



When bookstacks overflow

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When Bookstacks Overflow

SOONER or later — and usually sooner than was anticipated when its building was planned — every research library faces the problem of what to do when its bookstacks are full. Six possibilities may then be considered. Recourse to new methods of shelving may enable it to crowd more books into the building. A new and larger edifice may replace the present one. An annex may be constructed. Portions of the collection may be moved out and established as departmental libraries. Infrequently used volumes may be stored in the vicinity. Or, finally, cooperative storage may be provided, perhaps at a distance from the library.

It is not the purpose of this article to advocate any one solution or to combine several remedies in a prescription; no two libraries face exactly the same conditions. Rather, the advantages and disadvantages — and particularly the financial implications — of each possible measure will be examined, always from the point of view of a university library, and factors will be pointed out that ought to be taken into account by any university librarian who has to decide what to do in a specific case.

INNOVATIONS IN SHELVING

If, by simply changing its methods of shelving books, a library could continue in the same building for years to come, it might at first glance seem to have found the cheapest and most conservative solution of the space problem. Such innovations, however, if adopted on any considerable scale, would necessitate radical changes in American library practice. A fifty per cent increase in stack capacity may be obtained if books are shelved by size instead of by subject, but professors and students would find little advantage in being admitted to stacks filled with unclassified books. Fore-edge shelving (i.e., placing books with their spines up) will also save forty to fifty per cent in space; this has been advocated recently,¹ but the physical damage that might ensue makes this expedient unattractive.

¹ Fremont Rider, *Compact Book Storage* (New York, 1949).

At least four different types of compact shelving are now available, and they increase stack capacity by from sixty to ninety per cent. Costs of installation in an old building are difficult to determine, and evidently are not low if existing stacks have to be removed and perhaps junked. A paper by Robert Muller² has recently offered the first detailed analysis of this problem, but further study is needed. Moreover, the inconvenience resulting from compact shelving is hard to assess; it seems likely to prove unsuitable for extensive use in open stacks.

NEW BUILDINGS

Construction of a new building has been the traditional procedure in American universities when existing stacks are full, and is the ideal solution from the point of view of most librarians. A good new building, it should be taken for granted, can be far more useful and satisfactory than the old one ever was, for there have been great advances during recent years in the art and science of library planning. In addition to space for books, therefore, a new building promises better accommodations and service for readers and staff.

The difficulties are financial. In some cases they may be insuperable: if the resulting increase in overhead charges is included, a new building designed to house the major parts of Harvard University's collections for the next twenty-five years would cost \$16,000,000 at the minimum — \$20,000,000 to \$30,000,000 or even more if built on the scale prevailing during recent years in other Ivy Group universities. At five per cent, the income from \$16,000,000 is \$800,000 per year, and, even if such a sum were available, the library would have difficulty in justifying a decision to use it for building rather than for other library purposes.

Other circumstances may call for other decisions, but it is clear that costs ought to be faced squarely whenever the problem is debated. Monumental structures should in general be left out of consideration unless a donor appears who cannot be persuaded to give the money for other purposes of the library or university; but even non-monumental buildings are not cheap. While examples of new small libraries

² Given at the Third Library Building Plans Institute, Madison, Wisconsin, 31 January 1954, and to be published in the *Proceedings* of that Institute, which is to appear as an ACRL Monograph.

costing as little as one dollar per cubic foot may be found in areas where construction is relatively inexpensive, \$1.60 per cubic foot is probably the lowest figure that can safely be used today if all fees and charges, including landscaping and equipment are included, and two dollars would be safer in many places. A new building also increases the library's operating costs. Demands for service are stimulated by improved conditions; and charges for light, heat, and cleaning increase with size. The increase in annual overhead charges for building and services will probably come to approximately two and one half per cent of the cost of the new construction — the actual figure has been greater in a number of instances, and this is a conservative estimate based on fairly broad experience.

