

The Library "Doomsday Machine"

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Originally appeared in:
Publishers Weekly
February 8, 1991, pp. 36-37

Research and academic libraries continue to experience unrelenting budget pressures. The pattern of scholarly journal prices increasing two and three times as rapidly as the Consumer Price Index in the 1980s persists and will intensify in the early 1990s. The increases have also been rising far ahead of the Higher Education Price Index, and have occurred at the expense of other library services--most visibly, monograph purchases. Increases for 1991 will probably match or surpass those of the earlier peak year, 1987, which saw an 18% leap over 1986. Given this escalation, University of Virginia librarian Ray Frantz has coined an apt term for the crisis: "The serials doomsday machine."

The kinds of prices involved can be dramatic. For example, *Brain Research* (Elsevier), costing more than \$7000 for 1991, is one of the most expensive of all scholarly journals. Price increases can be equally extraordinary. For example, *Computers and Structures* (Pergamon) rose from \$1140 in 1986 to \$2384 in 1989-- an increase of 109%.

Because the highest average journal prices are consistently in STM, attention frequently focuses on these to the exclusion of other disciplines. However, other areas display similar hikes: the *Journal of Economics* (Springer-Verlag) rose from \$100 to \$263, or 163% in three years. *Art History* (Basil Blackwell) rose from \$52 to \$96 (85%).

To cope with such increases, librarians are canceling massively and borrowing increasingly from each other. Although there are few good records of library cancellations, larger institutions have dropped thousands of titles. Journals that used to be ordered routinely are now subject to policies of "cancel one to buy one of equal price." Librarians must often delay adding a new journal until it has demonstrated its worth. Yet even such draconian tactics give only a temporary respite, good until the next year's price increases. And the problem is compounded by researchers' demands for additional publication outlets, and for more pages.

ARL 1986-90 Statistics and Trends

In its newly released annual statistical compilation *ARL Statistics, 1989-90*, the Association of Research Libraries continues to track the crisis. The report summarizes the purchasing and expenditures of ARL's 119 member libraries, the largest research institutions in the U.S. and Canada. According to a recent Department of Education report, *Academic Libraries: 1988*, and ARL's own data, its 94 U.S. university library members hold 37% of all academic library books and journals. They procured 34% of volumes added in 1988, and spent 34% of 1988 monographic funds, 43% of serials funds, and accounted for 40% of overall library materials expenditures. The combined acquisitions budgets of ARL for 1989-1990 were almost half a billion dollars.

According to the *Statistics*, from 1985-86 to 1989-90, serials prices rose 51% to a median price of \$132.45 per subscription. To stay within budget, university libraries paid 52% more than in 1986 but held 1% fewer subscriptions ([Figure 1](#)). Meanwhile, prices of monographs rose 41%, but reduced funds led to an expenditure increase of only 19%. The result was a drop of 16% in actual monographs purchased.

A 16% decline represents roughly 5300 monographs fewer for each university library, or about 570,000 fewer monographs for ARL university library members compared with 1986. Assuming a unit price of \$40, this

decrease amounts to a loss of nearly \$23 million for monograph publishers and vendors.

Berkeley's university librarian Joseph Rosenthal wrote to deans and department chairs: "Over the past decade, the cost of maintaining Berkeley's library collections has increased an average of 9.3% each year due to inflation, the weakening dollar, and the increasing amount of information available... As the subscriptions budget has taken a larger and larger share, one result has been a 50% decrease in the number of books added to the collections each year. In 1981-1982, 83,000 books were purchased; in 1990-1991 we will be able to purchase only 42,000 books."

Overall, 61% of ARL university libraries are acquiring fewer monographs, and 55% fewer serials, than in 1986. Although the picture is gloomy for monographs, it is not consistently gloomy for all members. While nearly 40% of ARL university libraries are buying at least 21% fewer monographs than in 1986, nearly 20% are purchasing 21% or more books ([Figure 2](#)). The libraries whose fortunes have improved include both public and private institutions, with Canadian ARL members faring generally better due to the improved exchange rate.

