In 1999, Steve Coffman proposed that libraries form a single interlibrary loan based entity patterned after Amazon.com. This study examined the suitability of Amazon.com’s Web interface and record enhancements for academic libraries. Amazon.com could not deliver circulating monographs in the University at Albany Libraries’ collection quickly enough to satisfy undergraduates.

Steve Coffman proposed that libraries emulate Amazon.com, the virtual bookstore giant, with a visually appealing single library catalog that offers personalized service options. Rather than dealing with individual libraries, the borrowing public could seamlessly access the joint collections of all libraries via interlibrary loan (ILL). Coffman noted the impressive buying power of Amazon’s customers and the dotcom’s exploding sales figures. He suggested that libraries could draw and better serve a larger patron base by following Amazon’s techniques. His proposal sparked excitement, interest, and debate in public and academic libraries.

While Amazon’s strategy has made an impact in the mass marketing of books, how well does it translate in an education environment? Today’s students eagerly turn to the World Wide Web to gain access to information resources. Could a virtual bookstore, like Amazon.com, support the monographic needs of these students that are traditionally filled by academic libraries? While the academic library and virtual bookstore deal with a similar commodity: the book, they are different enterprises. Yet, this may not be apparent to college students. The authors investigated the ability of Amazon.com to deliver the resources that University at Albany patrons use. Could Amazon.com provide these materials more quickly than the University Libraries for research needs? How appropriate are the personalized and enhanced features of the Amazon.com interface for the academic user? While the thrust of Coffman’s proposal is the creation of a massive, interlibrary loan based global library network, this study focused on the more readily achieved features of Amazon.com that libraries might wish to implement on a local level, such as an easy to use interface, personalization, and catalog enhancements.

BACKGROUND

Certainly, Amazon.com does not have the institutional collections that academic libraries have developed over time. Created in 1995, the online bookstore originally positioned itself as a modest e-retailer of discount books. Amazon.com became a model for e-commerce; it grew rapidly, established brand recognition, and maintained a small inventory but generated a large volume of sales. It took seven years to turn a profit. Its first quarterly profit, $5 million, is dwarfed by the company’s debt of $2.8 billion. The company has expanded from selling books to becoming a virtual mall selling electronic goods, kitchen equipment, lawn tools, toys, and even cars.

Amazon.com has been praised for its provocative business strategies, its innovative Web presence, and customer service relations. Coffman’s vision of an Amazon-like universal catalog would contain records with special features such as book cover graphics, tables of contents, reviews, patron comments, and additional reading suggestions, simulating Amazon’s Web model. Librarians would add their “stamp of approval” to recommended materials. He additionally suggested utilizing Amazon’s navigational and accessibility techniques.

Coffman has drawn both naysayers and supporters. Some librarians acknowledged that additional enhancements to library catalog records would benefit users and make the dreaded catalog more user-friendly. One writer advocated for an integrated ILL mechanism, where the patron searches and requests materials in a single catalog session. Critics identified numerous problems with Coffman’s proposal and reviewed the difficulties with
promoting and implementing his ideas.\textsuperscript{9} Walt Crawford, for instance, disputed the Amazon.com model as infeasible. He cited astronomical ILL costs; political issues with building a single library catalog; and the loss of search capabilities found in many library catalogs.\textsuperscript{10}

\textbf{PROCEDURES}

The investigation was conducted at the University at Albany Libraries, over a 13-week period between January and April 2000. Each week, the authors randomly sampled approximately 80 books that were awaiting re-shelving in the Libraries' Circulation Departments because they had been recently checked out or had been used within the libraries. Each author examined approximately 40 books. The sample size of about 80 books per week represented roughly 20\% of the books normally awaiting reshelfing on any given day, and the sampling process of this volume of titles caused minimal disruption to the workflow of the circulation staff.

Each book was researched in both the Amazon.com database and the University Libraries' online catalog, ADVANCE. At Amazon.com, each title was entered into Amazon's site search engine. If the title search retrieved a matching title record, whether the book was hardcover, softcover, reprint or a different edition, and so forth, it was considered an available match. Because titles appear in various editions, published over time, data on imprint dates were not collected. Retrieved records were reviewed and information from these was recorded, focusing on the availability status of each book. In cases in which Amazon.com had records for multiple editions, the record for the most readily available edition was selected.

