



Stack Problems and Care

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BEFORE DEALING with specific problems encountered in the administration of book stacks, it might be well to remind the reader that this subject has a close resemblance to the weather as a topic for discussion.

Authorities concede that the first American bookstack came into being in 1877 when Gore Hall was built for Harvard University.¹ Its great book storage room was packed with parallel ranges of shelving side by side and in five levels with every cubic foot from wall to wall and from basement floor to roof used either for book storage or for access to the collection. It was used exclusively for stack purposes. Yet it was not many years later that President C. W. Eliot of Harvard addressed the librarians at their 1902 conference at Boston and beseeched them to establish clear-cut policies as to the storage and convenient use of the "overwhelming masses of books which are pouring forth at all the large centres of book making in the world, masses which each decade bids fair to double."² This marks the start of the period when the housing of books and materials became an acute problem. Since then more papers have been written by librarians and more claims have been made by the salesmen for book-stack equipment and less solid progress has taken place than one can imagine. This statement is made after careful thought, after detailed research, after the inspection of a number of existing stack systems and after the examination of several stack plans in the blue print stage.

There probably is a very good reason for this situation or at least a very human alibi for this lack of progress. Book stacks and their administration are hardly glamorous. Since they are kept out of sight in the average library, everything about them has been skimmed.³ In too many libraries they have received less financial sustenance than the proverbial church mouse. Before the reader who has a workable stack system becomes too exercised by these pronouncements, let this author say that he, too, has seen fine stacks in public libraries, college

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and university libraries, and special libraries. Nevertheless, the average library administrator should be a little more aggressive when doing battle for funds for new buildings and equipment so that a basic part of his equipment—the book stack—does not get the budgetary axe. It should be realized that a well-equipped and wisely-managed stack system is a real necessity if efficient library service is to be given.

The sharp teeth of economy sometimes cause such excruciating pain that the librarian forgets what the real objectives of a stack system are. They have been well expressed as follows: "close at hand, easily accessible throughout, conveniently adapted to the accommodation of its contents and for their economical rearrangement, reclassification and reception of accessories; clean and free from dust, well ventilated with a uniform and constant temperature of about 68°, well and even brilliantly lighted whenever and wherever required in the stack at all times day or night, conveniently provided with stairs and elevators and, for the larger stacks at least, suitable mechanical apparatus for quick transmission of books to and fro between shelving and the delivery point or points." ⁴ You will note that B. R. Green wrote this almost fifty years ago—yet his summary holds good today.

Seymour Robb has stated: "The stacks, in short, are the one phase of library administration common to all types of libraries. It makes no difference whether they constitute the bulk of a collection of 5,000 or 500,000 volumes, there are certain details which must be recognized to insure efficient administration. . . . If the stack arrangement is not carefully planned and even more carefully administered, much of the good work that should be done is nullified." ⁵

Now let's summarize stack details. The main building in a library system houses not only active book collections but many less active ones. A feature of the library building in the United States is its central stack or tier of stacks, the prize function of which is the economical, efficient storage of books.

Built of steel, each level of stacks is from 7 feet to 7 feet 6 inches high from floor to ceiling. Floors or decks, as they are commonly called, may be constructed of steel, concrete, glass or marble. Each shelf is usually 3 feet in length, movable, and interchangeable. The vertical division between two shelf supports is usually made up of seven adjustable shelves called a section. A range is a series of sections built end to end. It may be single- or double-faced. Ranges are from 9 to 36 feet in length. Spacing between ranges depends upon whether stacks are open to the public or not. Public ranges have aisles 6 feet wide from center to center. Closed ranges are 4 feet 6 inches from center

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to center with 3 feet of clear aisle. It should be remembered that all of these dimensions are not arbitrary. They have been developed in terms of average human stature and will hold good until *Homo sapiens* begins to develop differently.

A lineal foot of shelving holds from six to eight volumes. A shelf may be considered full for planning purposes when three-quarters of it is occupied by books.

Stacks may be located to the rear of a building with book lifts or conveyors for delivery of books to any one of the tiers of stacks. In some buildings a block of stacks is located through the center of the structure with reading rooms surrounding it. Another arrangement in some large libraries is to have the stack area occupy several levels immediately below the main floor with its subject departments.

Multi-tier stacks, many levels in height, are becoming common in various types of large libraries. Whether a building for joint storage of less active material by more than one library in a community should be considered is still problematical. The Midwest Inter-Library Center in Chicago is working it out on a regional basis.