If \$1.60 per cubic foot will cover the building and its equipment, and if the figures reported in 1952 by Dean Stallings³ are analyzed and accepted, it will be found that on the average about \$1,250 is required to house each thousand volumes and another \$1,250 to provide space for each reader. (The cost of space for the library staff and for corridors, desks, public services, and so forth, is included in these figures.) This means that a building containing 2,000,000 cubic feet can be expected to cost \$3,200,000, to hold 1,280,000 volumes, and to provide for 1,280 readers (or, if the number of volumes is reduced to one million, the number of readers may be increased to 1,560). If it will also cost \$80,000 a year more than the old building to operate, this sum, in an endowed institution, necessitates an addition of \$1,600,000 to the endowment if the interest rate is five per cent. While it is easy to argue about any of these figures, the author believes that they are low rather than high, for construction costs have increased since Dean Stallings wrote, estimates such as he obtained are likely to be low, and architects' fees, equipment costs, and landscaping may have been omitted in some cases.

If the new building costs \$3,200,000, and if \$1,600,000 more must be added to endowment to cover increased operating costs, the total investment comes to \$4,800,000, which, at five per cent interest, would provide an annual income of \$240,000. The question, therefore, is whether a new building is the best use to which this sum can be put; the library may well prefer to have the \$240,000 per year for other purposes, or to use a portion of the \$4,800,000 capital sum for one of

³H. Dean Stallings, 'College and University Library Buildings: A Ten-Year Forecast, 1950-1960,' *College and Research Libraries*, XIII (1952), 136-140.

the other possible solutions to its space problem and have the remainder available for service or for the purchase of books. On the other hand, a new building may be essential, and may cost even more per cubic foot later than if constructed now. In any case, the alternatives ought to be examined before a decision is reached. It should not be forgotten that the potential net value of the replaced building for other purposes may in some cases be the deciding factor.

ANNEXES

The location or design of the present building may preclude any addition; in other cases, however, construction of an annex may offer a relatively satisfactory solution that will be cheaper than a new central library building. Planning of an annex will normally be handicapped to some extent by the structure to which it must be appended. For example, if ceilings must be thirty per cent higher than would otherwise be desired, the cost per volume or reader housed in the annex may be something like twenty per cent greater than it would be in a wholly new building. The cost of essential reconstruction and rehabilitation of the old building must also be taken into account. Finally, it is obvious that a combination of old and new usually cannot expect to be as satisfactory as a completely new structure, and costs of providing service may be increased by makeshifts that a combination necessitates.

Thinking may be clarified by the following procedure. First, compute the value of the old building at \$1,250 per thousand books and \$1,250 per reader that it will house when the addition is completed. Second, subtract from this the space wasted in the annex because its ceiling heights must match the old ones, figuring this cost at \$1.60 per cubic foot or some other figure agreed upon. Third, subtract from the value of the old building the cost of alterations and renovation that will be required. Finally, subtract twenty-five per cent of the cost of the annex (adjusting this highly debatable figure to suit local conditions) for the permanent inconvenience that may result. The sum left should approximate the amount that will be saved by keeping the old building. A specific example might work out as follows. The old building, housing 500 readers and 500,000 books, would be evaluated at \$1,250,000. But \$200,000 (one fifth of the million-dollar cost of the annex) would be spent to provide twelve-foot ceilings instead of

the nine- or ten-foot ceilings that would be adequate if the new structure did not have to fit on to an old one. It would cost another \$100,000 to renovate the old building. Finally, the inconvenience might be assessed at \$250,000. This would leave the net value of the old building at \$700,000, a sum well worth saving, although at this point it might not be unfair to reduce it still further by subtracting also the net value of the old building to the university for non-library purposes.

DECENTRALIZATION

The library is enabled, by each of the three possibilities that have been treated thus far, to keep its book collection together on the present basis; the possibilities that remain to be considered all involve moving portions of the collection to other buildings. It ought to be realized, however, that the choice is not simply between a single book collection and several. Every research library has already taken dictionaries, encyclopaedias, bibliographies, and similar compilations from their place in the main classification and made a separate reference collection of them. It has removed rare books from the regular stack and placed them where special supervision can be provided. It is almost sure to have separate libraries for at least a few subjects such as law and medicine.

