The Essentials of a satisfactory university library building do not differ in most respects from those of any satisfactory library building. They include (1) adequate provision (with the possibility of needed expansions) for a rapidly growing stock of books; (2) reading rooms large enough to care for those who need to use the building for reading or research and placed as conveniently as possible to the stock of books; (3) administrative facilities both for the staff itself and for contact with the public, as the circulation desk, or desks, the librarian's office, and so forth; (4) suitable heating, light, and ventilation.

Other features essential to a university library building are: varying provision for the varying needs of different classes of users such as the reserve book room, the seminar discussion and study rooms and facilities for using books within the stacks.

The real difficulty arises when the relative claims of these features must be determined. Several tendencies in present-day education seem to indicate that specific emphasis on university activities is changing rapidly and that university library buildings must change with them. In other words, the library building, to be effective, must be functional. It must therefore change with changes in functions and procedures of the institution of which it is a part. It is not unreasonable to insist that elasticity of use and ease of modification of specific parts of the building to meet changes in university procedures and policies are perhaps the outstanding needs of a university library building that would serve the future as well as the present.

Some of the leading causes which affect changes in university policies and which are affecting the library are:

1. Limited or restricted registration. The endowed university may see virtue in excluding students who are financial as well as intellectual liabilities. The publicly supported institution would find it difficult to convince taxpayers that their sons and daughters should not be given access to university privileges.

2. Closely related to the number and kind of students is the scope of the curriculum. Other things being equal, the larger the student body, the wider the range of courses offered.

3. Enforced extension of school life due to unemployment is increasing the number of entrants and steadily increasing the size of the upper college classes and the graduate school.

4. Special types of library material once thought creditable possessions rather than essentials are becoming necessary equipment. Examples are phonograph records, photostats and microfilms, newspaper col-
lection, lantern slides, prints and other artistic illustrative matter. All these require special equipment, specialized storage and recording, and special rooms for their use. If this variation and extension of curriculum were always conditioned on adequate means for successful performance the problem would be easier. Unfortunately, this is not always the case. Inadequate library facilities are too often one of the most persistent conditions of the weak university or college.

5. Location of the institution. An urban university without dormitories and with many day students must often fight a tendency on the part of its students to make its library building a social center as well as an improvised lunch room, newspaper reading room, writing room and, sometimes, a dormitory in which to recover from nocturnal extra-curricular activities. A university with a large proportion of student residents on or near the campus should need less room for temporary student storage.

Just how these conditions will, or should, affect future library buildings is largely a matter of prophecy as well as experience. On the basis of fourteen years tenancy in a building that was up to date when erected, the following points are presented for discussion.

Book Storage

I am conservative enough to believe that in a university library, provision for books is of primary importance. It is possible that the unprecedented growth of university libraries in the past decade or two may have reached its height. Microfilms may reduce necessary storage space to a fraction of what it now is but this is hardly yet the time to abolish book stacks entirely. For the present and near future, at least, ample provision for growth must be made. The growth of research work makes stack access necessary for greater numbers of faculty and students; carrels, desks, and tables here and there for brief consultation of books taken from the shelves are necessary. Improvements in artificial illumination and air conditioning are making working space near windows less necessary than before. Book carriers, and teletypes for call slips, will be unavoidable in most libraries of any size, even though they do imply different organization and a larger stack staff than many libraries have. More elevators for staff and patrons are, as medical treatises say, "indicated." Further research in building illumination is still needed to ensure satisfactory lighting in most stacks used to any considerable degree for study purposes. Provision for either vertical or horizontal stack expansion is essential. A university library cannot, like many public libraries devoted chiefly to circulation of popular books, weed out its book stock frequently or even freely discard duplicate copies of books which later cultural fashions or subjects of research may make useful. In fact, this unpredictable and often sudden shift of interest and use in a university collection gives rise to one of its greatest problems. The university library should provide liberally for book stacks for dormant and less generally used material, even at a distance, as in the newspaper branch of the British Museum or the storage branches of the Providence Public Library.

Reading Rooms

It may be questioned whether the old assembly hall with high ceilings and many cubic yards of vacant space is any longer very often really essential. Forced ventilation and humidification make possible
lower ceilings and the ability to make two reading rooms function where one was located before. The desires of architects to build for themselves in lofty ceilings a monument more lasting than bronze may be overcome. There is much evidence that oversized reading rooms sacrifice in conditions suitable for study much of what they are intended to gain in economical supervision by a staff too small to service such large areas. If the university administration will not finance a staff large enough to service a group of connecting reading rooms, assigned to different fields of knowledge, provision for later partitions to provide for such separation should be considered. The old high ceilinged rooms made this impracticable. Sceptical university administrations may sometimes be converted by dependable data on the saving in light bills in lower ceilinged rooms and in the extra space provided by second stories or mezzanine rooms for special study purposes in large reading rooms. It is quite probable that this feature, so common in older library buildings, may be more generally revived in altering some of our present buildings.

