



METRICS

• The Next Chapter: Measuring the Pace of Change for Print Monograph Collections

by Christopher Stewart

Available online 13 June 2011

In recent months, two studies have been released that could have a key impact on the way academic libraries of all kinds manage and maintain local print collections in coming years. Both studies address issues surrounding access and use of physical collections, though in different ways. The first study, conducted by Cornell University Libraries (CUL), examined circulation of printed monographs at CUL over the past 20 years. The results may surprise some. The second study outlines a framework for academic libraries to devise new strategies for managing physical collections through participation in the shared digital repository, HathiTrust.

When contextualizing studies and recommendations for managing print collections in an era of mass digitization, I think it is important to also consider general data on book acquisitions and, equally important, overall circulation of monographic collections across a range of institutions of higher education in North America in recent years. E-books have been a reality in academic libraries for several years (though their numbers have not significantly altered monographic volume counts yet, especially in larger libraries) and Google Print nearly seven years ago. During that time, as users have grown accustomed to and expectant of digital delivery of scholarly information in journals, how has the book fared? Millions of books have been digitized, and new models for management of print resources have and are continuing to be developed. How does this rate of change compare with book acquisition and circulation levels in academic libraries over the past decade? In this column, I will provide an overview of the CUL and OCLC studies as well as a brief, statistical glance at print acquisition and circulation levels for North American colleges and universities over the past decade.

The Cornell study, the "Report of the Collection Development Executive Task Force on Print Collection Usage," was released in late 2010 and investigated usage of CUL's circulating collection.¹ The research report reminds the reader that for decades the dominant principle of monographic collection development in the nation's large academic research libraries has been to build collections that would meet virtually any research need so long as the material being added fit within the scope of the collection which is, not surprisingly, quite broad at most large research universities.² The fact that some part of the collection would remain "latent" was (and is) generally accepted as a "condition for meeting the needs of scholarship."³ On the other hand,

the report points out, monographic usage data have long informed collection development practices at public and smaller academic libraries, where budget pressures and space constraints often have more immediate and direct effects on the size and scope of book collections – though some would argue that collection development practices are far from strategic at many small and mid-sized institutions. In any event, the CUL study makes the important point that, given the millions a large research library spends annually on printed books, an examination of the return on that investment is a worthwhile and necessary exercise.

Results of the CUL study are astounding: 55% of the print monographs purchased by CUL since 1990 have *never* circulated.⁴ Faculty and graduate students comprised most of the borrowing activity, with undergraduates charging only 10% of the total circulation volume.⁵ Of course, circulation of printed books will vary by field, and the CUL study also breaks these data out for monographic circulation since 2001 across several disciplines. On average, only 35.5% of books purchased since 2001 had circulated for the first time.⁶

The Cornell study reinforces data from a study conducted at the University of Pittsburgh over three decades ago. That study reported that 40% of monographs never circulated during the first six years after purchase. If a book does not circulate within the first six years, the chances of it ever circulating drop to one in fifty. At ARL institutions, 56% of books never circulate.⁷ More recently, Dennis Dillon, using data from ARL and the National Center for Educational Statistics, calculated that among all academic libraries, printed books circulate once every 6.3 years and have a 15.78% chance of circulating in any given year. Among ARL libraries, printed books on median have an 8% chance of circulating in any given year (once every 12.5 years).⁸ The authors of the Cornell study ask the following question about 45% of the collection purchased since 1990 being used: "is that a lot or a little?" When less than half of the resources expended for new books offer any return on investment in 20 years, one could rephrase the question to *is that little for a lot?*

The second study, the "Cloud Library project," released earlier this year, was designed and conducted by OCLC Research, HathiTrust, New York University's Elmer Holmes Bobst Library, and the Research Collections Access & Preservation Consortium. Among other things, this study looked into the possible effect of mass digitization on how academic libraries will manage their print collections in coming years. HathiTrust membership now includes fifty libraries⁹ at major research institutions that contribute material including but not limited to printed monographs and serials processed as a result of agreements with Google. To date, approximately 8.6 million total volumes are included in HathiTrust, including approximately 5 million books.¹⁰

Christopher Stewart is Assistant Professor, Graduate School of Library and Information Science, Dominican University, 7900 W. Division St, River Forest, IL 60305, USA
<cstewart@dom.edu>

There is, according to the report, "sufficient material" in the HathiTrust collection to "duplicate a sizable (and growing) portion of virtually any academic library in the United States."¹¹ The study indicates that, by 2014, "60% of retrospective print volumes held in ARL libraries will be duplicated" in the HathiTrust repository.¹²

