

Sophia University Central Library

上智大学中央図書館建設の経緯

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ルドウィグ アルムブルスター

要 旨

本稿は、1984年4月に開館した上智大学中央図書館における基本計画策定から完成までの経緯を明らかにするものである。

本図書館の建設プロジェクトは、基本計画(1975~78年)および建築計画の策定期(1979~81年)、実際の建設期(1981~83年)に分けて考えることができ、前の二つに関しては、計画委員会と建設委員会における建設思想、方針、具体的な仕事の内容が記述されている。特に、建築計画策定に関しては、日米両国の建築事務所の合同作業のもとで立案された最初の建築計画が、極めて斬新で理想的なものであったにもかかわらず、建築基準、予算上の制約など種々の要因から大幅な変更を余儀無くされ、現在の形となった経緯が詳しく示されている。

また、建設にあたって維持費用の削減に関心が払われ、太陽エネルギーなど省資源化を可能とする試みがなされたこと、および出入口での盗難予防装置の設置、貸出業務の機械化のためのコンピュータの導入、目録業務の効率向上のためのUTLAS導入が図られたことなど、図書館建設における特徴的な側面が明らかにされている。

さらに本稿は、本図書館の規模を表わす具体的な各種のデータ、各階のレイアウト、平面図を示し、開館後の利用状況、目録利用上の問題点にも言及している。

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I. Background

In August of this year Japan will host the International Federation of Library Associations and librarians from all over the world will gather here in Tokyo. The host country can boast of a cultural tradition that extends back well over a thousand years and developed independently of European civilization. Contact with the West was established briefly in the sixteenth century and then for a second time a hundred years ago. Since this second encounter Japan has become one of the world leaders in technology, especially in the field of electronic data processing. It is therefore not a little ironic that Japanese librarians feel that their state of the art lags behind the West by some thirty years.

This backwardness has nothing to do with the sheer size of book collections. The National Diet Library, for example, houses one of the largest collections in the world. The 458 universities and colleges (as of 1983) have at their disposal millions of volumes dealing with both the humanities and science and technology; a network of 1,427 public libraries (as of 1981) covers the entire country and serves the general public. Rather, the pressing need in Japanese libraries concerns, as I see it, two areas: the quality of literature in foreign languages and the services available to readers. Open stacks are the exception rather than the rule, reference works are obsolete, interlibrary cooperation has only recently been inaugurated, and a long-distance lending system is as yet practically nonexistent.

The reasons for this negative situation are well known. The librarian in Japan still lacks public recognition and professional status. Library employees, even those with professional training, are classified as office workers, and it is small wonder that few are attracted to the profession. Conversely, the general lack of training in the field offers a plausible excuse to deny librarians proper legal status. The ultimate loser in this vicious circle is the reading public. Bookstores, selling both newly

published books and secondhand volumes, have become a substitute for the inadequate libraries. Books on sale there may be leisurely browsed through, consulted, or even read from cover to cover on repeated visits. It is not unknown for avid readers to leave a bookmark at the end of one session in a shop so that they can resume reading straight away on their next visit.

The passive learning habits of Japanese students are another factor that has a detrimental effect on the still rudimentary reference services offered by university libraries. More often than not, the students hear in the classroom all that is needed to pass their examinations, and so the library is not recognized as a place to carry out even elementary research on the sources. Furthermore, many professors rely on their own private collections of books and seldom call on the services of the library, nor do they encourage their students to do independent work in the library.

The first impulse to improve this situation originated from the U.S. and dates back to the early postwar years. Commissioned by the Occupation authorities, American librarians founded at Keio University in Tokyo the first School of Library Science in this country. National institutions of higher learning eventually followed suit, albeit hesitantly, and thus a young generation of professional librarians was duly trained. Since the early seventies a marked desire to reform and improve library services has been much in evidence, and, taking advantage of the experience of the best American and European institutions, well-organized libraries have been built. This uptrend was not interrupted by the economic recession brought on by the oil crisis. In the years 1982-1983 alone, 264 libraries (210 public and 54 university) were newly built or extended. Admittedly in most cases the building program was not prepared by the librarians themselves nor was a library consultant asked for guidance. Nevertheless, these figures point to the general trend to assign the library its due place in the life of modern society.