At Amazon.com, materials have different availability dates. Records of searched materials provided the following availability messages:

- “Usually ships within 24 hours.”
- “Usually ships in 2 to 3 days.”
- “On order—usually 1 to 2 weeks.”
- “This title is currently on back order. We expect to be able to ship it to you within 3 to 5 weeks.”
- “Ships 4 to 6 weeks.”
- “Out of Print—Try our out-of-print search service.”
- “We were unable to find matches for your search.” and
- “This title is currently not available.”

The actual availability of the books was not tested. Because none of the selected books were ordered from Amazon.com to determine if the availability notices were accurate, the authors accepted Amazon.com’s report of availability times.

Book records in Amazon.com contain a number of features not normally found in library catalogs. To examine some of the enhancements used by Amazon.com, records were examined for the presence of book review data and table of contents information for a 447-book subset of the total 1,054 books sampled. During the last 11 weeks of the data collection period, the book review data were collected on about half the books sampled.

Because all of the books included were from the University Libraries, their availability rate was 100\%. Searching the circulation module of the online system, ADVANCE, statistics were collected of past use. For each of the selected books, the circulation statistics for the current year and for past years from 1984 (the earliest year for which statistics are available) were recorded. If more than one copy was owned, the information for each was also documented.

\textbf{FINDINGS}

Table 1 shows the availability from Amazon.com of the 1,054 books. The time ranges are the estimated time for the item to ship as stated by Amazon.com. Items listed by Amazon.com as “Out of Print,” “Out of Stock,” and “Not Available,” did not give any estimate of time to delivery. The last column, headed “No Match in Amazon,” contains data for titles which could not be located from searching the Amazon.com site.

Analysis of the circulation statistics of the reviewed books in the ADVANCE system showed that 1,054 books sampled had been checked out a total number of 941 times in the year 2000. Because the University Libraries have a liberal loan period of up to a year, depending on patron status, many of the books had been checked out the preceding year and thus did not show up in the year 2000 circulation figure.\textsuperscript{11} The number of checkouts for the period 1984 (the first year circulation statistics were recorded) to 2000 was 10,820. Total circulation was 11,761, with a mean average of 11.16 checkouts per book included in the study.

To examine some of the enhancements used by Amazon.com, book review data were recorded for 447 titles, as previously mentioned. Of those titles, 52 were either listed as “not available,” or no record was found for them in the Amazon.com database. Of the remaining 395 items, 297 (75.2\%) had at least one review. One hundred twenty-six of the books found in Amazon.com were listed as “out of print,” although some of the out of print titles did have book reviews present. Only six of the books (1.5\%) found in Amazon.com had table of contents information included in the database record.

Most of Amazon.com’s reviews are labeled either “editorial” or “customer.” The editorial reviews, for the most part, were not book reviews in the typical sense, but rather were one or two sentence descriptions of the contents, more like the blurbs often found on book jackets. Only three of the editorial reviews gave any type of evaluative comments. Editorial reviews were found for 112 titles (28.3\%) of the 395 items, and each title had a mean average of 1.8 editorial reviews.

The Amazon.com Web site has a popular feature allowing customers, who have filled out an online registration form, to enter their own book reviews. Other

\begin{table}[h]
\centering
\caption{Availability of Books as Listed in the Amazon.com Database}
\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline
\textbf{Amazon.com Category} & \textbf{24 Hours} & \textbf{2 to 3 Days} & \textbf{1 to 2 Weeks} & \textbf{3 to 5 Weeks} & \textbf{4 to 6 Weeks} & \textbf{Out of Print} & \textbf{Out of Stock} & \textbf{Not Available} & \textbf{No Match in Amazon} \\
\hline
\textbf{No. of items} & 240 & 134 & 32 & 47 & 189 & 268 & 25 & 2 & 117 \\
\textbf{% Total} & 22.8 & 12.7 & 3.0 & 4.5 & 17.9 & 25.4 & 2.4 & 0.2 & 11.1 \\
\hline
\end{tabular}
\end{table}
registered customers may rate these reviews as to their helpfulness. Customer reviews were present for 58 (14.7%) of the 395 titles. The customer-reviewed titles had a mean of 4.3 reviews apiece.

