RESEARCH LIBRARY TRENDS: *ARL STATISTICS*

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(preprint version - final print version appeared in *Journal of Academic Librarianship*, volume 26, number 6, November 2000, pages 427-436)

There is an increasing recognition of the limitations of the national data collection efforts for libraries, among them the *ARL Statistics*. On the other hand, a widespread recognition that amidst the flux and uncertainty of the information revolution the research library paradigm offers a sense of stability and opportunity to be realized in its digital future. Libraries are "competing" for attention with an increasing number of internet start-ups, as well as, established information service providers; they are in need of more management information and data to show their value in an increasingly competitive environment - a need that a variety of new and revived efforts in library statistics are trying to address.[(1)] Despite the shortcomings, *ARL Statistics*,[(2)] one of the oldest efforts,[(3)] does serve the purpose of describing research libraries in a sustainable way, sheds light on scholarly communication trends by showing the decline of ownership and the growth of access, and tracks gross trend activity in library services and expenditure allocations. *ARL Statistics* is illuminating both by what the tell and by the story they fail to tell.

ARL Statistics describes collections, staffing, expenditures, and service activities for the 121 member libraries of the Association of Research Libraries (ARL). Of these, 111 are university libraries; the remaining 10 are public, governmental, and private research libraries. ARL member libraries are the largest research libraries in North America, representing 15 Canadian and 106 U.S. research institutions. The academic libraries, which comprise about 92% of the membership, include 13 Canadian and 98 U.S. libraries.

The ARL Membership Criteria Index, an index developed to assess institutional investments in library resources for the purpose of establishing membership in the ARL, serves as a gross indicator that is prominently featured by the *Chronicle of Higher Education* each year. It has been called into question by both ARL directors and higher education administrators since it emphasizes the quantitative aspects of the institutional identity of a library rather than assessing qualitative contributions to a collective of research library resources. That collective of research library resources has defied a good definition because it is not only the succinct institutional identities, but also the dynamic networking and consortial activities that provide access to information as well as the actual information sources themselves; complicating matters in defining this collective of research library resources is the increasing amount of digital information and the emergence of new institutional identities that are hard to characterize using established paradigms. Amidst this flux, the institutional identity of a research library has served as a succinct and stable point of reference and *ARL Statistics* has provided an enduring description of the resources and services research libraries provide helping us understand their evolution.

THE DECLINE OF OWNERSHIP

The story of declining ownership is a story of library budgets struggling to keep up with serial and monograph cost increases (see Table 1). As serial prices grow, libraries must spend rapidly increasing amounts of money and still cannot sustain their serial subscriptions (see Figure 1). Monographic acquisitions also indicate a similar pattern, though with much lower cost increases compared to serials, but much larger declines in acquisition rates. At the same time, services such as interlibrary loan are used more heavily, as shown in Figure 2. Consequently, resources per student are reduced, while levels of service activities are increasing.

In more specific terms, ARL data show that, while ARL libraries spent 2.7 times more money for serials compared to 1986, they bought 6% fewer serial titles (Figure 1). During the last decade, libraries shifted expenditures from monographs to serials to meet some of the demands of increasing serial prices, reducing the number of monographs purchased by 26%, which makes a record low median figure of 24,294 monographs purchased in 1998-1999, while the unit cost for monographs increased by 65%.[(4)] Since 1986, the average annual increase for the serial unit cost has been 9.0% and for the monograph unit cost 3.9%, both higher than the general inflation trends, which was 3.3% on average, in North America during the same period.

Table 1

Monograph and Serial Costs in ARL Libraries, 1986-1999, 2020
Median Values and Average Annual Percent Changes

Year	Serial Unit Cost	Serial Expenditures	Monograph Unit Cost	Monograph Expenditures	Serials Purchased	Monographs Purchased
(Libraries included)	40	103	62	99	40	62
1986	$87.09	$1,517,724	$28.67	$1,120,645	16,312	32,679
1987	$104.79	$1,770,567	$31.79	$1,064,484	16,600	26,240
1988	$116.65	$1,979,604	$35.83	$1,141,226	16,456	25,570
1989	$128.22	$2,130,162	$38.39	$1,241,133	16,298	27,082
1990	$130.07	$2,304,744	$40.34	$1,330,747	16,221	27,545
1991	$150.02	$2,578,309	$42.16	$1,400,738	16,250	27,524
1992	$161.74	$2,630,827	$43.62	$1,353,865	15,896	26,344
1993	$184.49	$2,919,756	$42.76	$1,295,807	15,668	25,188
1994	$190.26	$2,932,091	$44.51	$1,309,807	15,698	25,341
1995	$211.48	$3,133,885	$45.13	$1,365,575	14,741	25,707
1996	$219.19	$3,393,307	$46.76	$1,444,015	15,223	25,911

1997	$234.55	$3,674,368	$46.58	$1,460,234	15,450	28,576
1998	$244.18	$3,818,832	$47.94	$1,486,764	15,615	24,447
1999	$267.09	$4,098,075	$47.40	$1,506,651	15,259	24,294
Avg. annual % change:	9.0%	7.9%	3.9%	2.3%	-0.5%	-2.3%
Scenarios for 2020, assuming annual rate of change for unit costs remains constant (figures ***in bold italics*** are held constant from 1999 results)						
Scenario One †	***9.0%***	***7.9%***	***3.9%***	***2.3%***	***-0.5%***	***-2.3%***
	$1,632	$20,390,881	$107	$2,430,310	13,700	15,048
Scenario Two ‡	***9.0%***	9.0%	***3.9%***	3.9%	0.0%	0.0%
	$1,632	$25,034,352	$107	$3,364,644	***15,259***	***24,294***
Scenario Three §	***9.0%***	10.0%	***3.9%***	5.0%	1.0%	1.0%
	$1,632	$33,359,779	$107	$4,197,473	18,805	29,940

† Scenario 1: Rates of change for all variables remain the same. (Depicted in chart.)
‡ Scenario 2: Numbers of serials and monographs purchased remain the same.
§ Scenario 3: Modest increase in numbers of serials and monographs purchased.

Assuming the same average annual rate increases and projecting them into the future, the median ARL library will be paying $1,632 for a journal subscription and $107 for a monograph in 2020 (see Table 1, Scenario 1, and Figure 1). Such a library will lose purchasing power, buying only 13,700 serials and 15,048 monographs--16% fewer serials compared to 1986 and 54% fewer monographs.

But is it reasonable to assume no change in the average annual rates over the next 20 years? Scenario 2 (Table 1) is based on a projection for 2020 where the median library maintains its current purchasing level and Scenario 3 on a projection that shows how much the median library would have to spend in 2020 to purchase a modest 1% more serials and monographs per year over the next 20 years.

On the other hand, one might argue that instead of stable or increasing annual rates, we might be entering into an era where the increasing availability of electronic information will be reducing the costs associated with serials, monographs and other new formats (e-books, aggregator databases, e-journals, etc.). Although the idea of providing enduring access to information resources at low, marginal, or even no direct costs is appealing and promising with major implications for research libraries, it has yet to prove itself.

But what are some of the forces that have sustained a relatively stable number of serial subscriptions despite a sustained pattern of large price increases? In a recently published article on the impact of publisher mergers on journal prices, Mark McCabe presents a new portfolio theory of publisher mergers to show the remarkable inelasticity (i.e., insensitivity to price) of library demand for serials, which gives publishers "a strong incentive to increase prices faster