II. Sophia University library: planning period, 1975-1978

Ten years ago I was commissioned with the planning of the new library of Sophia University in Tokyo. In preparation for this task I visited American, German, and Austrian libraries during the summer months of 1975, and this tour of inspection proved invaluable for our subsequent planning. I returned to Japan encouraged and refreshed by the cooperation received from librarians in different countries, and I still feel deep gratitude for the patient help and courtesy they extended to me. Doubtless an American colleague spoke half-jokingly when he told me, "You want to build a university library? You'll have to write off ten years of your life." In the event his forecast was amply fulfilled, even though those ten years were by no means a loss.

Sophia University was founded by the German Jesuits as a private university in 1913. It is a Catholic university in the sense that its teaching and research activity is fundamentally oriented on Christian principles. The basic questions that have faced mankind since the dawn of history are studied in a Christian spirit. During the first years of its existence Sophia was confronted by formidable problems. World War I, the great earthquake of 1923, and World War II caused grave crises to a non-government institution that was dependent on support from abroad. The university's period of rapid expansion came only after World War II. Since 1952 student enrollment has risen from 1,000 to 10,000, 40% of whom are women. This tenfold increase in student numbers rendered the former library building completely inadequate and obsolete.

As further extension was ruled out for structural reasons, the university decided to construct a new library building, for which a site had to be cleared within the crowded campus. A planning committee was duly established, and to ensure its effectiveness the president of the university himself was made chairman of this body. The committee consisted of the

University Librarian, representatives of the university administration, the faculties, and the library staff, as well as outside experts; during the first round of sessions, an official of the Ministry of Education also took part. We were most fortunate to enlist as our consultant the American librarian Dr. Robert L. Gitler, whose valuable suggestions carried a good deal of weight with the committee. Familiar with the Japanese scene, Dr. Gitler had founded the Department of Library Science at Keio University in 1951 and had headed it for five years. Regrettably, students were not represented on the committee, for the campus unrest that plagued universities around the world in the seventies rendered the student self-governing body inoperable at Sophia.

The committee's first task was to determine how the new library could meet the present needs of the university and also its needs twenty or thirty years hence. The solution to the first part of this problem was comparatively simple for it was based on empirical data and experience. To foresee the needs of the future proved a far more intractable question. The role of the computer and other modern devices in the library of the future would depend on the unpredictable progress of technology, thus making it very difficult for us to foresee how a library would operate within two or three decades. Utmost flexibility in the building structure therefore seemed indicated, and this led to an open-floor concept that allowed for later reorganization of space whenever change became necessary.

The committee's survey soon brought to light the importance of centralized access to information, and this element became the overriding principle of all our planning. Painstaking footwork revealed the fact, surprising to many, that within the boundaries of the main campus alone more than thirty collections of books were housed in various institutes and seminars, and had never been registered in the university library catalog. Further investigation revealed that practically without exception these institutes lacked sufficient space and

were no longer able to carry out their functions properly. Proposals were therefore drawn up by the committee for each institute and center on the best method of stacking their books and carrying out their activities in accordance with internationally accepted standards. But the additional space required to achieve this objective proved to be so great that the integration of these various collections into the new library building project appeared to be the only effective remedy that was economically feasible.

In this way the task of centralizing access to information took on a new dimension, and the need for the physical concentration of all institutes, seminars, and study centers within the new library was strongly indicated. This became a basic concept in all subsequent planning for it meant that all the university's learning and research resources would be put at the disposal of everyone not only in theory but also in practice. The university happened to possess all the basic requirements for this type of centralization. Situated in the center of Tokyo, its main campus of some 47,000 m² is hemmed in by city buildings, with the singular advantage that the library is located within five minutes' walking distance from any point of the campus.