The Cloud Library project has potentially ground shifting implications for print collection management in the academic library. While copyright restrictions prevent most material in HathiTrust from being made available in full text, full-text indexing, tables of contents, and other information can be made available and provide a means for "moderating and tuning" demand for physical print versions, especially lower demand monographs, which will in turn facilitate the transfer of material to local or regional high-density storage facilities and promote a shift in library resources toward more "distinctive and institutionally relevant service portfolio."¹³ Given the continued growth of HathiTrust's collections and the increasing cost of building and maintaining local print collections that are seldom if ever used, institutions will be wise to reconsider the way they manage portions of print collections that are "increasingly devalued as an institutional asset."¹⁴ If the model outlined in the Cloud Library project is to become a reality, library leaders, publishers, funders, and others will need to focus efforts in the coming years on developing new resource discovery tools for material in mass digitized collections such as HathiTrust, along with new frameworks for intra-institutional cooperation that will facilitate the continued development of shared secondary storage agreements such as ReCap (Columbia, Princeton, and NYPL), WEST, a current California Digital Library initiative to "organize a distributed print repository service among research libraries in the western region of the United States,"¹⁵ and others. Whatever the future holds, however, the report highlights the immediate importance for academic libraries to develop viable interim strategies that will "maximize the return on investment in library print collections while acknowledging the rapid shift toward online provisioning and consumption of information."¹⁶

As mass digitization continues apace and high profile studies like those described here are released, it is worth taking a brief look at how the printed book has fared in general in recent years across a spectrum of academic libraries. While large, national datasets on academic libraries cannot provide the type of detailed information on proportion and age of print collections that are purchased and circulate, these datasets do provide information that can be used to make general observations about print collection growth or decline and the relationship of monographic collection growth and circulation. As academic libraries, even large academic research libraries, contemplate moving from a "just-in case" model to a "just-in-time" model for collection management, it is useful to know the level of investment academic libraries are (or are not) continuing to make in print collections. It is also useful to know the return on these investments in terms of circulation, albeit in general terms. To that end, the Association of College and Research Library Academic Library Trends and Statistics survey provides three useful variables with which to work: number of monographic volumes purchased; expenditures for monographs; and initial circulation transactions. According to survey instructions, "number of volumes purchased includes all volumes for which an expenditure was made... including volumes paid for in advance but not received during the fiscal year." Initial circulation transactions include the "number of initial circulations during the fiscal year from the general collection for use usually (although not always) outside the library." Expenditures are monies spent for volumes counted, and circulation is for items from the general collection only.¹⁷

From the approximately 1300 responding libraries to the 2000 ACRL survey and the approximately 1500 respondents to the 2009 survey, 433 libraries provided complete data for both years for these three questions/variables. Of these, five responses were removed due to inconsistent or apparently incorrect data. Thus, a final sample of

Table 1
Monographic collection growth and circulation in North American academic libraries, 2000–2009 (N = 428)

	Minimum	Maximum	Mean
Monographic volumes purchased 2000	53	440,450	11,829
Monographic volumes purchased 2009	1	638,592	14,089
Expenditures for volumes purchased 2000	\$3000	\$8,365,885	\$482,684
Expenditures for volumes purchased 2009	\$315	\$15,345,869	\$549,301
Initial circulation transactions 2000	820	1,532,951	102,455
Initial circulation transactions 2009	133	2,234,203	129,315

428 libraries was used. These libraries comprise a diverse institutional mix, from community colleges and technical institutes to large research universities in the U.S. and Canada.

We know that digitization expands access to material in books in the same way it expanded access to material in journals over the past two decades. However, while the transformation of the delivery system for material in scholarly journals has been completely transformed in a relatively short period of time, the same cannot, obviously, be said for books. Table 1 lists the averages for the entire sample for the three variables. The number of monographs purchased over that decade increased by approximately 19%, from an average of 11,829 monographs in 2000 to 14,089 monographs in 2009. Spending for monographs increased by approximately 14%, from \$482,684 in 2000 to \$549,301 in 2009. While there are some very large research libraries in the sample that likely move this average toward the higher end, more than a third of the libraries in the sample spent over a quarter of a million dollars on monographic volumes in 2009. For the entire sample, initial circulation transactions increased by 26%, from an average of 102,455 transactions in 2000 to 129,316 transactions in 2009.

Table 2
Monographic collections and declining circulation transactions in North American academic libraries, 2000–2009 (N = 201)

	Minimum	Maximum	Mean
Monographic volumes purchased 2000	53	77,115	7694
Monographic volumes purchased 2009	1	638,592	10,935
Expenditures for volumes purchased 2000	\$8060	\$3,128,052	\$323,580
Expenditures for volumes purchased 2009	\$315	\$5,757,033	\$312,142
Initial circulation transactions 2000	820	1,081,746	89,872
Initial circulation transactions 2009	133	1,024,562	67,236

Table 3

Monographic collections and increasing circulation transactions in North American academic libraries, 2000–2009 (N = 227)

	Minimum	Maximum	Mean
Monographic volumes purchased 2000	146	440,450	15,491
Monographic volumes purchased 2009	90	223,699	16,883
Expenditures for volumes purchased 2000	\$3000	\$8,365,885	\$623,565
Expenditures for volumes purchased 2009	\$2265	\$15,345,869	\$759,297
Initial circulation transactions 2000	826	153,295	113,598
Initial circulation transactions 2009	1692	2,234,203	184,280