In the reading rooms in particular as well as in the building in general, sound deadening material should be used as far as possible for walls and floors. Maximum shelving capacity, with adequate lighting, should be provided for larger open shelf collections of books for reference. Increased wall space resulting from smaller rooms will help here.

On the other hand, too much optimism should not be indulged in with regard to the efficiency and economic maintenance of present-day air-conditioning systems. They are almost certain to improve in both respects. The same may be said of lighting. The theory that the cure of lighting ills is more light, more power, and more expense has recently been somewhat discredited. A very wide margin of possible over actual current consumption should be provided and conduits installed with enough spare room to permit additional wiring if necessary. Nevertheless, more light and power outlets more generally distributed are often quite as important. We are learning that proper location of lighting units may be as important as high general intensity of light. Addition or changed positions of furniture may cast shadows which only relocation of lighting units can disperse.

Carrels, Study and Seminar Rooms

Adequate provision should be made for carrels or work tables in the stacks, study rooms for individual research workers, and rooms of moderate size for seminar and other research groups. Just what will be adequate in the future of any university is difficult to predict. If the present state of affairs with abundant Work Projects Administration and National Youth Administration funds for individual research projects continues, and most of the major and some of the minor faculty continue to be provided with research retinues for whom stack privileges, carrel and private study room assignments and extensive transfers of source material to distant buildings and offices are demanded, nothing short of an office skyscraper will suffice for any university of even moderate size. Even this will not be quite satisfactory as not all of the individual offices can be immediately contiguous to the particular group of books which the director of the project believes are needed for his research of the moment. If some of our present conditions persist this may be one of the major problems of the future university library building. It will be if the univer-
sity continues to expand its fields of re-
search and to multiply the individual proj-
ects in each field.

Closer coordination of reading rooms
with circulation desk, public catalog and
book stack also becomes necessary as the
number of research workers increases and
the intricacy of reference questions also in-
creases. It seems probable that future
university faculties, administrators, and
students will not entirely overcome the
tendency to consider the staff of the circu-
lation desks a group of clerks of low schol-
larly attainment who do little but perform
simple evolutions with varicolored cards
(or perhaps, with charging machines and
other mechanisms) and, as a side line, lo-
cate in the specialists' special fields ma-
terial which the specialists themselves
cannot find if the catalog entry varies even
slightly from a simple norm or from the
specialist's favorite terminology. Every
possible saving of time in locating and
delivering books must be cultivated. Con-
necting doors between rooms or arrange-
ment of rooms in suites will increase
elasticity of use and economies of time and
effort.

The advance of microphotography and
the development of archives and other
manuscript material, and the intimate re-
lations of these classes of material with
printed matter make the need for smaller
rooms for the specialist and the special
attendant greater than ever. The reading
room of the future university may not be
so much a unit as a mother-ship with a
group of satellite rooms of related use.

Another Tendency

To offset this, another possible tendency
may be noted. It has been almost a part
of the librarian's credo to oppose the es-
stablishment of departmental libraries in

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tributing books, and in a centralized correlated administration that ensures the maximum of service to a maximum of users. As a matter of fact, there are few present university libraries of any size which are not systems rather than buildings. In the smaller institutions, separate rooms for specialized fields may serve the same purpose as separate buildings and at much less cost.

This will intensify rather than remove the problem of the main library. The multiple reading rooms will still be used by those who are not specialists. The humanities will probably still retain their traditional axis. There will be many thousands of volumes in overlapping fields and much storage of dormant material for which the central library unit must still care.

Circulation Facilities

Whether there will or should be a unification of circulation and reference service will depend largely on local conditions and curriculum development. In a heavily used building, there should be auxiliary centers as well as a main center of circulation. In any university which does not find it entirely desirable to give complete open shelf access to books for assigned class work, the reserve room will obviously be one such center. Similar service should be given in any other room or rooms open for special use and with a regular attendant. Physical provision for as wide a "spread" as possible for returning and receiving books and for consultation of the public catalog are essential.

It is perhaps scarcely necessary to repeat what is already a common practice in locating these centers of use. In general, the most easily accessible place, usually the first floor, can most easily take care of a large amount of short time use—the kind that most lower-class undergraduates make of the library. Increasing seclusion and less accessibility seem logically to belong to more advanced research. The seminar rooms seem naturally to gravitate to the upper floors or to the stacks. In a new building it is fairly easy to locate these several types of use with access to the portions of the stack collection to which they are related. As one soon learns by experience, this relation tends to be easily spoiled if either the number of research workers appreciably increases or the collection of books much outgrows its assigned limits.

Whether or not the classroom and reading room purposes of the seminars are united or separate is important. In the former case, freedom is limited in both directions. Readers must leave when classes recite. Classes must make concessions to readers. A division of purpose is the more economical. Experience in at least one university indicates that the traditional need of consulting many books during a seminar discussion is for the most part no more necessary than holding a court trial in a law library. In both cases, the really necessary citations and exhibits can be assembled when needed with no undue trouble.