But it was by no means easy to convince the faculty of the wisdom and advisability of this project. The directors of institutes were apprehensive lest their organizations might be totally absorbed by the library and in the process lose their academic and financial autonomy. Months of deliberations and consultations were needed to allay the fears of the academic staff and persuade them of the advantages of closer cooperation. Gradually there arose the concept of a centralized "commonwealth of scholars" that would find a natural habitat in the new library where all the necessary facilities of a modern research and learning center would be freely available. For the librarians involved, this was the time when a new concept of a library evolved, a concept that was sufficiently flexible to allow for future development and was based on

general principles that far transcended the specific situation and needs of one particular university.

In comparison with American models, the projected Central Library, consisting of institutes, seminars, and specialized book collections would be called a research library. At the same time, however, an undergraduate library was planned. This would consist of some 100,000 standard books, offering freshmen and sophomores all the material they might possibly need for their studies. These books would be stored in a bright and spacious reading room that hopefully would induce the younger students to make best use of an as-yet unfamiliar set-up.

At the end of the second round of sessions, the planning committee prepared a 25-page program statement in which the organization and goals of the new library were defined and explained. The document was concluded by a list of desiderata regarding the furnishing and space allocation of every single unit within the library. With this, the planning committee accomplished its task and turned over further initiative and action to the building committee, on which, of course, the library administration was duly represented.

III. Architectural Planning, 1979-1981

The overriding concern at this stage of the planning was the choice of an architect to transfer the program statement into concrete architectural planning. Various contacts and discussions were made, until finally, on my urgent recommendation, it was decided to invest in the vast experience that U.S. architects had accumulated in designing modern libraries. The design of the new building was then entrusted to a joint team of American and Japanese architects. The American side was represented by the Chicago office of Skidmore, Owings, and Merrill (SOM), with Mr. Walter A. Netsch and his team assigned to the project; this was to be Mr. Netsch's sixteenth library design. In compliance with Japanese law, Nikken Sekkei Inc. was appointed

the officially responsible partner, although in the course of the planning this company was replaced by the design office of Takenaka Komuten Inc.

The years 1979–1981 will be remembered as a unique and valuable experience by all those involved in the project. Both in Tokyo and Chicago the conceptual design was developed, discussed, appraised, amended, and repeatedly remodeled before any major decision was made. In the beginning the university authorities had in mind a high-rise building at the south end of the campus, bridging the north-south campus avenue. The librarians, however, successfully maintained the need for a spacious, uninterrupted, street-level floor, pointing out that a tunnel cutting through the main floors of the building would disrupt services vital to the smooth functioning of the library. The university administration had also intended to include in the new project non-library elements such as a large auditorium, a computer center, and a counselling center, but it was finally agreed that these had best be kept separate from the library, which was to be set up as

an independent unit. Two other key decisions were to locate the undergraduate collection in the easily accessible basement, which, owing to the sloping terrain, would enjoy daylight on the southern and eastern exposures, and to distribute the library's general collection throughout the upper floors in coordination with the holdings of the various institutes and seminars. At the same time a solution offered itself regarding the problem of housing the continuous expansion of the special collections, for any institute would be free in the future to turn over those books that it could not house on its own shelves to the adjoining main stacks of the library and still keep them in easily accessible use.

The first conceptual design report, drawn up and signed by SOM and Nikken Sekkei, ran to some hundred pages and was presented to the university in September 1979. The building structure, conceived as a column-supported system of open floors surrounded by curtain walls, was designed in accordance with Mr. Netsch's 'field theory', based on a chrysanthemum pattern. Straight lines and repeti-