There is no need to dwell on the details of the shelves themselves. Librarians are well aware of the various types of adjustable steel shelving, including the newer types of "compact" stacks.⁶ There is a comprehensive discussion of where to use the latter type.⁷ Attendance at any large professional library conference will insure up-to-date knowledge of all of these items. The new, folding type of shelving used by the Midwest Inter-Library Center is shown in an article in the *Library Journal*.⁸ One word of caution about shelving though— think long and carefully before tilting the lower shelves in stack systems. Some librarians, stuck with tilted lower shelves and nursing barked shins feel quite strongly on this subject. Let us also recognize that there is a marked trend toward the securing of cheap storage space for the housing of inactive stack materials at some distance from the library itself.⁹

Having skimmed over these subjects let us consider some of the current problems in stack management. For the purpose of clarification this discussion excludes bookshelving around the walls of reading rooms. It refers to stack units apart from the reading areas, even though adjacent to them. Stack problems fall into the following fields: (1) administration; (2) type of stack; (3) control of material loss; (4) control of atmospheric conditions; (5) cleaning of material; (6) efficient service; and (7) lighting.

One of the problems of stack management has to do with admin-

istration. Some librarians believe that stack areas should be administered by the heads of the different subject service departments. For example, a number of public libraries have adaptations of the "museum or Baltimore layout." In this arrangement, subject reading areas are grouped around a central main floor hall or court and beneath each subject area are the book stacks. The stacks house somewhat active materials such as bound periodicals and government documents on the levels nearest to the main reading room and less active files on the lower levels.

This theory of stack administration is not sound for it brings about uneven service, piecemeal planning, and spot coverage of the various areas. It would seem to be much better management to place the entire stack system under the supervision of a non-professional manager. He should be directly responsible to either the head of the circulation department or the head of the general reference department. Then all policies, personnel training and service techniques can be efficiently established and maintained.

Open stacks. Direct access to book stacks makes the control problem acute. Care should be exercised to provide adequate supervision. This may include inspection of brief cases if book losses have been heavy. Of course stacks should be planned so that there are no fire exits or other unlocked doors near them or in unsupervised spots. Where fire exits are present because of peculiar problems encountered in planning, panic bolts and alarm devices should be installed.

In open stacks be sure to provide plenty of table space for users. Locate tables at strategic points as "oases" or obtain standard stack half-tables to hang at convenient locations. This will keep books from being dropped and damaged—things that happen often when a reader gets tired standing, leaning against a stack. Then, too, if users are encouraged to leave material on the tables when they have finished, it can be reshelved accurately by experienced shelvers.

The matter of permitting smoking in certain areas in libraries may present a real problem in open stack management. Some libraries are developing lounge areas, conference rooms and seminar rooms. Here, in an effort to obtain informality, smoking facilities are provided. This trend is all well and good but its carry-over into unsupervised stacks is another matter. Not only does it impose an additional cleaning load, but also it can be dangerous to the safekeeping of valuable material. This does not mean that the fire hazard is great in modern libraries, for books are difficult to burn. On the other hand, lighted cigarettes

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can do a great deal of damage to individual items of stack material—especially if used as a book mark!

Closed stacks. Control of these stacks is very important because so little actual supervision is possible. It is in this type that fire exits are very common because of building code requirements—and lots of books are lost because of them. The same controls listed under “Open Stacks” should be applied here. Elevators, especially those with doors on both sides, are another potential danger to the book collections. The library’s public—student or layman—must be barred from them. It may be advisable to key-control one or both sides of the elevator.

Provide adequate table space for book returns. These will come back in large quantities. If there is insufficient flat surfaces, bindings will be damaged through improper piling. Be sure to provide sufficient book-lifts or elevator units. Otherwise stack personnel will have to cart arm-loads of books up and down steps—to the detriment of the books through dropping—to say nothing of the detriment to the staff.

Speedy service is a real problem in a larger closed stack area. Stack attendants must be located at strategic points not only to get the books-wanted slips but also to service a natural unit of the stacks—subject or level. Pneumatic tube systems, telautographs, telephones, and other devices are being considered for various installations. They add to the expense of a stack system but, on the other hand, if the operation is large enough, they may be a real economy in staff time.

Another problem that may arise in the control of stacks is the situation when the library is not the only service in the building. For example, a college library may be connected with some other building on the campus. If either service maintains hours of opening different from the other, there is a serious control problem as far as the library’s stacks are concerned. If the library elevator must function as a service elevator for some other college or department, additional problems of access to the stacks will arise. Obviously, the time to eliminate these control problems is during the planning stage. Yet several new libraries have been unwise enough to disregard these problems and now must live with them.

