

Each essay deals with a particular subject of law reform. Two ('Reform and the bureaucracy' and 'The future of legal practice: does it have one?') are not based on the work of the ALRC, but rather of other law reform bodies. The rest ('Sentencing reform', 'Procedural reform and class actions', 'Reform and the fourth estate', 'The computer, the individual and the law', 'New dilemmas for law and medicine') arise directly from the law reform work of the Commission, and provide examples of the Australian approach to law reform.

This Australian approach is different, and its excellence is recognized outside this country, notably in the foreword by Lord Scarman, a former Chairman of the Law Commission for England and Wales. The material in the essays is interesting, beautifully and clearly expressed. Kirby has learnt the value of expressing himself in terms that non-lawyers can understand. *Reform the Law* provides for any concerned citizen a valuable insight into the aims and processes of law reform which will affect us all, often in unexpected ways.

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The Cost Effectiveness of Alternative Library Storage Programs by
R.A. Stayner and V.E. Richardson
(Monash University Graduate School of Librarianship, Melbourne, 1983)
pp. 149, \$10.00.

Early practitioners of the library art used the term 'economy' in the original sense of administration or management. In England, a nineteenth century librarian, James Duff Brown, authored a 'how-to' book on library practise called *The Manual of Library Economy* which, after its first publication in 1903, went to a 4th edition. This was no Samuelson-style achievement, but in those days it wasn't entirely bad either.

Until the last decade or two, most economists were just not interested in either the macro- or micro-economics of libraries. Fritz Machlup was the first to arouse public interest in the macro-aspects of the information industry, and William J. Baumol's landmark study¹ of the economics of academic libraries marked a point of departure for stimulating others to examine the economic functioning of libraries and related, information-providing document repositories.

In general, applied economists studying libraries' problems have been thin on the ground, despite a fair amount of more theoretical interest in the Economics of Information represented by such researchers as Arrow, Marschak, Boulding and Lamberton. In Australia, except for a fine study of the economics of Queensland public libraries by Karunaratne, Lamberton, Murnane and Stayner,² there have been no major economic library studies until this excellent report by Stayner and Richardson, which investigates methodologies appropriate to making rational choices among alternative forms of bookstock storage.

The library profession has benefitted in many ways from the application

of the quantitative techniques routinely invoked by statisticians, operation researchers, and, since 1962, by economists. 'Statistical bibliography', a term now displaced by Alan Pritchard's neologism, 'bibliometrics', originated in 1917 with the analysis of the literature of comparative anatomy from 1550 to 1860 by Cole and Eales,³ the 1923 studies of the *English International Catalogue of Scientific Literature* by Hulme,⁴ and the introduction of citation analysis in 1927 by Gross and Gross.⁵ Since these pioneering efforts to assemble and interpret statistics relating to books and periodicals, a respectably large and useful literature has evolved. Bibliometrics deals with such subjects as: the structure, distribution and growth of scientific literatures; the largely unobtrusive social structure and scientific reward system implicitly embodied in the literature, and the application of techniques based on material usage patterns to the analysis and management of libraries and library networks. Stayner and Richardson's contribution is of the latter type, drawing also on economic principles to assess the cost-effectiveness of alternative library storage programmes. This study is a thought-provoking and significant contribution which will encourage clear thinking about a problem faced by all libraries. It should serve a useful function in assisting library trustees, library sponsors, chief librarians and their staffs to arrive at rational, resource-sparing solutions to controlling problems imposed by years of exponential growth of library stock.

Notwithstanding recession-induced cuts in acquisition budgets which have slowed, but not stopped this growth, the Australian librarian, and librarians elsewhere, have had to face the problem of what to do when the books, serial collections, library staff, and patrons overflow the available space. This quest for *Lebensraum* poses special problems always — more so in a period of economic constraint, when capital expenditure, in particular, has been cancelled, severely cut or postponed. Paradoxically, in a manner reminiscent of the Sorcerer's Apprentice, the flow of new acquisitions into libraries continues, albeit at a slower pace, but the increased space to contain each annual increment is not obtainable as it was in the past.

Specifically, the study examines this space problem by comparing the advantages, disadvantages, and cost-benefits accruing from four alternative methods to "accommodate an assumed annual intake of library materials, this volume . . . [of materials] . . . determined by a simple extrapolation of recent acquisition rates". The four alternative solutions examined to provide more library space are:

- (1) an extension to the existing library (called the 'new building' option), providing the library patron with open access to the collection;
- (2) a secondary storage facility, owned by the library itself, providing high density or 'compact' storage with access for library staff only;
- (3) a facility similar to the secondary storage facility, but shared co-operatively by several libraries (the 'co-operative storage' option); and,
- (4) the 'no new building' option, which looks instead to one or more

techniques of space substitution by resort to high density document storage forms, re-designing of existing space and imposition of a 'zero-growth' regimen on the collection. The strategies adopted include: acquiring documents on microfilm; reducing reader and staff space; weeding out unused or infrequently used portions of the collection; increasing shelving density; and relying more on borrowing material from external document sources.

Stayner and Richardson apply the welfare economists' benefit-cost analysis techniques to the four alternatives, first to measure the magnitude of each alternative's costs and benefits, and then to evaluate and arrive at decisions among them. The empirical data used were derived from the three research libraries at the Universities of Queensland and Sydney and at Monash University.