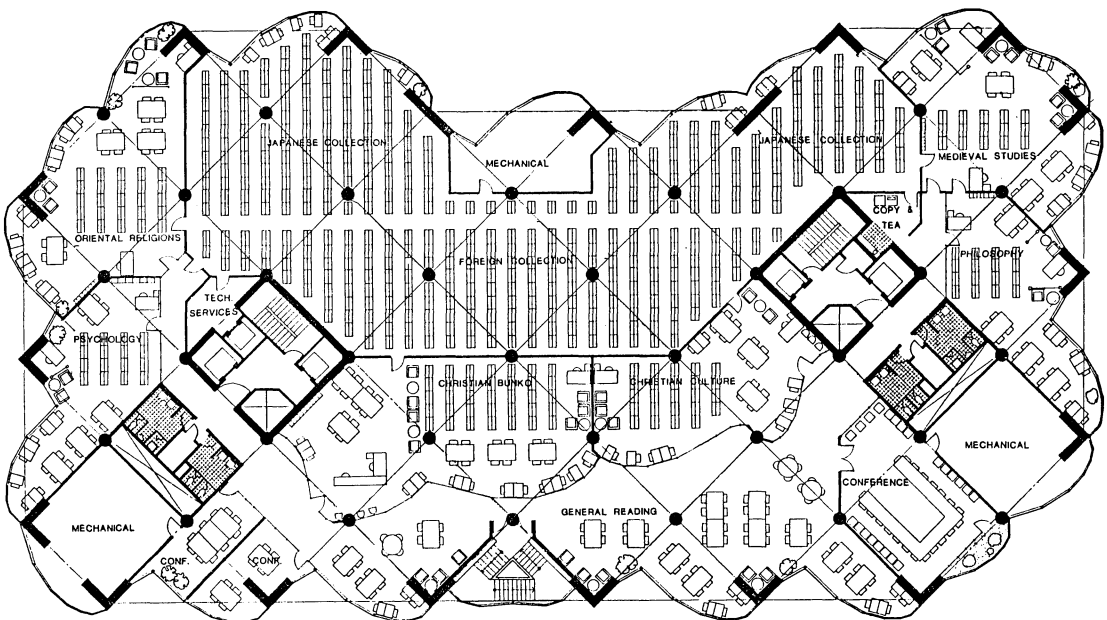


Fig. 1 The first floor plan (eighth floor), based on a chrysanthemum pattern, designed by SOM architects.

tions were avoided wherever possible. The two-stories window pattern was an integral part of an undulating facade of glass and aluminum, with the proportion of glass increasing at the northern end and that of aluminum at the southern end (Figure 1). The overall concept was designed as an architectural work of art, while at the same time allowing for the efficient functioning of a well-organized library. This overall concept was an expression of the university's educational ideals—respect for the individuality of the person and for its creative self-development.

This original design had to be modified several times in order to meet the requirements of the various local building codes that up to that time had not taken into consideration an academic library as such; as a result, norms issued with an ordinary school building in mind, with its classrooms and corridors, had to be complied with. Earthquake and fire-prevention regulations, both written and unwritten, also proved to be obstacles for a non-Japanese architect. The most far-reaching changes, however, were imposed by budgetary limitations regarding the cost of the construction of the building and its subsequent maintenance, for the projected building cost in Japan was double the figure calculated in Chicago. As a final blow, the international oil crisis occurred in the middle of the planning period and the projected annual maintenance expense became a decisive factor in the planning.

The modifications necessitated by economic reasons did not come as a complete surprise, for from the very beginning it had been agreed not to start the planning with a fixed budget in mind. Instead, the policy was first to design a building tailored according to the empirically calculated needs of the university, and only then, if necessary, to cut back the plan to fit the financial restrictions imposed by budgetary limitations. This type of planning did not, of course, make it at all easy to choose between what was to be kept and what was to be sacrificed. When the realization of functional and aesthetic values could not both be afforded,

the latter had to be sacrificed to the former, however lamentable this decision was.

Finally, a rectangular building of conservative design was erected with a heavy weight-bearing facade and repetitive windows, a far cry from the original imaginative design. As compensation, however, all but four support columns within the building were eliminated. When passing judgment on the final design, one should take note of the assessment made by one of the most outstanding American experts in library planning, the late Keyes D. Metcalf, who showed deep interest in the Sophia project from the very early stages of planning. Mr. Metcalf welcomed the enforced return to the conservative rectangular design of the building and saw it as a positive asset for the smooth functioning of the library. He once told me, "Library planning has always been a fight between the librarian and the architect. The architect wants to create a monument, the librarian wants a well-functioning library." Perhaps I might add to this statement that a third party has also to be taken into consideration—the financial authorities, whose power and determination should never be underestimated.