This article is not a study of departmentalization, which, it is hoped, can be treated at length in a later issue of the *BULLETIN*. The point to be made here is that further decentralization ought not to be dismissed automatically as a possible answer to the space problem; it may, in spite of evident disadvantages, prove to be a lesser evil. Scientific workers are inclined to believe that the printed materials they need ought to be shelved in the laboratories where research is done. A separate library for undergraduates has proved desirable at Harvard. Even in the humanities and social sciences it may be advantageous to place working collections in buildings that serve as departmental headquarters; there is much to be said for having books as close as possible to those who use them. Music and fine arts collections are among the candidates for removal from the main library; so are university archives.

Conditions vary so greatly from one institution to another that no general recommendations can be offered. It must be remembered that space costs money even if it is not in the main library building,

that decentralization is almost sure to increase service charges, and that it may also necessitate more duplication of books than would otherwise be required. But decentralization may take care of immediate needs with a comparatively small capital investment and may be indicated as a temporary solution of a space problem although it may result in an unfortunate and dangerous precedent.

STORAGE WITHIN THE INSTITUTION

Storage within an institution under warehouse conditions may be regarded as a special form of decentralization that calls for detaching from the main collection portions that are infrequently used rather than those dealing with specific subjects. Unused space in buildings belonging to the university may be available for such storage, sometimes so located that it can be supervised by a departmental librarian. Oberlin, the author recalls, was storing infrequently used material nearly fifty years ago. Iowa State College has used a Nissen hut on its campus for this purpose. Departmental libraries themselves may resort to decentralization; when the new Graduate Center at Harvard was built in 1950, the Law School Library obtained space under four of the buildings in which 500,000 volumes can be shelved; the total cost for additional excavation, finishing, lighting, and shelving was less than \$125,000, or only about twenty-five cents per volume. This space is not as satisfactory as that within the library's regular stack — range aisles are narrow, and shelving, which extends to the ceiling, is adjustable only with a wrench — but it is adequate for material that is not heavily used.

Storage entails charges for messenger service, causes inconvenience, and may decrease the library's total value because some scholars will not or can not wait to obtain books they would otherwise consult; but storage under warehouse conditions costs only a fraction as much as shelving in a central library's stacks — with narrow aisles and with books arranged by size, perhaps less than one fourth as much per volume, if extra service charges and inconvenience are left out of consideration.

It may be estimated that the average volume in a library occupies space worth \$1.25, or six and one-fourth cents per year at five per cent interest, and the annual cost of care of a volume and upkeep of the space it occupies can be conservatively estimated at a second six and

one-fourth cents, or the income of another \$1.25, making a total of \$2.50 invested for space, care, and upkeep of each volume acquired. Consequently, if it is found that the corresponding capital cost in a storage building is just under one fourth of that amount (i.e., sixty cents), \$1.90 can be saved by such storage. This may more than make up for the inconvenience and extra service charges, at least for volumes that are very infrequently used, and may also justify the acquisition and storage of some material that would otherwise be rejected.

COOPERATIVE STORAGE

President Eliot of Harvard suggested cooperative storage at the beginning of the century, but practical experience with it dates only from 1942, when the New England Deposit Library opened. Its building, which resembles a warehouse, is in Boston, and is owned and operated by ten libraries that have formed a corporation chartered by the State. Various articles have described the institution,⁴ and a statement in the Autumn 1954 number of this BULLETIN will provide up-to-date information about it, as well as an account of the background out of which it developed. Since each participating library ordinarily retains title to the books it shelves in the New England Deposit Library and pays rent for the space it uses, this is not a new library in the sense of a separate new collection of books.

The Midwest Inter-Library Center has been open for only three years, but preparatory investigations were conducted in 1941 under a grant by the Carnegie Corporation of New York. It is a genuine new library because most of the materials that are deposited become its property and are amalgamated into a single collection. The Hampshire Inter-Library Center in the Connecticut Valley region of Massachusetts is similar. Both institutions eliminate duplicates in addition to providing storage, and both are hard at work on cooperative acquisition programs to prevent unnecessary duplication of infrequently used books in the years to come. A proposed Northeastern Regional Library has been discussed,⁵ and is still being studied, but little progress

⁴ Keyes D. Metcalf, 'The New England Deposit Library,' *Library Quarterly*, XII (1942), 622-628; Andrew D. Osborn, 'The New England Deposit Library,' *College and Research Libraries*, V (1943/44), 21-28; Francis X. Doherty, 'The New England Deposit Library,' *Library Quarterly*, XVIII (1948), 245-254, and XIX (1949), 1-18.

