Branch Library Planning in Universities

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TWENTY YEARS AGO, Joseph Hudnut, then Dean of Harvard's Graduate School of Design, wrote of the dramatic and threatening rate of growth of the Harvard University Library, and foresaw a great mound of books, as high as the Pyramids, covering the famous Harvard Yard. He also observed Harvard's pattern of branch and departmental libraries, noting that the library "does not grow like a melon, enlarging its periphery in concentric rings, but like a strawberry plant which sends out creepers which take root and blossom into baby libraries."[1]

The Harvard University Library is the oldest university library in North America and the largest university library in the world, and it is probably no coincidence that it is also highly decentralized. For although other factors play a part, it can be generalized that the older and larger a library, the more decentralized it will tend to be. With almost 100 departmental, special, and graduate school libraries, and a number of new ones in the planning stages, the Harvard University Library is highly decentralized, not only from the point of view of space needs and the needs of users, but also because of its fiscal and administrative structure. "Every tub on its own bottom" sums up, as accurately as any metaphor can, the University's organization.[2] The Harvard University Library reflects the decentralized structure of the University, and by the judicious coordination of these ninety-odd libraries through the Office of the Director and the University Librarian, a workable pattern of branch libraries developed.[3] Keyes Metcalf stated explicitly the policy of coordinated decentralization and further expressed this development with the construction of the Houghton Library for rare books and manuscripts, the Lamont Library for undergraduates, the New England Deposit Library for storage of infrequently used materials, and further de-

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centralization through the transferring of several subject collections from the Widener Library to other Harvard libraries.[4]

Although the reasons behind a policy of decentralization, in whatever form and to whatever degree, are not as relevant here as are the implications of such a policy for building planning, the two are not unrelated and a brief discussion of these reasons is appropriate. A detailed history of the decentralization of academic libraries can be found in an article by Lawrence Thompson,[5] and Arthur McAnally has discussed the administrative aspects of such a pattern.[6] Basically there are two *species* of decentralization. The first is an operations-oriented pattern based on kinds and forms of materials which occurs in separate libraries for map collections, rare books, documents, audio-visual materials, non-Western languages, and so on. The second is a user- and subject-oriented pattern, occurring as graduate and professional school libraries, laboratory collections, storage libraries and separate undergraduate libraries. There are also two main *causes* of this branch pattern. One is the sheer bulk of a collection in which, when there is no more room in a central building, something has to give. The other is the accretion of materials within a small office or laboratory collection until it becomes a substantial library. Conscious decisions on developing and controlling this branch pattern must be made, taking into account such factors as campus geography and services to users. Any pattern of branch libraries creates administrative, fiscal, and collecting problems, as well as its own distinct buildings possibilities and advantages. It can be generalized that any university library of substantial size will be decentralized to some degree. The questions are how much decentralization, and the decentralization of what. Although the answers will vary with different institutions, we can identify major factors, common to all institutions, which will affect the final decision. These and some general planning conditions and constraints will first be discussed before turning to specific building arrangements and details of facilities.

One is the degree to which the central library is able to house the main collection. If there is serious overcrowding and no chance of making more effective use of existing space, there will be pressures to move part of the collections to another location. The needs of the library's clientele is a second factor. On a small campus with a strong central library, pressures from users for scattered service points will be minimal; if the campus is extensive or the main li-

brary is less accessible to some segments of the university, there will be demands to provide service in more locations, as exemplified at M.I.T. with its linear campus configuration. In addition, departmental policies and politics may create needs, whether real or imagined, for separate libraries; the existence of a separate library collection is sometimes recommended or required by an accrediting board, and it is a fact of academic life that it is also often a status symbol. Even when these needs are shown to be unrealistic and the costs of supporting such decentralized collections shown to be high, these demands become very difficult to ignore.

Another factor affecting decisions on decentralization is the availability of space, either within existing buildings or as sites for new construction. An addition to the central library would logically be undertaken if adjacent land were available, as is the case with the general library at Illinois, where the bookstack has been expanded four times, and is about to be expanded again, gradually taking over an adjacent parking lot. On the other hand, the existence of a suitable site for a branch library would affect the librarian's decision to decentralize. The ability of a department to offer suitable space and facilities closer to home would also put it in a strong bargaining position. This was the case with the fine arts collection at Harvard, where an addition to the library of the Fogg Museum of Art was constructed at the time another building was being erected on adjacent land, and the main research collections in fine arts were moved from Widener into the new facility.