IV. Practical plans and furnishing

The conservation of energy, very much a topic at the time, received a quantitatively measurable formulation when the university administration fixed the maximum annual budget for the maintenance costs of the new building. As a result of this decision, additional construction expenditures were considered and accepted if they were guaranteed to lower maintenance costs in the future. The largest investment along these lines was the installation of solar energy collectors on the roof of the building. Tokyo has enough sunny days all the year round to provide the energy needed to heat the library's two basement floors in winter and to cool the central book stack in summer. Despite its obvious advantages, this project was a controversial one. On the one hand, librarians will always object to additional

plumbing in the stack areas, while on the other, the technology involved is still insufficiently developed to allow an empirical assessment of its economical possibilities. The university was able to approve this project only because substantial government subsidies were granted to promote the use of solar energy.

Separate systems for drinking water and utility water were similarly expensive to set up but cheap to operate. As the city authorities failed to keep their promise to deliver utility water, arrangements had to be made for collecting and storing rainwater. In this respect, what originally had been regarded as a handicap turned to our advantage. Since the ground below the library consists of layers of loam and sand, it offers no firm foundation, and the supporting walls of the building had to be anchored on pylons reaching down to sea level. As a result, the excavated space beneath the third basement could easily be converted into a large storage area for rainwater.

The extreme dryness of the Tokyo winter coupled with the excessive humidity of its summer necessitated the installation of an air-conditioning system throughout the building to protect the books and to create favorable working conditions. With the exception of the two basement floors, served by solar energy, 80% of the heating and cooling is supplied by peripheral fan coils and 20% by ventilation. All windows contain double heat-reflecting glass panes and can be opened in spring and autumn. Division of each floor into service zones and the overall use of thermostats further help to reduce energy consumption.

For a library used by both Japanese and non-Japanese, the wisdom of purchasing exclusively local equipment and furnishing was questionable, all the more so as the pertinent Japanese Industrial Norms undoubtedly fall behind the actual trends of population development in this country. The standard non-Japanese products, designed for taller and heavier users, proved competitive in price with furniture of comparable quality produced locally to special order. Members of the build-

ing committee and the Japanese architects twice went abroad to study the interior design of libraries and visit furniture factories. Finally large orders for chairs, bookstacks, and window frames were placed with German companies, while reading tables, difficult to transport from abroad, were produced under license in Japan.

With the exception of the Rare Book Room, the bookstacks in the library are freely accessible, and so arrangements had to be made to guarantee their security. This was achieved by installing an electromagnetic control gate at the main exit so that books cannot be removed from the library without being checked out at the circulation desk.

The computerized circulation of books does away with the need for library cards and date stamping, and in addition keeps the records automatically. On average, the total procedure for checking out books does not take longer than forty seconds per volume. To increase the availability of the books in the library, borrowing rights are automatically suspended for anyone, whatever his/her rank or title, who fails to return volumes within the prescribed time limit: three months for professors, a month for graduate students, and two weeks for undergraduates. The computerized system has the added advantage in that it provides statistical data helpful in selecting new titles to be purchased by the library. The computer is also used for processing periodicals. For cataloguing monographs, the Canadian UTLAS system was adopted, and this provides the individual library with the possibility of automatically developing its own computer-based data files. The present card catalog will be replaced by computer-based data files as soon as the network of Japanese academic libraries becomes operative. Access to Japanese and American data banks is available to library users through terminals, some of which are also linked to the university's computing center.

V. Construction of the library, 1981-1983

The ground-breaking ceremony for the new library building took place on 3 December 1981. Underestimating the reliability of the Japanese, our American and European friends seemed not a little surprised about the confidence with which the date of 3 December 1983 was fixed for handing over the completed building. But the date was faithfully kept and Sophia University thus received on time a fine present for the seventieth anniversary of its foundation. During the spring vacation in February 1984 the books were efficiently transferred from the old to the new library by a professional removal company, and the Sophia University Central Library began operation at the beginning of the academic year in April 1984.