In ensuing chapters, the authors discuss each of the options in detail, describing the types of data needed for evaluation of each alternative, the substantive and economic effects of continuous growth of the library collection, and the specific economic problems posed by open-access libraries in their substantial demands on space and recurrent costs. In common with other researchers faced with the complex, and partly insoluble, problem of imputing value or 'pay-off' to the information gleaned by readers in libraries, the authors have chosen a surrogate for library output — access to library materials. Access itself requires definition; we use as a measure of access the volume and frequency of circulation, and in-library use of the collection. This definitional strategy counters, in part, the serious logical and conceptual problems in ascribing value to transmitted, received, and interpreted messages from the universe of recorded discourse provided the reader in the non-market environment of the library.

Chapters 4 to 7 follow a more structured format than the preceding sections. Each storage alternative is separately discussed with reference to identifying and accumulating the costs incurred in: planning; obtaining land; construction; purchasing furniture and equipment; moving and transferring bookstock; restoring library operations; initiating use of the new facility; and costing into the future any necessary expansion of the alternative studied. The fourth alternative — 'no new building' — is particularly interesting in that it draws upon, as the others do not, the resort to high density storage media and electronic rapid-delivery technologies, some of which (microforms) are not at all new to the library economy, and others (facsimile, digital discs, videodiscs, and computers) which are either of comparatively recent origins, or are just emerging as technological solutions. This chapter contains a brief but quite informative and useful review of the various 'high-tech' approaches we now associate with the jargon phrase, 'the paperless society'.

It is true that these photographic and magnetic media systems do promise storage space savings of considerable magnitude over traditional book and serial formats, but they simply are not the low-cost panaceas so loudly trumpeted by those inoculated with one or the other variety of

technological fix. The authors justifiably caution against allowing the initial low-storage cost advantages of microform to mask the high-use dependent after-costs of frequent maintenance, need for special housing, expensive repairs, and periodic equipment replacement through obsolescence. These caveats also apply in one degree or another to videotape, videodisc, digital discs and related computer-based high-density storage and display systems. In short, libraries adopting high-tech to solve space problems still have a case to prove that overall costs, or even unit costs, are significantly lower than alternative building or secondary storage programmes.

A set of five useful appendices provides an analytical model to assist the choice of storage materials and shelf storage densities; discusses the technique for basic economic discounting calculations to measure present value in evaluating alternatives; describes data collection procedures on a study of bound periodical usage at Monash; and gives a simple mathematical method for estimating collection overlap in merged co-operative storage ventures and for eliminating duplicates among materials contributed to the co-operative store.

The authors emphatically state that findings are not projectable to the general case, but relate only to the three libraries studied. Differences in the cost and design of the library building, the comparative costs of land, secondary storage structures and equipment, the high maintenance and high costs of using alternatives such as microform or electronic storage, and the equally high costs of removal and alteration of myriad library records and files when weeding out low-use material, will require a separate cost-benefit analysis to be made of the specific conditions encountered at each separate library. This will not come as a surprise to economists, or to librarians.

With regard to all the options mentioned, particularly those requiring weeding of the collection, a profound knowledge of past and predicted future library material usage patterns is required of the analyst. The authors have followed the lead of the bibliometricians in adopting the principle that successful prediction of future patterns of use of materials depends upon knowing the patterns of past use. In the context of this study, such data are of particular value in developing algorithms and criteria for weeding the collection by some explicit data parameter such as the date of the item's last use or circulation, and for decisions as to which material should be relegated to secondary storage. In this regard, the exclusive use of easily obtainable recorded, 'out-of-the-library' circulation data poses a problem to librarians who, in the past, rejected usage criteria as a measure of document value, and, in defence, asserted (without supporting evidence) that circulation patterns do not mirror a collection's total use. Rather, they claimed that in-library use, such as that afforded by browsing, scanning, or reading within the library, would (or could) be different from that recorded by circulation records. The authors, in all fairness, do discuss various factors which may bias attempts to correlate circulation and in-house use, such as the proportion of the total collection in circulation, and the known and almost universal obsolescence of library

material. The authors cite the studies performed to date which generally agree that circulation data, although only a small part (roughly 10-15 per cent) of total usage of material, in fact is representative of all usage with respect to frequency of use and the identity of the material used.

Among the useful data tabulations in this report are two tables: the first lists various criteria to be employed in weeding serials, and the second lists the requirements for alteration of library records and internal files whenever relegation or weeding is performed. Such alterations are, in most manual systems, and even in some computer-based systems, rather more labour-intensive and higher-cost than weeding and relegation devotees admit when they recommend the weeding alternative.

Stayner and Richardson have made a valuable contribution to the library literature and to the economics of library-based information systems in general. Their study is also not irrelevant to the operators and vendors of batch and on-line computer-based information centres, who tend to forget that such systems are relatively worthless without the library-stored documents that their retrieval 'hits' identify. Paper will be with us for a long time, and there is nothing on the horizon, at least for a decade or two, that seriously suggests the demise of either the book or the library which houses it.

This study puts forth no simplistic solutions, but offers a fairly rigorous methodology to clear away the wishful thinking about what is often called 'rationalisation of resources'. Economic decisions to adopt one or the other of the author's four alternatives (and they are only the most likely of a larger repertoire of reasonable and available alternatives) are not trivial at the medium-sized and research library level. Millions of dollars of invested and new capital and high recurrent costs ride on the correct choice. This study provides a most useful approach — a method — to ensure that the choice simultaneously spares resources and retains library effectiveness. It's hard to accomplish that flying by the seat of your pants.

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