**DISCUSSION**

To relate Amazon.com’s delivery estimates to the needs of the University at Albany patron population, the authors redefined Amazon.com’s availability categories based on experience with our patron population (see Table 2). When library patrons look for a book, generally they expect that the item will be found on the shelves for immediate access. Whether, and to what extent, they can wait to obtain materials depends on their needs.

The patron-based category “Undergraduate Acceptable,” includes all books for which Amazon.com has a stated delivery period of up to two weeks. Within the University at Albany library system, patrons do not always have immediate access to all materials. Books may need to be paged from remote storage or retrieved from a different library, which can typically take a day. A two-week time period corresponds to our own experience of the time it takes, on average, for interlibrary loan requests to be filled. It also corresponds to the University Library’s recall period. A requester wishing to check out a book that is currently on loan to another borrower may place a recall on the book. The borrower then has up to two weeks to return the book, and at that point the requester can check it out.

The second category in Table 2 is “Researcher Acceptable,” defined as all books for which Amazon.com has a stated delivery period of up to six weeks. This category includes all materials in the “Undergraduate Acceptable” category, as well as items that take up to four additional weeks for delivery, and, thus, total percentages for the patron-based categories add up to more than one hundred. Patrons, generally faculty members and graduate students, who need material for their own research, are often willing to wait longer periods of time to obtain harder to find items. In the case of rare books, interlibrary loan requests can take many weeks to fill.

The category, “Unavailable,” encompasses all titles that are not directly available from Amazon.com because they are out of print, out of stock, not available, or not found in the Amazon.com database. Amazon.com’s “Out of Print” category gives the user the option to have the order placed seamlessly with the company’s network of out of print dealers. Because orders were not actually placed from Amazon.com, it is not possible to state whether or not a substantial number of out of print materials would be delivered in a timely fashion using this option. Acquisition of out of print items can be complicated by factors including availability, condition, and differing editions of the same volume, and in some cases it may take years to find an out of print book if it can be found at all. No matter the reason, these titles could not be reliably obtained from Amazon.com within a defined time period.

Obviously, these patron-based categories do not cover all situations. As any academic librarian knows, undergraduates are often unwilling or unable to use materials unless they are available on demand, so any wait, including even Amazon.com’s fastest promised delivery will be unacceptable. Mary Ann Chappell reports that even a 48-hour turnaround time on interlibrary loan materials renders them useless for many undergraduates.12 Likewise, while many research projects are conducted at a leisurely pace, a researcher may have a shorter deadline that makes a six-week delay in obtaining a book unsuitable. However, the patron-based categories provide a framework for comparing the viability of an Amazon.com-like delivery model to academic libraries.

Of the books examined, only 38.5% were available though Amazon.com within the two-week time period deemed “Acceptable Undergraduate” delivery. A total of 60.9% were available within the six-week period deemed “Researcher Acceptable.” It was not possible to obtain 39.1% of the items at all directly from Amazon.com.

<table>
<thead>
<tr>
<th>Patron-Based Category</th>
<th>Undergraduate Acceptable</th>
<th>Researcher Acceptable</th>
<th>Unavailable</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of items</td>
<td>406</td>
<td>642</td>
<td>412</td>
</tr>
<tr>
<td>% Total</td>
<td>38.5</td>
<td>60.9</td>
<td>39.1</td>
</tr>
</tbody>
</table>

“An obvious problem with Coffman’s suggestion of a single, largely interlibrary loan based global library system would be the substantial shipping and handling costs associated with each transaction.”
11 times to patrons, if the book had been provided through ILL rather than ownership.

Interface Display

Because the authors visited Amazon.com at regular intervals, they were able to make observations about the site’s interface display. Substantial changes occurred frequently. This included the addition of items, such as kitchenware and cameras to the product offerings, and the actual display itself. The interface screens often brought the search window up in a different location (sometimes on the left, at other times in the center). The main screen of the interface promoted different products with each visit.

Display of retrieved records varied. At the start of the research, titles were displayed in a single column format. Sometimes the requested title appeared at the beginning of the list, while at other times it was embedded further down. After several months, the display became much busier, showing a three-column display, with the retrieved records in the center. The other two columns were “sponsored results,” advertising space for artists and authors, and “listmania.” Amazon.com’s recommended products. While a highly cluttered screen and a frequently changing display might function well for an online bookstore, library catalogs must maintain a higher level of stability and clarity.

