The road with print has been a long one

- “I think even the most committed librarian will admit that this specific relationship is winding down. It was a great relationship, but it ran its natural course and the advent of more efficient methods has brought about a more attractive partner.”

Alexandria: the original pre-print server

And then there was print: the gilded library

- Printing expands, becomes less expensive
- Bookcases become the “wallpaper of the library,” (Edwards & Fisher) surrounding grand reading rooms
- Libraries as signs of wealth
- Knowledge as social ornamentation
The ascent of the library building

- 17th Century Enlightenment
- Origins of the synthesis of function and design
- Metaphor changes to cathedral of knowledge
- Knowledge becomes democratized, society not so much

Dome and the cube
Reading and the dome and the cube

- Dome is metaphor for the human mind
- Light filters down to reader from above (religious overtones)
- Circular shape is manifestation of interconnectivity of knowledge (and importance of interdisciplinary aspect of knowledge and learning)

The reading room
Books and the reading room*

- 17th/18th Century: book on periphery (in the cube)
- 19th Century: spoke shelving and the “gentrification” of the dome with shelves (new bookcase technology aided in this)
- 20th Century: reading rooms become foyers, grand entryways, and other spaces, often retrofitted


The warehouse era
And the buildings we’ve inherited

- “Within the academy, by contrast, libraries became dry, technical, and isolated shadows of their legendary progenitor.”*

Which were not in service for long

<table>
<thead>
<tr>
<th>Age of Building Replaced by New Academic Library (n=58), 2003-2009</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old Building Not Replaced</td>
<td>4</td>
<td>6.9</td>
<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Less than 25 Years</td>
<td>7</td>
<td>12.1</td>
<td>13.2</td>
<td>20.8</td>
</tr>
<tr>
<td>25-49 Years</td>
<td>31</td>
<td>53.4</td>
<td>58.5</td>
<td>79.2</td>
</tr>
<tr>
<td>50-74 Years</td>
<td>5</td>
<td>8.6</td>
<td>9.4</td>
<td>88.7</td>
</tr>
<tr>
<td>75-99 Years</td>
<td>3</td>
<td>5.2</td>
<td>5.7</td>
<td>94.3</td>
</tr>
<tr>
<td>More than 100 Years</td>
<td>3</td>
<td>5.2</td>
<td>5.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>92.5</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>5</td>
<td>8.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Declining Construction


The new normal: closure and consolidation

<table>
<thead>
<tr>
<th>Institution (Flagship Campus)</th>
<th>2000</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana University</td>
<td>23</td>
<td>21</td>
</tr>
<tr>
<td>Michigan State University</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>Northwestern University</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Ohio State University</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>Purdue University</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>University of Chicago</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>University of Illinois</td>
<td>21</td>
<td>11</td>
</tr>
<tr>
<td>University of Iowa</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>University of Michigan</td>
<td>21</td>
<td>4</td>
</tr>
<tr>
<td>University of Minnesota</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>University of Nebraska</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Pennsylvania State University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Wisconsin</td>
<td>19</td>
<td>21</td>
</tr>
</tbody>
</table>
Public library closures: 1999-2003*

<table>
<thead>
<tr>
<th>Reasons for closure</th>
<th>Number of Libraries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remodeled</td>
<td>20</td>
</tr>
<tr>
<td>Another library was opened in its place, in the same neighborhood</td>
<td>57</td>
</tr>
<tr>
<td>Another library was opened within the system funding area but not the proximate neighborhood</td>
<td>19</td>
</tr>
<tr>
<td>Merger with another library facility</td>
<td>14</td>
</tr>
<tr>
<td>Lack of use</td>
<td>53</td>
</tr>
<tr>
<td>Sudden reduction in funding</td>
<td>37</td>
</tr>
<tr>
<td>Reduction in hours</td>
<td>0</td>
</tr>
<tr>
<td>Reduction in staff</td>
<td>15</td>
</tr>
<tr>
<td>Too expensive to renovate/bring building up to today's building codes</td>
<td>15</td>
</tr>
<tr>
<td>Political</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>60</td>
</tr>
</tbody>
</table>


Collections, space, and academic library closure and consolidation

- Cornell
- Stanford (proposed)
- Princeton
Cornell*

Engineering Library to Relocate Text Volumes and Expand Digitally

SEPTEMBER 1, 2010
BY PATRICIO MARTINEZ

In response to budget strain and the rising use of electronic resources, by June 2011 the Engineering library will have all of its print collections relocated into other University libraries. Its electronic collections, which represent 99 percent of the library's materials used by students, will be enhanced to maximize their use for learning and research.