A similar factor is the availability of funds to build or renovate. Funds must be sufficient to construct a facility which provides better quarters than those presently available, and the decentralized library should be sufficiently justified to warrant this expenditure. Then, too, it might be difficult to embark on a major fund drive for a large facility rather than a few smaller ones to be built over a longer period of time. There are some easily decentralized segments of the collections which could be described as "glamor items," such as rare books, or certain subject areas—music or fine arts, for example—which might be attractive to specific donors and which could more quickly attract money for construction as a branch library.

These and other factors, such as general university policy or the attitude of the faculty towards the library, will affect the final decisions on the degree and kind of decentralization to which a library will commit itself. It can be generalized that, in most cases, the

policy decided upon will be either one of relative centralization or one of relative decentralization. The general characteristic of the former is that there are fewer and larger library facilities, as at Brown; that of the latter is a greater number of libraries, varying in size, as at Illinois. In older institutions where many small collections have, over the years, grown into *de facto* branch libraries, a third pattern can be found. This is a pattern of consolidation, with a number of small, related collections being merged into larger and more satisfactory units, as exemplified by the libraries which became the Countway Library of Medicine at Harvard. This is an example of the interesting pattern of pulsation in academic library growth—a contraction at one point where major facilities permit the consolidation of elements and a decentralization at another point in time. The construction of the Widener Library permitted a number of elements, including the Business School Library, to be brought together. After twenty or thirty years a major facility becomes cramped again and the forces toward decentralization begin to work. Another example is the University of Chicago, where branch libraries moved out of Harper into other locations and many will now be moving back into the new Regenstein Library.

The size of the branch collection is one of two critical variables in planning a facility. Many elements in the planning process will be strongly influenced by the size of the facility being planned, and their treatment by the planner and the decisions he reaches will vary greatly. The amount of research and program preparation spent, the decision to call in an outside consultant and for how long, the stack arrangement and configuration, and the proportions of various kinds of seating will all be affected by the size of the new library. The other variable is the form the accommodation for the branch library is to take. Three forms can be distinguished. In one, the library will be housed in its own separate new building. In the second, the library will occupy some space in a new building to be shared with other occupants. Finally, part of an existing building can be vacated and renovated for library purposes. The size and form of the library affect four elements in the planning process which are particularly important and especially relevant to branch libraries. One such element is the "efficiency" of the library. This is a building term defined as the ratio of space usable for library operations to total space, or, in other words, net square feet to gross square feet. The difference between the two is the space given to circulation elements like hall-

ways and elevators, utility spaces like rest rooms and mechanical rooms, and architectural spaces like foyers and open courts. Generally speaking the larger the branch library being planned, the higher its efficiency can be. Ten smaller, separate libraries may need ten lobbies, ten elevators, twenty rest rooms and so on; one library ten times as large may need only two elevators, one large lobby, etc., resulting in more net square feet in the same amount of gross. As to the type of accommodation, a library sharing a new building with other occupants could easily achieve a higher efficiency than if it were to occupy its own building or renovated space in an existing structure. A high proportion of the utility and mechanical spaces could be located elsewhere in the building, allowing a high degree of net library space. This could also be true of a library which occupies converted quarters in an existing building, but constraints of the existing structure may negate some of the benefits.

A second building characteristic which is affected by the size and form of the branch library is expansibility. And although all libraries must take the need for expansion into account, branch libraries are more vulnerable to having it become a sudden crisis. A small library of 20,000 volumes with space for an additional 25 percent is less prepared to accommodate the sudden influx of 7,000 volumes because of a gift or new collecting demands than is a library of 200,000 volumes, even if the latter had space for only a 15 percent increase. As to the form the facility takes, a library which has its own building can be planned to have a high potential for expansion, and the highest number of options as to the directions this expansion can take. It can build on available adjacent land, or under that land if there is a need to retain open space. It can build another floor or floors if the building is constructed to allow this (as can be done, for example, with the library of the Harvard Divinity School). However, a library building so symmetrical or hemmed in by other significant structures can often encounter more difficult expansion problems than a library which is part of a larger building.