U.S. research libraries are heavy purchasers of overseas materials, principally from Europe. Paradoxically, a great deal of the material purchased from major international publishers based overseas is U.S. originated research. The effect of their pricing increases is exacerbated by a steady overall decline in the value of the U.S. dollar since it was allowed to float in 1971.

1991: Unrelieved Cutbacks, Heavy Cancellations

Subscription prices for 1991, announced in summer and fall 1990, carried depressing news for librarians, administrators and scholars. The Faxon Company has reported that U.S. dollar prices of non-U.S. subscriptions tentatively are up by 25.6% for the new year, with U.S. subscriptions up by 12%. The overall average impact will be about 20%, depending on the mix of titles.

ARL libraries have reported some specific publishers' increases: Elsevier, 35%; Springer-Verlag, 26%; Wiley, 22.5%. Some U.S. learned society publishers also lowered the boom: the Association for Computing Machinery (ACM) increased its publications package by 22.5% over 1990.

ARL surveyed members in late 1990 for their responses. Fifty-two percent reported major cancellation projects, with an average cancellation target per institution of \$120,000. Some of the biggest cancellations come from the largest collections and institutions of "last resort." For example, Berkeley has canceled \$400,000+; University of Illinois, \$109,000; Rutgers, \$240,000; University of Georgia, \$350,000. North Carolina State University has canceled 1085 subscriptions since 1987 and an additional 1864 recently. Replies indicate the "most devastating year ever for library collections." Harvard expects to begin a round of cancellations, amounting to about \$100,000 in 1991.

And 53% of the ARL libraries anticipate further cuts in monographic purchases. The University of Illinois expects to reduce book acquisitions by 20%; Brown, 11%; others report cuts of up to 27%. But Lynn Sipe, assistant university librarian at the University of Southern California, noted, "We are already at the outer limits of what can be tolerated in terms of the 30/70 monographs/serials ratio. If cuts are made, they must come in serials!"

New Paradigms for the Future

The continuing serials crisis signals that the present system of scholarly publishing is in danger. Information overproduction, "publish or perish" philosophy, the weakening U.S. dollar, skyrocketing prices and the increasing unaffordability of published research findings--which are, after all, initially produced at universities and often publicly funded--all lead ARL to believe that cancellation projects must be a way-station to longer-range solutions.

ARL's fall survey determined that "there is no indication that librarians ever expect to re-achieve periodicals purchasing levels of the '60s and '70s." The consensus was that journal prices are capable of devouring as much

money as exists for their purchase, and that "throwing more money at the problem" is not the long-term answer.

Michael Keller, associate university librarian at Yale, wrote, "We must begin to formulate *radical* alternatives for collecting and disseminating scientific literature." One director, preferring anonymity, suggests that it is not until some of the "sacred cows" are canceled that a search for solutions can begin in earnest.

Other actions suggested by ARL directors include: finding a new paradigm for research libraries, with a shift from supply to access; sharing expensive international journals among several libraries statewide or in a multi-university region; exploring opportunities to facilitate transmission of information via developing networks and other technologies.

ARL Strategies for Change

In fall 1989, ARL members voted to increase their dues and to create the Office of Scientific and Academic Publishing to represent their interests. Activities are being pursued on several fronts. The first involves sharing consumer strategies, research and information among ARL members. ARL is also holding seminars and meetings with faculty, administrators and students on a number of campuses to discuss the responsibilities of librarians and scholars. The objective is to acknowledge an institution-wide problem and seek collaborative solutions, rather than relegate information to a "library problem."

Another thrust is to cooperate with societies of scholars, publishers and other groups, placing library concerns on their annual programs, agendas, and in their publications to develop a "shared information conscience." ARL is also encouraging experimentation with electronic journals and new technologies.

The ARL hosted a meeting in October 1990 for editors of newly emerging refereed electronic journals, and is promoting university-based publishing via electronic networks. Finally, ARL is actively fostering greater competition to existing higher-priced publishers. For example, increasing the percentage of not-for-profit publishing, a percentage which has dramatically shrunk since World War II, could provide more cost-effective choices for scholars/authors.

Until some of these solutions and strategies begin to take effect, the buying picture for library materials--and thus for their publishers-- looks dismal. Finding long-term solutions will demand creativity from all the players in the "information chain."

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