The building consists of eleven floors with a total area of 26,871 m², each floor having an average area of 2,344 m². Three of the floors are below ground as reckoned from the west side of the building, where the main entrance

is located. The installed equipment can store some 1.3m volumes, thus allowing for considerable expansion of our present collection of 500,000 volumes. There is seating accommodation for 2,500 people, that is, approximately 25% of the present student body. The top floor has been left empty for the time being to allow for future expansion as the crowded terrain around the building will not permit the addition of an annex.

The third basement houses the necessary machinery and equipment; it also has an unloading dock for trucks as it is directly accessible from the road on the east side of the campus and can provide temporary storage for 10,000 volumes. On the west side the second basement (Figure 2) contains a locked store-room for compact shelving and also serves, together with the first basement, as a reading room for the undergraduate library. This reading room has 800 seats and stacks for 100,000 volumes. Three separate rooms for study groups and a student lounge, where smoking is permitted, complete the setup of

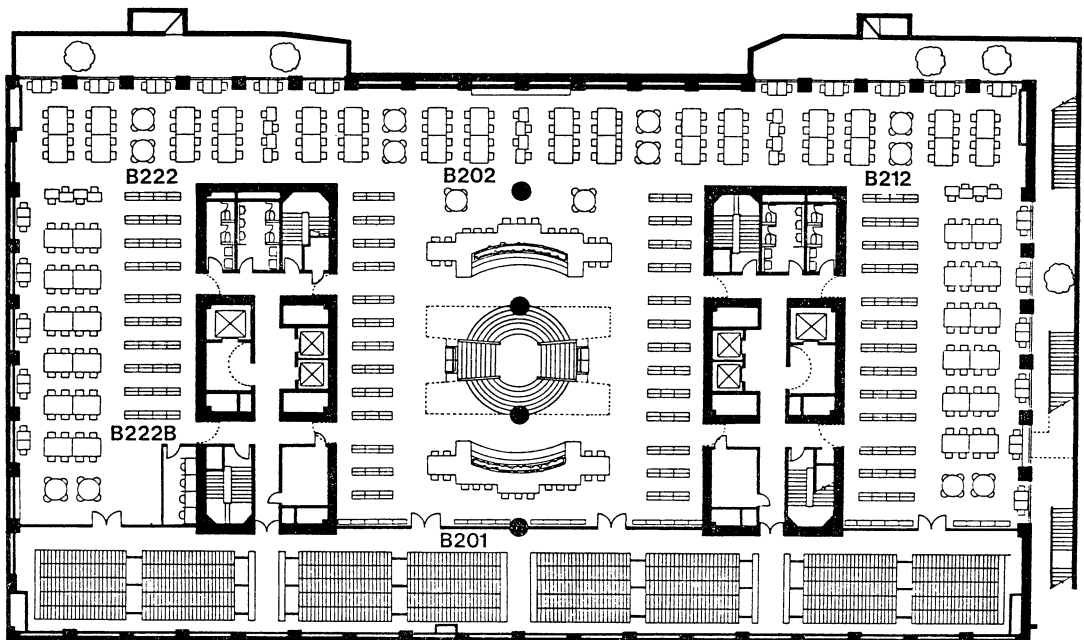


Fig. 2 The floor plan of the second basement, housing the undergraduate library.