During and after the process of relocation, students will still have access to the study space and computer labs of the library, according to a report released by the University Library system in late June.

When the relocation of the library's print materials is finished, its librarians will remain in Carpenter Hall, home of the Engineering Library and the college's administrative offices. The librarians will provide students with reference expertise in using the library's online collections.


Cornell makes the case for consolidation

- Only 14% of books had circulated in past five years
- 500 reserve books moved to Uris (main library)
- 192,000 volumes before move
- 28,000 to Uris
- 158,000 to offsite storage
- See broader Cornell print use study
Stanford University Combined Science Library Proposal*

- Combined libraries to include: Biology, Chemistry/Chemical Engineering, Math/Statistics
- Traditional function of branches was to house collections specific to and physically close to academic departments
- Small branch libraries no longer an effective service model (mainly due to changing collection formats)
- Function has shifted to “found” study space
- Clear preference for digital resources in the disciplines served by many small branch libraries (Humanities and Arts disagree!)


The final equation at Stanford

- Use will be affected (driven) by co-location of library in Old Chem Building
- Physical collections reduced by 75%
- 8,400 square feet for combined science library
- 64% reduction from combined square footage of three libraries previously
Princeton: Lewis Library

Lewis

- Designed by Frank Gehry
- Approved 2001
- Opened 2008
- Gold standard in academic library consolidation
- 87,000 square feet
Lewis: libraries consolidated

- Astrophysics
- Chemistry
- Biology
- Geosciences
- Mathematics
- Neuroscience
- Physics
- Psychology
- Maps
- GIS
- Statistics

Interdisciplinary role

- The library reflects the interdisciplinary nature of science. It contains outstanding collections and knowledgeable staff supporting the disciplines of Astrophysics, Biology, Chemistry, Geosciences, Mathematics, Neuroscience, Physics and Psychology. The library also holds the Map Collection, and the Digital Map and Geospatial Information (GIS) Center.*

*http://scilib.princeton.edu/about/
Not the end of print, but the end of the way we manage print

Print Acquisition Levels for New Academic Libraries

<table>
<thead>
<tr>
<th>Rate of Annual Growth of Print Collections for New Libraries (n=58)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
</tr>
<tr>
<td>Number of Volumes Added is Increasing</td>
</tr>
<tr>
<td>Number of Volumes Added Remains Static</td>
</tr>
<tr>
<td>Number of Volumes Added is Declining</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Missing</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Print growth and enrollment

<table>
<thead>
<tr>
<th>Annual Rate of Print Collection Growth and Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Rate of Growth of Print Collection</td>
</tr>
<tr>
<td>Rate of Added Volumes is Increasing</td>
</tr>
<tr>
<td>Rate of Added Volumes Remains Static</td>
</tr>
<tr>
<td>Rate of Added Volumes is Decreasing</td>
</tr>
</tbody>
</table>


The high cost of maintaining print collections

- Cornell Study (2010)*
- Dillon (ARL)**


The Cornell Study (2010)

• 55% of monographs purchased by CUL since 1991 have never circulated
• Undergrads borrowed only 10% (circulations)
• On average, only a third of the books published since 2001 have circulated

The Impact of HathiTrust

• By 2014, 60% of print volumes held in ARL libraries will duplicated in HathiTrust repository
• Full text will likely not be available, but TOC and indices are already available
• Managing print inventory can be streamlined, especially for long-tail content
Programming the building: aspirations for new and renovated library space

- Multi-modal/multiuse
- Third spaces (social/cultural)
- Learning spaces
- Flexible
- Traditional
- Contemplative
- Dynamic
- Green

Multimodal/multiuse, Minneapolis Central Library
"Non-Library" Space in Academic Library Buildings