A "browsing room" seems to have become a desideratum if not a necessity in the modern university library building. Unless used as an auxiliary study room—which may easily defeat its professed purpose—it need not be closely connected with the other reading rooms in location. Like other good things, it will be an added expense not only in duplication of books but in supervision.

Administrative Quarters

There are two schools of thought in re-
gard to these. The first, representing many
readers, is that the staff can work in any
place in which there is desk room. The
second viewpoint, held in varying degrees
by the staff, is that the public should share
its privileges of space, light and air with
those who serve the public. There is no
reason why the experiences of business
houses and factories should not be utilized.
The best possible artificial light should
supplement enforced lack of natural
light. Ventilation and heat should be
cared for quite as much as in the public
reading rooms. Probable expansions in
service should be anticipated as far as the
building committee and the building fund
permit. The old question of making the
public catalog convenient to both the pub-
lc and the catalogers may not be com-
pletely solved in every case. When the
catalogers must yield, they should be given
strategically placed stairways, elevators or
space for official catalog. This is their
right in the interests of the public. If the
catalog staff is too small to keep the de-
partmental shelves free from uncataloged
books, extra shelf space should be given
them.

An extensive exchange system will in-
volve extra stack space for duplicates,
packing rooms, additional files and file
clers in addition to the normal demands
of the order department. Suitable loading
and unloading facilities for trucks are
needed and easy access for donors.

If it is necessary to maintain a bindery,
basement space should be given it. Any
other space will unavoidably cause trouble
when the power machinery of the bindery
is in operation. Storage space for stock,
material in progress, and spare space for
the installation of new machinery are im-
perative for economical and efficient oper-
atation.

Prophetic vision and a thorough under-
standing of the present and probable future
policies of expansion of the specific uni-
versity are necessary for suitable provision
for increased or newly acquired activities.
If the university library conducts an ex-
tension service, space for office, clerical
work and book storage is needed. The
same is true for microfilm and photostat
service. In addition there must be labora-
tories for these services. A division of ar-
chives or rare books will require a different
policy of use, emphasizing the preservative
function of the building. Even so simple
a place as the librarian's office needs differ-
ent treatment in an institution where
routine correspondence, files, and other de-
tails require changes in staff size and
duties, particularly in case an assistant
shares the librarian's administrative labors.
It is doubtful whether any permanent
standards of general utility can be formu-
lated in these respects. The librarian must
often echo the alleged last words of
Goethe, "More light!" He must always
have in mind the even more apposite ones,
"More room!" In doing so he will not
forget to check his plans for rest rooms,
lunch rooms, coat rooms and other pro-
visions for staff comfort. This problem
is often complicated at present by the
presence of workers on various types of
federal aid projects. The probable per-
manence or revival of these projects should
be considered in planning a new university
library or extending an old one.

An Often Neglected Detail

One detail too often neglected or re-
fused approval by architects and university
administrators is plenty of elevator service
and other satisfactory mechanical labor
saving devices, such as book carriers that
really carry, vacuum cleaning installations
or outlets, service aids such as janitors' closets, wash stands in the stacks, and the like. Particularly in the case of elevators, the nonlibrarian can seldom grasp the fact that efficiency is promoted by elevator service in any building of more than one story or that increase in efficiency increases the demand for more elevator service for even greater use of the building.

I close as I began. The basic essentials of a university library building are: provision for books in increasing numbers; provision for readers to meet an increase in their extensive and intensive use of the library; and provision for the efficient performance of the administrative processes of the library. These are the same as in any library building. They require special study in a university building because the university library is affected much more quickly and closely by changes in university policies than the public library is by general changes in the reading habits of its patrons. It is doubtful whether a good university library can have a detailed policy of any assured permanence either in building or procedure, apart from the policies of its institution. Its preservative function is no less essential. Its building must be planned with that in view. Its scope must widen and its procedures must change to include new fields of study and research in which the university engages. What these will be, no one can tell with certainty. What their relations and applications and their extent will be is equally unpredictable. The trivium and quadrivium with their citadel of basic classics are no longer our refuge and the apparent tendency to synthesize in many scientific fields increases the uncertainty.

In view of these conditions, it may not be unreasonable in the light of present knowledge to reduce the essentials of a university library building to these two: first, room for all present activities with generous provision (probably no less than 50 per cent) for their probable expansion and a plan which correlates them in location to permit the greatest amount of use by patron and staff with the least time and effort; second, since the present tendency toward rapid changes in all human and intellectual relations makes permanent correlation of use or function impracticable, building with a view to permit relocation of services, the introduction of new activities and expansion to care for needs which cannot now be anticipated. In other words, maximum adaptability at minimum cost.

This will certainly interfere with the old idea of a library building as a permanent architectural monument incapable of major changes. Such monuments are already for the most part obsolete, or diverted from their original use. It would be folly needlessly to repeat these mistakes.