Despite the increase in initial circulation transactions on average, it should be noted that nearly half of the reporting libraries reported declines in initial circulation transactions (see Table 2). Initial circulation transactions declined by approximately 25% for this group, from 89,872 transactions in 2000 to 67,236 transactions in 2009. Of the two hundred and one libraries that reported declines in circulation, 16 were libraries that spent more than \$1,000,000 annually on monographic purchases, representing 35% of all of the libraries in the sample that spent more than \$1,000,000 annually on monographs. More importantly, however, despite declines in circulation for these 201 libraries, the group on average saw an increase in monographic volumes purchased. In 2000, these libraries purchased an average of 7,694 monographs; in 2009, 10,935 monographs — an increase of 42%. Interestingly, the amount spent on monographic volumes declined slightly (3.5%), however, from an average on \$323,580 in 2000 to \$312,142 in 2009, indicating some correlation between monographic spending and circulation volume. Indeed, for the entire sample, correlation between monographic volumes purchased and circulation transactions was found to be statistically significant ($p=0.05$). To that end, it is no surprise that, for the 227 libraries that saw increases in circulation, spending for monographic volumes increased by approximately 22% (see Table 3). Finally, most of the largest academic libraries in the sample are among those that saw increases in circulation.

Although by different means, the Cornell study and the Cloud Library project offer similar implications for academic library book collections. We are quickly moving beyond an era when academic libraries, even many large academic research libraries, can consider a long term future in which largely unused assets are locally managed and maintained. Tools for analyzing circulation will likely be further refined in coming years. While the circulation data presented here is far from conclusive and certainly not representative of any specific type of academic library, it does show that, on average, circulation increases with expenditures. What then, is the return on investment for the millions academic libraries spend in print monograph collections annually? Is it, as the Cornell study asks, a lot or a little? Surely, the value of circulation metrics in national datasets such as IPEDs and the ACRL survey will improve if

libraries are willing to derive more specific data such as age of circulating material, circulation across major disciplines, and other more refined information. As the Cornell study and others before it illustrate, “new” does not guarantee “use” — any use. Mass digitization, which began (and, of course, continues) as a strategy for ensuring preservation and expanding access to information in print volumes, has emerged as a potentially powerful tool for academic libraries to greatly reduce a range of costs while still maintaining access to potentially significant portions of legacy and seldom used monograph collections. HathiTrust has begun by developing a compelling framework for academic libraries to consider. Like most good ideas for academic libraries, it stresses advocacy and cooperation on a broad scale. We are good at both.

NOTES AND REFERENCES

- [1]. “Report of the Collection Development Executive Committee Task Force on Print Collection Usage Cornell University Library”, Cornell University Library.
- [2]. *Ibid.*, p. 34.
- [3]. *Ibid.*
- [4]. “Report of the Collection Development Executive Committee Task Force on Print Collection Usage Cornell University Library”, 2010 Cornell University Library, p. 2.
- [5]. *Ibid.*
- [6]. “Report of the Collection Development Executive Committee Task Force on Print Collection Usage Cornell University Library”, 2010 Cornell University Library, p. 17.
- [7]. Library consultant Rick Lugg has recently highlighted data from the University of Pittsburgh study, which was written by Allen Kent et al and published in 1979 by Marcel Dekker, Inc. Lugg’s analysis has been cited in recent presentations at the 2010 Charleston Conference and the 2011 Association of Subscription & Intermediaries (ASA) Annual Conference (Accessed April 23, 2011).
- [8]. Dennis Dillon, “The Economy...and the Collection Presented at the Committee on Institutional Cooperation Center for Library Initiatives Conference, May 19, Bloomington, IN”, www.cic.net/downloads/conferences/library2009/DennisDillon2009.pptx (Accessed April 23, 2011).
- [9]. “Welcome to the Shared Digital Future”, <http://www.hathitrust.org>. <http://www.hathitrust.org/about> (Accessed April 24, 2011).
- [10]. *Ibid.*
- [11]. Constance Malpas, “Could-sourcing Resource Collections: Managing Print in the Mass-digitized Library Environment”, OCLC Research, Dublin, OH, 2011, p. 9. <http://www.oclc.org/research/publications/library/2011/2011-01.pdf> (Accessed April 30, 2011).
- [12]. *Ibid.*, p. 10.
- [13]. *Ibid.*
- [14]. *Ibid.*
- [15]. “Current Initiatives: California Digital Library”, <http://www.cdlib.org/services/collections/sharedprint/westinitiative.html> (Accessed April 19, 2011).
- [16]. Constance Malpas, “Could-sourcing Resource Collections: Managing Print in the Mass-digitized Library Environment”, OCLC Research, Dublin, OH, 2011, p. 11. <http://www.oclc.org/research/publications/library/2011/2011-01.pdf>.
- [17]. “ACRL Statistics Questionnaire: 2009–10 Instructions”, Association of College & Research Libraries, 2009. www.arl.org/bm-doc/10instruct.pdf (Accessed April 30, 2011).