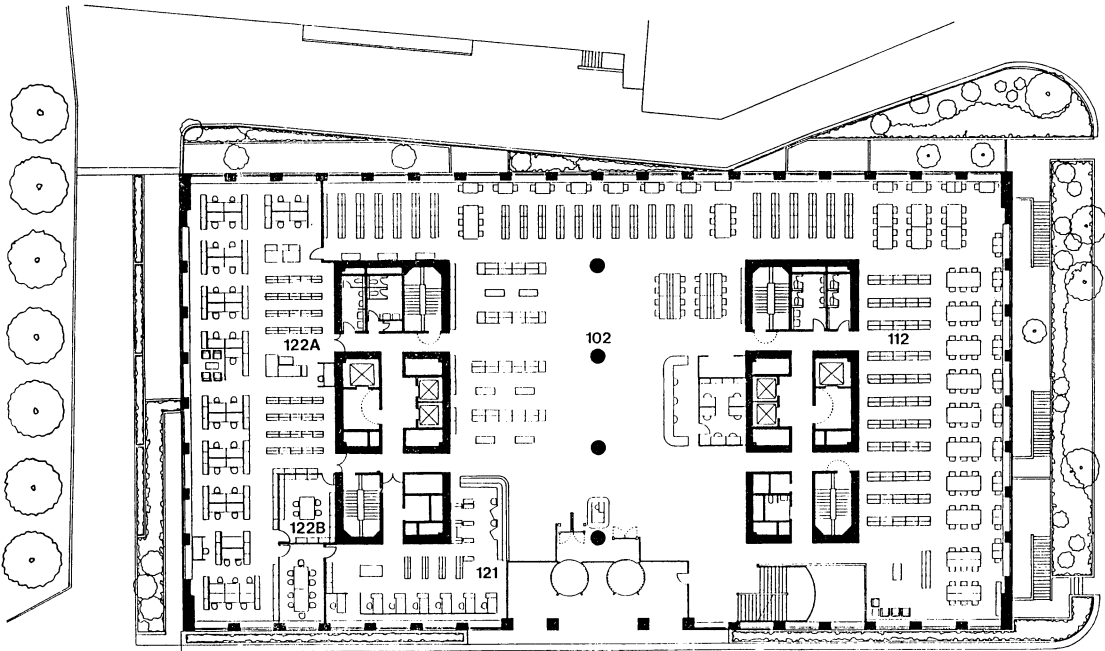


Fig. 3 Layout of the first floor :

- 102 Lobby with the catalog and reference collection.
- 112 Reading room of current periodicals.
- 121 Circulation desk.
- 122A Acquisition and cataloguing department offices.
- 122B Book selection room.

this first basement floor.

The first floor (Figure 3) contains the entrance hall of the library and is equipped with catalogs, the reference collection, reading rooms for current periodicals, circulation and reference desks, and library offices. The catalogs cover not only the holdings of the main library but also those of the libraries of the university's theological faculty in the suburbs of Tokyo and of the International College located on a nearby campus; the library computer system is on line with the latter campus. The layout of the offices was designed in accordance with the work flow of the acquisition and cataloguing departments.

Apart from a corner area reserved for the library administration, the entire second floor houses the collection of the Faculty of Science and Technology, including its own reference

section, abstracts and indexes, current and bound periodicals. The third floor contains the audio-visual departments as well as special collections of library science and bioethics. From the fourth floor upward the same scheme is repeated (Figure 4). Research institutes and seminars surround the central core of the building housing the bookstacks of the general collection; on the west side of these floors there is a general reading room separated, for airconditioning reasons, from the stacks by a glass wall with two doors to allow easy access. For the benefit of the institutes and seminars, two conference rooms, ranging from eight seats to eighty, have been provided on each floor. A total of twenty-four separate study cubicles are at the disposal of specially authorized users for a limited period of time.