A library sharing a building can expand into existing space, provided other occupants are relocated, so long as this possibility was considered at the time of original planning and areas adjacent to the library were designed and constructed to accommodate library functions. This need not mean that a department or professional school must compromise its own space needs just to permit future library expansion. The construction of adjacent areas with strong enough

floors to carry the live load of bookstacks, with few fixed, load-bearing interior walls and with service elements consolidated in cores, is as prudent a decision as that ensuring enough flexibility for changes in electrical wiring and the introduction of communications cables, and requires just as few compromises with present use plans. In addition, a library in a shared facility should be located so that it is against an outside wall where any future addition to the building might logically occur. If this cannot be done, another solution is to buffer the library with offices or classrooms which are capable of conversion to library purposes. The library which opts for renovated space in an existing building must take all of these into consideration as well as whatever problems the physical constraints of that building imply.

The spatial relationships of the internal elements of the library are another characteristic to be considered. Here the smaller branch will have fewer problems and will be easier to plan, if only because the problem of relationships tends to diminish with the size of the library. For example, the spatial relationships between and among the entrance, the circulation control point, and the reference and bibliographic area need little discussion when a small library is under consideration. Their positioning will be almost automatic and the options for location are reduced; these areas become a single grouping. However, in a larger branch, say one of 15,000 square feet or more, the options are much more numerous, and considerable thought must be given to the location of each area in relation to the others so that the most efficient service and operation is achieved. The higher the number of options and the greater the degree of freedom for design, the better these relationships can be developed. The branch library occupying its own building is in the best position to achieve this.

The library sharing part of another building will of necessity have certain constraints upon it, and runs the risk of being located in an area of the building less suitable or amenable to its functions and role. The location of bearing walls, service cores, and so on, which might make sense for the building as a whole, may present a real problem from a library point of view; the librarian should be allowed an adequate voice in the over-all planning so that the restricting effects of these can be minimized. The librarian often has great difficulties in planning space within a building which is in very large measure the home of one or more academic departments. Planning

a facility such as this can often be more complex and take longer than planning a separate library building. For example, an elevator core can make sense for the entire building except the library, with the rest of the building committee ignoring or dismissing the librarian's objections. These same difficulties are likely to be met by the librarian planning the internal features of a branch library in converted quarters. The constraints of existing bearing walls, the live load of floors and the size of rooms may all have to be accepted as they are in the conversion of a lecture hall or laboratory into a library.

The last major characteristic affected by the size and type of branch library being planned is flexibility. Modular construction provides a degree of built-in flexibility for any building, and this potential should be fully exploited to obtain the maximum benefits. The use to which any part of the library is originally put may change drastically in time, and the building must be able to accommodate these alterations without major structural changes and without compromising the ability of the library to function as an effective facility. The larger the area with which the planner can work, the easier it should be to incorporate flexibility into the design. A smaller branch library provides less opportunity for experimentation with alternative interior arrangements if many of the major building elements are fixed. However, the planner may be more willing to experiment with new ideas and unproven operations designs in a smaller branch, thus allowing for later change if these do not prove satisfactory, than he might in a larger, more expensive library. As with the internal relationships problem, the higher the degree of the librarian's involvement in the planning process, the more flexibility he should be able to incorporate into the library; the branch library in its own building is in the best position for this. Slightly less opportunity exists for the librarian planning to share a new building with others, some of whose needs may limit the flexibility of the library, but the task of designing flexibility into the constraints of an existing building is considerably more difficult, and the results usually unsatisfactory.

Just as there are no easy answers to the questions of how much or what kinds of decentralization, there are likewise no easy answers when the buildings planner is asked where the proposed decentralized facility should be placed. New buildings on expanding campuses must jockey for the dwindling number of most desirable sites.

When the decentralization is done on the basis of subject areas, the geographic positioning of the branch library is dictated by the location of the particular department. In those relatively few cases where a branch subject library will have its own building, the only requirement is that it should be adjacent to, and if possible, physically connected to the department's own building or complex of buildings. This connection need not be in the form of a completely attached extension to an existing building; a connection by enclosed walkways or tunnels would be adequate and in some cases preferable. At Harvard, for example, the Countway Library is connected with other Medical School buildings by means of a tunnel; the Houghton Library is connected to Widener by both a tunnel and a bridge. Care must be exercised here, however, so as to avoid the problems created at the Baker Library, which has so many connections to other Business School buildings that it is riddled, and has become a major pedestrian thoroughfare. A more recent variation of this occurs in the total planning of a larger complex of which a branch library is a part. The components of the new Science Center will all be connected by a system of enclosed walkways or pedestrian "streets," with the library located near a "crossroads," giving it a prominent location as well as ease of access.