<table>
<thead>
<tr>
<th>Non-Library Facility</th>
<th>Old Facility</th>
<th>New Facility</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>General computer lab(s)</td>
<td>57.7% (26)</td>
<td>95.5% (43)</td>
<td>45</td>
</tr>
<tr>
<td>Snack bar or cafe</td>
<td>15.2% (7)</td>
<td>97.8% (45)</td>
<td>46</td>
</tr>
<tr>
<td>General use classrooms</td>
<td>37.8% (14)</td>
<td>97.2% (36)</td>
<td>37</td>
</tr>
<tr>
<td>Conference/meeting rooms</td>
<td>44.0% (22)</td>
<td>100.0% (50)</td>
<td>50</td>
</tr>
<tr>
<td>Auditorium</td>
<td>23.0% (3)</td>
<td>100.0% (13)</td>
<td>13</td>
</tr>
<tr>
<td>Tutoring center</td>
<td>21.0% (4)</td>
<td>89.4% (17)</td>
<td>19</td>
</tr>
<tr>
<td>Writing center</td>
<td>18.1% (4)</td>
<td>95.4% (21)</td>
<td>22</td>
</tr>
<tr>
<td>Archives</td>
<td>68.1% (30)</td>
<td>88.6% (39)</td>
<td>44</td>
</tr>
<tr>
<td>Bookstore</td>
<td>40.0% (2)</td>
<td>100.0% (5)</td>
<td>5</td>
</tr>
<tr>
<td>Copy center</td>
<td>73.7% (14)</td>
<td>94.7% (18)</td>
<td>19</td>
</tr>
<tr>
<td>Academic department(s)</td>
<td>90.0% (9)</td>
<td>60.0% (6)</td>
<td>10</td>
</tr>
<tr>
<td>Art gallery or museum space</td>
<td>27.6% (8)</td>
<td>89.7% (26)</td>
<td>29</td>
</tr>
<tr>
<td>Other (please describe)</td>
<td></td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>Answered question</td>
<td></td>
<td></td>
<td>56</td>
</tr>
<tr>
<td>Skipped question</td>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>


Multimodal/multiuse: Goucher College Athenaeum
The third space: are we or aren’t we?

• “We are longing for the opportunity to stroll in public. By designing your physical space so that the library is part of a larger public space, you don’t take away from the library, you make it more than just a library.”*

*F. Kent, & Myrick, P. How to become a great public space. American Libraries, 34(4), 75.

Being alone, together
Learning space

- Since the end of the last decade, scholars and leading practitioners (e.g., Freeman, Bennett, Latimer) have argued for the academic library's transformation into a learning space. Much of the conversation has been informed by changing collection formats and the end of the hegemony of print.

Learning space is about connections*

- Between users
- Between users and librarians
- Between users and information

Kent’s characteristics of desirability and the library and learning space*

How do public libraries perceive learning space?

• Technology training and other transliteracies?
• User content making (e.g., publishing)
• Peer training areas?
• Software training?

Learning space is more than an information commons, it’s a building program

• There are numerous examples of re-invented libraries designed around elements of learning space, de-centered space, and third space, but what about programming the profession for all of the new roles we envision we will play in these types of libraries? Has our program changed?

Alternate views of current library design

• Jackson and Hahn* research on user preference for traditional library iconography as measured in user desirability and likelihood of using the space*
• Time on task learning
• Library as sacred space
• Gate count has limited use in measuring success of building
• The “physical sensation of knowledge”**

The modern library, unplugged

- Recent research in neuroscience shows affect of distracted, hyper-connectivity (very little learning taking place)
- Library has emerging role in providing and promoting spaces that immerse users in non-distracted, time on task learning
- Recent OITP report, “Restoring Contemplation”*


Major design elements related to library traditional role (and value users place)

- Acoustical privacy
- Quiet study (research and case studies show users want more, not less)
- Aspirational spaces (these can be modern, but must contain traditional elements)
- Evidence of legacy
- Natural light
Questions for our new course

- What is the context for these new libraries?
- What does the building express and inspire? What needs are met? Can these be expressed by other buildings as easily? Will it?
- Are we prepared for the new roles the building requires of us?
- Are we linked to learning through our roles, or are we building spaces where we assume learning takes place?
- How do we perceive ourselves in these new buildings?

Images

- Slide 1: Dominican University
- Slide 3: http://thesithlibrary.wordpress.com
- Slide 6: University of Virginia (left image), San Francisco Public Library (right image)
- Slide 7: http://loc.gov
- Slide 8: http://winterstreetreview.files.wordpress.com/2010/04/boston-public-library.jpg
- Slide 10: http://www.bc.edu/bc_org/avp/cas/fnart/fa267/19th/bplnew.jpg
- Slide 21: http://homasmayerarchive.de
- Slide 25: http://firstmonday.org
- Slide 32: http://hennepintheatretrust.org
- Slide 34: http://goucher.edu
- Slide 36: Georgia Gwinnett College
- Slide 39: http://iacrl.net
- Slide 44: University of Chicago