Apart from the various staircases, vertical

Sophia University Central Library

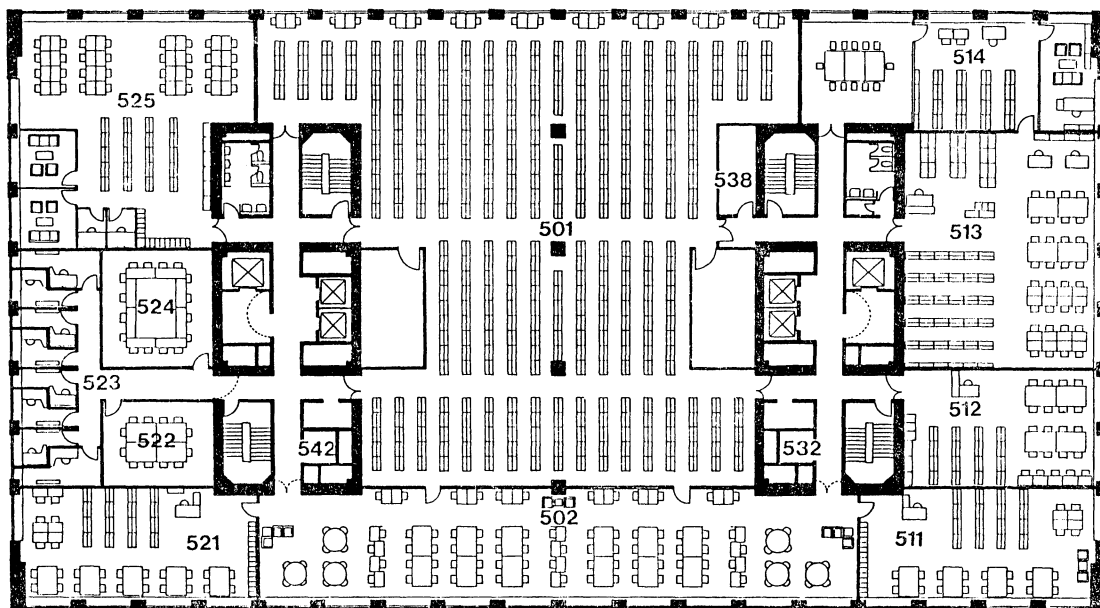


Fig. 4 Layout of the fifth floor:

- 501 Central bookstack area.
- 502 General reading room.
- 511-521 & 525 Institutes, study centers, and seminars.
- 523 Study cubicles.
- 538 Typing room.

traffic within the building is handled by four elevators for users and two service elevators; a combination of elevator and booktruck is used for the transport of books within the library.

VI. Experience with the new library

The students took immediately to the new library. During the first months the automatic counter at the entrance registered some 5,000 visitors a day, and this number increased to 9,000 or more as the oppressive summer heat set in and the semester examinations approached. The pleasant atmosphere of the airconditioned rooms, together with the easy availability of working places, made the library more popular with the students than any exhortations on the part of the professors could have accomplished. This in turn led to the

encouraging development that the number of books borrowed from the library doubled in comparison with the previous year. More than a thousand readers from outside the university obtained borrowing rights for a special fee, so that the impact of the new library has not been confined to the campus alone.

It goes without saying, however, that various problems, some of them foreseen, cropped up, although these are not related to the design of the new building as such. Perhaps the greatest difficulty was caused by the complexity of the new card catalogue. In 1981 the library decided to switch from its own homemade classification to a standard one for all subsequent acquisitions—that of the Library of Congress for Western books and of the Nihon Decimal Classification for Japanese and Chinese titles. As a result new titles can be indexed with greater reliability and rapidity,

but the catalog as a whole lost its unity as the new rules are not compatible with the old ones. In addition, there was no time to integrate the catalogs of the various institutes and seminars into the main library catalog. This unified setup is liable to prove somewhat puzzling for the uninitiated user; although for the first time in the university's history all available books can be traced, it sometimes requires more than one attempt to check on a particular title. Hopefully this problem will be gradually solved as the work of unifying the catalogs proceeds.

The difficulties that the user meets with handling the catalog are to some extent repeated at the bookstacks located on the different floors. Old and new books, both Japanese and Western, are located in the same area, but could not be shelved together. This made it imperative to erect easily understandable pointers, in Japanese and English, throughout the library and no effort was spared to develop a system of traffic signs to lead the user from the catalogs to the desired book.

We had no precedent or experience to fall back on when laying down rules to guarantee a frictionless symbiosis between the library and the various institutes and seminars brought together under one roof. So far a workable division of authority has been achieved, and continued cooperation and good will on the part of all concerned will be needed in the future to bring about a fruitful and harmonious unity. The first step toward this goal

will be taken by the library when it begins to put into practice the projected central processing of all newly acquired titles by the various university institutes.

In the long run, the success of the new concept of the Sophia University Central Library will greatly depend on the quality of the library staff. The building itself has been painstakingly designed for smooth and efficient functioning as a modern library and the first year of its existence has seen encouraging progress. But it is the staff working in the library who can bring about the desired aims of the new venture. One precondition, however, is the long-overdue legal recognition of qualified Japanese librarians, a reform that has slowly been gaining momentum in recent years. I hope that the forthcoming IFLA conference in Tokyo will draw attention to this pressing problem and make it better known to the general public. It would without doubt be the most valuable contribution that the international participants of the conference could make to the host country.

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