A number of closed-stack systems have special problems in connection with rare or irreplaceable material. This material may include a wide variety of items: incunabula, manuscripts, out-of-print publications, art books requiring special and restricted use, books on symbolism and foreign imports which might be considered pornographic in any but the hands of scholars. These usually are housed in locked, screened sections of closed stacks called “cages.” Access to the cage

may usually be had only when accompanied by a library administrator who functions as a library "keeper."

Color. Another trend that is taking place in library open-stack planning is the use of color in stack areas. One library—at Carlton College—is using three different standard stack colors—green, blue and brownish red—in different portions of its ranges. The difference in color is used on the finished ends of its ranges only. The shelves themselves are all of the same color—grey.

Cleaning. There should be a schedule for regular cleaning of books, using specially developed vacuum equipment and extreme care. More damage has been done to books by their friends, the cleaners, than by either dirt or improper variations in humidity.

A spray has been recently developed which may be helpful in book cleaning. It renders dust heavy so that it can be picked up on dust cloths or by the vacuum without flying around in the air. Claims for ventilated shelves and other devices to the contrary, the obvious and best way to keep collections clean is to prevent outside dirt from ever entering the stack area. Once in, it is hard to remove. So many methods of cleaning have been devised that about the only thing that can be said is, "Use equal parts of good equipment and good judgment." The following old-time method of collection-cleaning leads one to wonder just how the books fared:

Several men and women were hired to do the heavy work. The men took the books from the shelves and placed them upon library trucks, being careful to keep them in proper order. When a truck was full it was wheeled to a point near an open window where a tub of water was standing. Half a dozen galvanized tubs had been rented for the purpose, and were kept full of fresh water. The men would take two books from the truck and first clap them together, knocking dust and dirt from the surface into water. Then each book was taken separately, opened over the tub, and the leaves aired by holding the back up, with one cover horizontal, and allowing the leaves to fall rapidly, thus emptying the book of any loose objects it may contain. It was a marvel to the workers to see how the water absorbed the dirt. . . . Meanwhile one of the women had thoroughly cleaned the shelves, and when the truck was wheeled back, another removed the books and carefully wiping them with a cloth, placed them back on the shelves as before.¹⁰

Humidity. Ideal humidity for book storage stacks is 55 per cent. Great care must be taken to avoid different humidities in open areas of the same building as condensation will result. Some libraries have forced-air, circulated through ducts in the various stack areas, with

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some humidification but no dehumidification. With these systems excessive humidification should be avoided. Some libraries report that unit air conditioners have helped to correct bad conditions.

In stacks below ground level, mildew or mold may plague the collections, for book sizing, if moist, is a fine place for mold to develop. If the foundation walls have been poorly constructed or the site has been inadequately drained, the librarian is faced with a bad stack condition to cope with and must get artificial drying equipment to continually combat the moisture. Devices employing calcium chloride are on the market for this purpose. But, when possible, why not build the library right in the first place?

While on the subject of moisture and book stacks, it should be remembered that water is a greater cause of book loss than fire. Floods have caused extensive losses to some of our libraries and book drying afterwards is only a matter of saving something from the ruins after a bad library location has resulted in damage.

Windows. Newer stack systems are being planned without windows, for both sunlight and dirt-laden fresh air are real enemies of books. If staff members suffer from claustrophobia, provide small windows that have glare-reducing glass and that are fastened shut permanently.

Lighting. The type of stack fixture should be chosen for its light production output—not its aesthetic appeal. Whether it looks like a cap with earlaps or an old-fashioned gas jet globe is not important. The question is “What does the light meter read—especially at floor level and at top shelf level. Thirty-five foot-candles should be a minimum of illumination. Be sure the fixture is one that can be easily cleaned.

The control of stack lighting is important. Some modern installations are installing timed light switches. These may be adjusted to turn lights off after intervals of from 10 to 25 minutes. More exact timing should be established after the stack area is in use.

In conclusion, when planning a new building consider the book-stack unit as a package of problems related to other library problems but in many ways separate from them. If possible in a large new library project make the stack contract a separate one for general contractors do not have the “know-how” of expert stack engineers and manufacturers.¹¹ In any case, serve your library stack through careful planning, supervision, and improvement and it will pay real dividends.

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