The order of the retrieved records seemed to have more to do with the availability of titles from Amazon.com than with the relevance of the record to the searched title. Often, the authors found the searched title did not necessarily come up at the top of the list. For example, the title of the book Religion in Greece and Rome, by Herbert Jenning Rose, was entered into the books field of the search tool and the search was executed. One would expect a searched title would appear as one of the first retrieved records if it were present in the database. Instead, the selection appeared four screens down at entry number 13 (of 14 total) presumably because it was an out of print selection.

A title search of this type in a typical library catalog produces an alphabetical listing of library-owned sources. A book not owned by the library will not appear in the results list; however, a book that is owned will. Catalogs usually have a keyword searching capability that provides a list of records containing the searcher’s specified terms. Amazon.com’s search results display have more to do with generating sales than with matching the actual title requested, where a library catalog should provide accurate information about materials in the system.

Although library catalogs do not display recommendations, most contain links to related materials. Text-based and Web-based catalogs provide command links or hyperlinks, respectively, to materials that are relevant to the retrieved record. These options allow the user to review other materials that either have the same author, subject, or series. Many provide a mechanism to search by call number, thus the user is placed virtually into the physical collection.

Record Enhancements

While it might be appropriate to include customer reviews at a commercial bookselling site, they are less appropriate in a library catalog. A few controversial titles were included in the sample. The Amazon.com record for the title, The Blue Book of the John Birch Society by Robert Welch, inspired a number of enthusiastically positive reviews. Because a customer reviewer may be anonymous, or even provide a fictitious name, the reader may be completely unaware of the biases of the reviewer. Another book sampled was No Man Knows My History: The Life of Joseph Smith, the Mormon Prophet by Fawn McKay Brodie. This critical biography of the founder of the Mormon religion received a large number of both extremely positive and extremely negative reviews, presumably reflecting the religious beliefs of the reviewers.

Coffman suggests that catalog records could be tagged with librarian-generated commentary, such as a “library recommended” designation to indicate high quality titles as a mechanism for providing enhanced service. While it is true that librarians often do recommend books to patrons, they normally do so in some context. A title that might be very suitable for one application might be completely inappropriate for another. In the academic library, recommendations often take place during the reference interview or through the creation of course-specific bibliographies or pathfinders designed for answering a certain type of information need. Further, educational merit, rather than entertainment value, drives collection development. Student reviewers of library materials might be expected to have very different selection criteria than do librarians, so inclusion of this type of review would be inappropriate in the academic library catalog.

Academic libraries have sources of electronic book reviews from subject specific databases such as ERIC and EconLit, and more general sources such as EBSCO Academic Search FullTEXT Elite. Providing links to reviews in those sources right from the book record could enhance the catalog. Likewise, librarians and vendors have recognized the desirability of including table of contents data in cataloging records, although most libraries have been slow to implement such enhancements. Even Amazon.com had table of contents information available for only a tiny fraction of the books sampled, perhaps indicating the difficulty of obtaining this data inexpensively.

“Certainly, libraries do not want to wrap their loan items and send them as gifts but libraries are beginning to use technology to provide personal touches and generate user satisfaction.”

Personalization

To create a sense of customer loyalty, Amazon.com offers a number of personalization features. A user logged on to Amazon.com is remembered and welcomed to the site. E-mail notifications let patrons know about new books by their favorite author or publications in their subject area. This bookseller will even make gift suggestions, wrap them, and mail them. Certainly, libraries do not want to wrap their loan items and send them as gifts but libraries are beginning to use technology to provide personal touches and generate user satisfaction. As Jeff Barry notes, “Advances and new ways of leveraging technology for enhancing library services generally come from librarians.” Librarians have reported their experiences in offering patrons automated electronic notification about new books added to the collection. These services may be in the form of a Web-mounted searchable database of new titles, or via e-mail notification directly to the patron.

Amazon.com makes individualized product recommendations, which are usu-
ially generated by the customer’s profile. The information for this profile mainly comes from data gathered during past visits to the Web site. Client purchase information, submitted reviews, executed searches, and auction bids are stored. In the “About You Area,” customers may submit a 4,000 word personal description and a photo, and may create a “wish list.” “Trusted friends,” who receive e-mail notices of gift ideas and occasion reminders can review this information.