More frequently a branch library will be housed in part of another building, and whether this is a new building or renovated space in an old one, the position of the library in it is important. Generally speaking, a branch library which is in a part of a departmental building will be of such a size that it can be accommodated on one floor, and for reasons of convenience and accessibility this should be the main floor of the building. A number of levels of small size should be avoided; a library of 12,000 square feet is more efficient, both in space utilization and to the users, on two levels of 6,000 square feet each than on four levels of 3,000 square feet.

In the case of a branch library which requires two floors, either because of its size or the need to include other functions at the main level of the building, the public area should be at the main level and another level can become the general bookstack. In many instances this will logically occur with the main library level at grade and the bookstack on the first floor below grade level. However, there is no single location which can be called the ideal one for all libraries; each decision as to location may be influenced by many

departmental needs and factors outside the librarian's control. But in a number of matters, such as means of access and the architectural expression of the library, the librarian must take a firm stand to ensure that the building is not built at the expense of the library.

The location of the library should not subordinate its basic practical needs to an architect's desire to express in his design some vague philosophical concept he may have of the library's place and function. It should not, for example, be imprisoned in the center of a building just because its function is central to the department's teaching and research, and it should not be on the top floor solely to represent the uplifting nature of its contents. On the other hand, the librarian should welcome and urge any attempts to express the library in an open and visible manner; many active areas of the library, such as the card catalog, reference, and current periodical areas can be appealing and visually attractive to passers-by.

As already mentioned, the location of the library which is part of a larger building must allow for easy expansion, either into other space in the building or into an addition. Also the library must be easily accessible, and unless it is a small and highly specialized collection used by a limited clientele, it should ideally be positioned near a major circulation path. Since the hours during which the library is open may not always coincide with those in which the building is open, the library should have its own outside door or be so placed in relation to the building's entrance that readers can gain access to the library with the rest of the building secured. Similarly, the library area must be able to be closed off if the building remains open when the library is not. In this context it will be necessary to ensure that building elevators which penetrate the library can be operated to the library only by key when the library is closed.

Although the library should usually be located near a main circulation path, it is important that the library itself does not become a traffic artery, either by accident or design. The building should not be designed so that users are forced to pass through any part of the library to reach a non-library area. And the planner must also take care to ensure that the positioning of the library and its entrances (if there are more than one) in relation to non-library parts of the building do not make the library a convenient but unintended shortcut to some other place; building users will not walk around the library if it has a door at each end and they can save steps by cutting through. Similarly the library should not have the most conveniently

accessible rest rooms in the whole building. One other matter to which the librarian should pay close attention in a library within a larger building is the shared facilities. Their location in relation to the library can be critical. There should be easy access from the building's loading dock and shipping and receiving room to the library; deliveries should not have to be trucked all over the building to get to the library. Often the library can benefit by sharing a staff room or a photocopy area elsewhere in the building, thereby relieving itself of the maintenance problems these entail and perhaps gaining as additional space the areas they might have occupied within the library.

The separate storage library for lesser used materials is a special kind of branch library, and is an alternative to relocating subject collections and creating departmental libraries as a solution to the problem of overcrowding. The storage library can provide economic advantages over other types of branch libraries, and it presents its own possibilities from a buildings point of view. Because there will be few readers and minimal public services, the problem of internal relationships between staff, readers, and books is minimal, as is the need for a high degree of flexibility since the building's only use will probably continue to be the storage of books. In the matter of efficiency, the storage library will be able to achieve a high ratio of net to gross square footage because of the reduction of stairways, halls, and service spaces to a minimum and the lack of any need for architectural space.