⁵ Carl M. White, 'A New Mechanism in the Organization of Library Service in the Northeast,' *College and Research Libraries*, XI (1950), 228-237, and Keyes D.

has been made, largely because of differences of opinion regarding location and uncertainty as to whether or not an acquisition program should be undertaken at the outset.

In the preceding section of this article it was suggested that, if the inconvenience and extra service charges are disregarded, \$1.90 may be saved by storing a volume. Cooperative storage seems to promise a smaller sum, because greater distance would increase transportation costs and a larger overhead might be required for staff and service. An advantage, however, arises from the fact that, whenever several participating libraries send in copies of the same book, only one has to be stored and the other copies can be discarded, eliminating all storage costs for them. Cooperative storage, in other words, enables a group of libraries to discard books yet keep a copy of each volume available for borrowing when needed.

Since this is not a study of acquisition policy or of the problem of future growth, it is not the place for a discussion of the further advantages and complications that are offered by adoption of an acquisition program designed to bring to the cooperative center books that, though not heavily used, might otherwise be purchased by one or more of the cooperating libraries. Neither does it seem necessary to discuss here the alternative — a specialization agreement between libraries of a region that would bring infrequently used materials in each field to a single library, eliminate duplicates, and enable each participant to forgo future acquisition of infrequently used materials in all fields other than those in which it was specializing. Under such an arrangement each library might be expected to provide inexpensive storage locally for marginal materials in the fields assigned to it, but the chief problem would involve acquisition policy rather than storage.

It could be argued that more careful selection would reduce the number of marginal books acquired by any library, and that some volumes in any large collection ought to be discarded rather than stored. However, twenty-five cents must be invested in changing records before a volume can be discarded; this is as much as it would cost to keep the volume for several years, and the librarian may find it difficult to spend that amount now in order to save money later. There are two arguments for inexpensive storage: it usually is easier to decide to shift than to discard, and storage at a comparatively small

Metcalf, 'A Proposal for a Northeastern Regional Library,' *College and Research Libraries*, XI (1950), 238-244.

cost (no greater than discarding as far as selection and record changing are concerned) protects to a large extent the library's sizable investment in purchasing and cataloguing the volume. But selection of books for storage or discard is by no means a simple matter, as many librarians know to their regret. Theoretically the librarian should be able to decide, but practically he may find himself in trouble unless he has faculty backing. If only one man on the faculty were interested in each subject the complications would be fewer, but in a large university, with many men in each field, there is sure to be disagreement; some librarians are inclined to think that even the largest libraries have few books that all professors would be ready to consign to storage in the vicinity, still fewer that could be sent to a regional depot, and fewer yet that could be discarded.

Panaceas are not available. It is easy to object to any solution less attractive than a completely new building. Money can be saved by constructing an annex instead, by compact shelving, by further decentralization, or by storage, and this article has suggested methods for computing such savings, but it cannot provide any formula for assessing the inconvenience that results from them. Neither, of course, can it assess the value to the scholar of the increased resources for research that he can be offered in return for such inconvenience. Clearly, however, if acquisitions must be curtailed because available funds are devoted to construction and maintenance, then convenience of access to a collection can be provided only at the expense of its content. A compromise must be reached, and compromises are never wholly satisfactory, but careful study of costs and awareness of the other factors involved should help the librarian to decide which is the lesser of the evils he faces when space runs out in the stacks.

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CORRIGENDUM

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In the article entitled "The Harvard Collection of Hugo von Hofmannsthal," p. 61, the year of accession of the collection of printed works of Hofmannsthal presented by Mr Gilbert H. Montague, '01, should read '1949,' and not '1947' as printed.