Privacy

Amazon.com’s Privacy Policy details how and when the company distributes customer information to affiliated companies. It also states that, if they buy or sell parts of their store, customer information is usually part of the transferred business assets. Amazon.com may also retain numbers of customer credit cards, drivers’ licenses, and social security cards. Amazon.com updated this privacy policy in August 2000. The previous policy stated that the company had a “long standing practice of not selling, trading or renting customer information.”19 The new policy states that customer information is now considered an asset.

In contrast to Amazon.com’s approach, libraries have long respected patron privacy by maintaining the confidentiality of library patron records as a basic tenet of librarianship. Many library policies contain restrictions prohibiting the disbursement of patron information. In many states there are laws that protect patron-borrowing information. As Theresa Chmera notes, “In those states, it is a statutory violation to produce identifiable patron information to persons other than library employees engaged in their regular library duties, unless there is a court order compelling the library to produce such information.”20 Federal law prohibits the disclosure of information about video borrowers.21 Libraries do keep statistics of patron activities (e.g., door counts and reference transactions) but these are kept as aggregate, non-identifying data. Patron record information is never exchanged with other libraries.

While libraries traditionally view their patron records as almost sacred, if libraries were to become a single gigantic electronic entity, will this still be the case? In a time when cash-strapped educational institutions are increasingly pressured to raise money through business “partnerships,” perhaps corporate financial offers for access to the enormous patron data-base from the “Earth’s largest library” would be impossible to resist.

“Coffman’s premise is not that libraries or library patrons obtain books from Amazon.com, but that libraries create their own mega-library to rival Amazon.com.”

CONCLUSION

Coffman’s premise is not that libraries or library patrons obtain books from Amazon.com, but that libraries create their own mega-library to rival Amazon.com. But, if libraries assume this business model for their operations, they will have to assume many of the same operational practices to achieve any level of efficiency. In time, the same forces that determine Amazon.com’s product offerings and delivery options would come to shape the joint collection of the “Earth’s largest library.” If libraries, even large, research-oriented ones, are to allocate a significant portion of their budgets to covering things like shipping and handling charges, they simply will not have the money to invest in richly diverse collections of enduring value.

While it may be the largest, Amazon.com is not the only online bookstore in existence. Just as Coffman calls for the creation of an enormous network of libraries, a network of online booksellers and used book dealers could provide access to a greater range of titles and perhaps offer more services and site enhancements than can be found at Amazon.com. It is possible that other online booksellers, alone or in combination, could have been more successful in supplying books needed by University at Albany patrons in a timely manner, and this could be the subject of further research.

The missions of bookstores and academic libraries are quite different. Academic libraries work to strengthen the research and teaching programs of their institutions by acquiring, organizing, and promoting relevant materials. As a business enterprise, the fundamental mission of Amazon.com must be to ultimately maximize shareholder wealth. Amazon.com sees itself as accomplishing this goal by use of “the Internet to transform book buying into the fastest, easiest, and most enjoyable shopping experience possible.”22 Under the Amazon.com model, information is a commodity, and, while access to information is provided to marketable titles, it is questionable if they will provide access to titles, which cease to be marketable. In this study, Amazon.com was unable to deliver in a timely manner a large percentage of the books, which had been used by University at Albany patrons. Academic libraries view information as a public good that contributes to the building of knowledge and that should be preserved and shared with members of the community. These differing missions and perspectives shape the body of information that users are likely to access at each institution.

“Librarians do need to monitor services and technological advantages that online bookstores offer and evaluate and implement in a thoughtful and deliberate manner only those that would benefit patrons.”

Companies engaged in e-commerce have developed innovative technologies that no doubt can be applied in more traditional settings. Amazon.com’s Web interface does offer some real advantages over the traditional library catalog. At the same time, the rapid changes and relative instability of the interface are not something libraries could or should wish to emulate. A catalog interface that changes almost daily would not be conducive to providing effective user education or reference service. Librarians need to monitor services and technological advantages that online bookstores offer and evaluate and implement in a thoughtful and deliberate manner only those that would benefit patrons.

NOTES AND REFERENCES


11. The status of the borrower cannot readily be determined from the circulation system and was not recorded in the study.


15. Ibid.