Expansibility is as necessary for a storage library as for any other, but if this cannot be accomplished by one storage library there is no reason why one or more cannot be located somewhere else as needs demand. The same three types of accommodation can be identified for storage libraries as for other branch libraries, with the observation that a storage library may often be partly or totally underground. An underground facility may complicate the building problems, and special care must be taken to control seepage, humidity, and so on. Expansibility may also be complicated. An underground facility, however, will have less heating and maintenance costs, and will do away with deteriorating effects of sunlight on paper.

A storage library built expressly for that purpose, like the New England Deposit Library, the storage facility at the University of Michigan, or the auxiliary facility at Princeton, can be highly efficient since it can be planned to meet the requirements for maximum stor-

age, either with conventional or compact shelving. However, there is no reason storage cannot occur in any and all cellars and attics the librarian can lay claim to, or even in rented warehouses as was done at the University of Chicago, as long as the environmental conditions are adequate and the physical access problems can be solved. The Harvard Law School has built basement storage space for its library into no fewer than three of the buildings it has constructed in the last eighteen years, thus providing an additional 15,000 square feet of storage.

As in the case of storage libraries, branch libraries can be based on a kind of material rather than a subject, separated either because of form or because of use. Undergraduate and rare book libraries are obvious examples, as are audio-visual centers, which have their own sets of building implications.

Although the question of what subject materials are most suitable for separation into branch libraries is primarily one for the administrator, it is not without implications for the building planner. Historically, these subject libraries have occurred in the sciences, medicine, law, and other professional schools. In the sciences this has tended to mean a large number of small specialized libraries near the laboratories, with all the problems of duplication, overlapping, and staffing that this creates. Over the years these collections tend to grow far beyond the capacity of the library to house them. Because of the inter-disciplinary nature of the sciences, and the fact that the scientist does not need ready access to the retrospective materials which often form the bulk of these collections, there is potential for consolidation. Examples of this consolidation are the Kline Library at Yale and the proposed Science Center Library at Harvard, where the large bulk of the collection is housed in a larger library of 25,000 to 40,000 square feet, leaving the departmental libraries with the basic and current research materials the scientist needs at hand.

Branch collections in the non-scientific disciplines are, by nature, less suitable for consolidation. The basic compatibility between collections in chemistry and biology has no equivalent between divinity and business administration, so the professional school libraries will tend to remain independent and to grow into large research libraries, sometimes to the point of requiring a separate building of their own, as at Chicago's Law School and Harvard's Graduate School of Edu-

cation, with all the implications which such an arrangement has been shown to have.

Finally, it has been observed above that the decentralization of certain materials may facilitate or encourage the solicitation of gifts. Rare books and manuscripts are an obvious example and among the more important buildings which have been financed by private donors for such collections are Harvard's Houghton Library and Yale's Beinecke. Separately established libraries in subject fields can also attract donors, as was the case for the new Tozzer Library at Harvard's Peabody Museum of Archaeology and Ethnology which received one million dollars to construct a new library; indeed, a department is likely to develop a pride in its branch library and actively assist the library administration in bringing its needs to the attention of prominent alumni and donors.

Joseph Hudnut, who likened Harvard's library to a strawberry plant, rather than a melon, also predicted a fantastic growth of its collection. "The [Harvard] Library holds 5,600,000 books and doubles in size every fifteen years. In 1962 it will have 11,000,000 books; in 1977, 22,000,000; in 2060, 1,400,000,000. By that time it will have expanded to the edges of the Yard, having thrown all the other buildings over the fence into Harvard Square. The space now occupied by Philosophy Hall will be devoted to 30,000 items on the literature of the Congo; University Hall will be sunk under 400,000 on Oceania; and the Appleton Chapel . . . will be remembered as the site afterwards consecrated to 500,000 incunabula on *Imitatio Christi.*"[7] Although Hudnut's mathematical reasoning was based on a faulty premise and the threat he saw has so far failed to materialize, there is no doubt that the development of a coordinated branch pattern has reduced this threat to the Harvard University Library, and that similar decentralization has achieved the same for other academic libraries.

Some have argued that "Future developments in science and in library techniques indicate that even more centralization will take place and that rapid transmission of printed material through new electronic devices will eliminate the necessity for outlying groups of library materials."[8] However, even in a rather highly automated system, students and faculty will continue to need reference sources, current journals, and basic research and monographic literature close at hand—in a branch library. Branch libraries must still be built, and the planner must be prepared to deal with them.

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