pressure to be sure that every document in a Regional FDLP depository is represented in all its instantiations. Similarly, how do we ever call a halt to collecting current imprints or special collections in a subject area in which our institutions no longer teach and there are no researchers? After all, building content collections is not an end but a means to supporting education and research.

• The commitment of staff resources where demand has declined
  The decrease in ARL circulation and reference statistics tells us that we have provided users alternative paths to the information they need. This is a sign of success. But there are staffing patterns that support the old work and that resist change. How do we reallocate significant effort to the new work?

The second category that I posit is a significant redefinition of the way we deliver information that redefines large-scale organizational strategies. The core structures of the research library emerged in the first third of the twentieth century, were ascendant in the second, and began to erode in the third. That erosion is reflected in numerous trends, but I will name a few:

• The elimination and consolidation of branch libraries is an irreversible trend. There was once a furious debate in the library literature about the central versus branch service model that seems strikingly absent today. This leads to new questions. For instance, how do we best use new strategies like the imbedded (or feral) librarian?

• Moving low-use collections out of primary library facilities has become the commonplace in ARL libraries, but this is now causing us to posit new questions. Is there a national strategy for these collections that would
establish a threshold for minimum holdings of a copy of a title? If so, how do we avoid the "free rider" problem? What is the agency through which assured national cooperation could be accomplished?

- New models of service delivery, which are weakly supported, need strengthening. I think we are still having the conversation about services like online reference, the information commons, and digital repositories that reflect uncertainty about their future. In the last 35 years, when new core services like library automation or preservation emerged, there was the struggle to determine, first, how they fit into the organization and, second, how to incorporate them into the standard budget processes. This was often daunting, even in good times. How do we now adjust budgets in face of current challenges to incorporate new service models, and where do we place them organizationally in bad times?

- There is the compelling issue of digitization of legacy collections. To understand how important digitization can be, I only have to reflect that I can now use Google Books™ search to find what has been written about the region of Lower Cape Fear in the 18th century. Whether or not the Google Book Settlement is accepted will not, I think, alter this reality. Monographs are being drawn into the same vortex of change that has already transformed the information presentation of those things we used to call journal articles. E-books are about to become a major resource, and I believe we will stop hearing that students and faculty do not use them for linear reading but only to find specific information. There is something resonant in the recent prediction by Jason Epstein in a *New York Review of Books* piece:

  Amid the literary chaos of the digital future, readers will be guided by the imprints of reputable publishers, distinguishable within a worldwide, multilingual directory, a function that Google seems poised to dominate—one hopes with the cooperation of great national and university libraries and their skilled bibliographers, under revised world copyright standards in keeping with the reach
of the World Wide Web. Titles will also be posted on authors’ and publishers' own Web sites and on reliable Web sites of special interest where biographies of Napoleon or manuals of dog training will be evaluated by competent critics and downloaded directly from author or publisher to end user while software distributes the purchase price appropriately, bypassing traditional formulas. With inventory expense, shipping, and returns eliminated, readers will pay less, authors will earn more, and book publishers, rid of their otiose infrastructure, will survive and may prosper.”

The next frontier, one I have no doubt will be successfully challenged, is the vast holdings of unique materials in special collections. There is the tightly related area of digital collection development, characterized by "collecting the Web." We are still asking how we can create this change? Rest assured though, digitization is changing the game fundamentally.

My third category is multi-institutional collaboration. This may sound "old school," but I think it is more. No doubt, collaboration has been a library hallmark; but, in general, I would say it has been a way to share local resources and staff effort, and it is important but not fundamental. Consider for a moment the kind of cooperation that might actually be game changing. In the last 35 years, the singular example that comes to my mind is OCLC—so fundamental that we cannot imagine what our world would look like without it. I take a risk in identifying developments that fit this threshold, but indulge me:

- Google Book Search does not exist without the participation of libraries that have built and made accessible the collections being digitized; and, to that extent, it is a collaboration among the contributors. Even in its limited form, it is profound, but imagine what things will look like after the court case. Whether or not the settlement is disallowed, the U.S. Department of Justice has already signaled that it thinks the digitization, searching, and snippets display are a "fair use." If Judge Chin rules against the settlement, what is likely to happen? Google will work to define "opt-in" strategies for all publishers as it already is doing for those who fall outside the proposed settlement. Book publishers, eager to find new markets and to create
competition for Amazon, which has owned them, will not ignore the
temptation.
• The CIC members of ARL have formed the Hathi Trust. Among the key
goals of the trust are:
  • To build a reliable and increasingly comprehensive digital archive
    of library materials converted from print that is co-owned and
    managed by a number of academic institutions
  • To dramatically improve access to these materials in ways that,
    first and foremost, meet the needs of the co-owning institutions
  • To stimulate redoubled efforts to coordinate shared storage
    strategies among libraries, thus reducing long-term capital and
    operating costs of libraries associated with the storage and care of
    print collections
  • To create and sustain this "public good" in a way that mitigates the
    problem of free-riders.9
This effort has attracted significant non-CIC participation and is a
promising answer to the challenge of long-term preservation of collections
we have digitized locally. The total participation is now 26 libraries.
• The 2CUL project of Columbia and Cornell libraries
  With the support of the Mellon Foundation,
  Cornell and Columbia…[are planning]…significant partnerships in
  collaborative collection development, acquisitions and processing.
  The two universities will form a separate service entity to facilitate
  the collaboration. Ithaka, a not-for-profit organization…, will
  provide project management and assist in the planning. Initial work
  will focus on several global collecting areas, as well as
  collaborative funding and support of technical infrastructure in
  various areas.10
2CUL serves as a model that, if successful, begins to erode the historic
tradition of "not done here" that has framed—if not undermined—our
efforts at inter-institutional cooperation.
• New models for automation have emerged. Open source cooperation is a trend that may well have profound impact on higher education and has been heavily supported by the Mellon Foundation and characterized by the Kuali Foundation and community. Among research libraries, open source has grown and flourished. Duraspace was an inevitable outcome if Fedora and DSpace were to grow and thrive over the long haul. Likewise, "The goal of the Open Library Environment Project is to define a next-generation technology environment based on a thoroughly re-examined model of library operations and connected to other enterprise technology systems." It has now moved from planning to the development phase. At the same time, we also see the emergence of new network level capabilities. OCLC's WorldCAT Local is but one prime example.

• The concept of the North Atlantic Storage Trust was first championed by Paul Gherman. The purpose of the trust was to coordinate the effective management of collections held in over 50 library shelving facilities, principally among ARL institutions. The ultimate goal was to limit growth in those stored collections and achieve economies by eliminating redundancy while preserving access. Since the first work by southeastern libraries, OCLC has taken a lead; and the program has morphed into the "Cooperative Collection Management Trust (CCMT) [that] is a group of institutions connected by the need to reduce the costs and footprint associated with physical storage and management of print materials while maintaining access to the content. OCLC is leading a pilot program that seeks to address these needs across a variety of institutions in North America." While we have yet to see a practical implementation, I believe the time is right for this project to gain traction.

• ARL as a member-driven organization has been asked to serve as a convener of efforts. During our 2009 strategic plan review, a new focus for our strategic directions emerged. Without going into all the details, the directions were conditioned by membership's desire that we focus on helping create the vision for the future research library. We are, for instance, beginning a "Future Scenarios Development" project that will
shape just such a vision. Similarly, we have begun an active conversation with the Association of American University Presses on how to reshape collecting in the emerging e-book environment. We will soon publish a study on how independent small campus journals and libraries can cooperate to preserve these vital publications in an environment in which scale has dwarfed quality. I expect such efforts to proliferate rapidly over the three-year life of our current strategic plan.

In discussing what I view as the various categories of current change that are converging to reshape fundamentally the library institution, I have asked a series of related questions. Perhaps there is a simple question to guide us—"What should we do now that will in the future best serve the mission of the research library in the service of teaching and research?" We should test the answer to that question with another—"Is this answer generated out of the inertia of historic routine, the psychology of our own self-esteem, the incoherence of university community understanding, or fundamentally because the vision of the future lacks persuasive clarity?" If the answer is not motivated by these considerations, then we have a brightening path ahead.

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Notes

2 Carla Stoffle, "ARL Libraries Expenditures by Source," e-mail survey, 2009. The author shared a spreadsheet of the data that included responses from 70 member libraries. Only two were non-academic members.


5 Keller, 4.


