Linda Hall Library

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The Linda Hall Library, in Kansas City, Missouri, is one of the most recent research libraries to be established in this country. Provided for under the terms of the will of Herbert F. Hall in 1941, the library purchased its first books in 1946. With an original endowment of about 6 million dollars (now increased to about 10 million), Linda Hall Library has grown very rapidly, and at the present time has a collection approximating 165,000 volumes, with an annual rate of increase somewhere between 12 to 15 thousand volumes.

The trustees, all appointed by Mr. Hall, devoted the four years from 1941 to 1945 to a thorough study of the library needs of the Kansas City area, calling upon various library experts and consultants throughout the country for advice and counsel. Late in 1945, with Dr. Malcolm Wyer of the Denver Public Library as the Board's appointed consultant, a decision was made to establish the library as a special reference and research institution, with science and technology as its area of subject specialization. Many factors played a part in this decision. A year earlier a group of energetic and far-seeing Kansas City businessmen had established a privately sponsored industrial research organization, the Midwest Research Institute, in a vigorous attempt to attract to the city and its surrounding area the still expanding wartime and defense industries in the central states. The growing number of technical people arriving in the city found insufficient technical library facilities, as pointed up by various surveys conducted by local chapters of national scientific and technical societies. A fine public library system with many branches throughout the city provided for the general library needs of the community, and several medical library facilities were also available, so that the choice of science and technology as the subject specialty for the new Linda Hall Library seemed to be logical and promising.

A librarian was appointed late in 1945, and the first books and journals were purchased and received in the spring of 1946, with immediate service available to all who needed these materials. In accordance with the decision of the trustees, the librarian specified the area of subject responsibility as the Dewey 500's and 600's, with several obvious exceptions. Clinical medicine, surgery and dentistry were excluded. Public Library, in a downtown location, had established a Business and Technical Service, making it unnecessary for Linda Hall to give special attention to the various business services classified in the 650's. Because no other local library was able to give comprehensive coverage to the area of psychology and psychiatry, some of which already fell into Linda Hall's purview, the library here accepted a large degree of responsibility, exclusive of educational psychology and educational tests and measurements.

The Hall home, a graceful Georgian house in Kansas City's Southtown residential area, was converted into an attractive library building in the next two years, with a minimum of damage to the original fine

structure. An old garage building, as well as a newly constructed stack-building, adjoining the garage, served to house the increasing flow of books, periodicals and other library materials. In 1947, by a fortunate purchase, the bulk of the collection of the American Academy of Arts and Sciences in Boston was acquired by the Linda Hall Library. Founded in 1782, the Academy library had been predominantly a scientific collection, very strong in the publications of other scientific academies and in many classic journals in the physical sciences and mathematics. Some 50,000 volumes were acquired in this purchase, and though its strength was chiefly in serials, many historically important monographs and treatises of the 17th, 18th and 19th centuries were found in the collection. For the retrospective materials the Academy collection became the backbone of the new Linda Hall collection.

In the meantime the library was extending the range and scope of its current serials and periodicals subscriptions and exchanges, so that by 1954 nearly 5000 titles were being received. Since textbooks and general treatises in many sciences and in engineering become obsolete so quickly, emphasis in this area was from the beginning placed upon a wide coverage of current Older books which had become books. classics of a sort, or which had not been superseded by more recent or more authoritative texts, were of course purchased if and when they appeared on the market. A policy of selective purchase of foreign texts was followed from the beginning, and the library emphasized foreign titles in the biological and physical sciences, which appeared after 1946. The selection of foreign titles has been narrower for engineering and related fields, where American practice seems to be in advance of achievements abroad. From a practical point of view, the American engineer is rarely able to handle foreign languages and, rightly or wrongly, tends to dismiss the foreign text, unless it happens to be of such originality and distinction that it cannot be dismissed.

The purchase of periodical indexes, the special subject bibliographies, and various national and trade bibliographies was a matter of first consideration in the library's buying program, and any item with a trace of scientific and technical bibliographic interest, regardless of languages or time of publication has been pursued by the acquisitions department. Foreign dictionaries, general encyclopedias and other general reference materials have also been added, with special attention given to a wide range of foreign technical dictionaries.

The library had many serial sets to add and fill in, and indeed still has many such desiderata. Wherever possible, the most recent ten years of such publications were sought for, and sets built back from that point. Microfilm and microcard runs of various titles were added, if they were new titles to the library, or if they filled in sizable gaps.

In the rare book field, a policy was established of buying those classic titles in science which have become recognized milestones along the line of scientific development and achievement. Since this is regarded as a long term acquisition activity, such books have been purchased only when the price seemed reasonable, and never at the sacrifice of the budget for currently important materials. Several hundred items, many of them rare, scarce, and beautiful, are now a treasured part of the collection.

The University of Kansas City campus lies across the street from the library. In 1947, the Linda Hall Library purchased the University books and serials in the sciences and agreed to supply the science book needs of the University except for dupli-

cate and multiple copies of textbooks. The University's program in pharmacy and its graduate work in mathematics, chemistry and biology, though small in extent, is growing, and will depend upon Linda Hall holdings for its future expanding book needs.

The University of Kansas Medical Center is located across the state line in Kansas City, Kansas, only a few minutes' drive from the Linda Hall Library. Fine cooperation has developed between the two institutions, and the Linda Hall facilities are freely used by the large Medical Center staff, working in many borderline subjects such as biochemistry, general and comparative physiology, public health and hygiene, and even in subject areas such as physics and electronics. Research workers at other medical centers and hospitals in Kansas City and in Topeka, and other Missouri and Kansas cities, also look increasingly to Linda Hall for assistance.

The University of Kansas campus at Lawrence, Kansas, is only an hour's drive from Kansas City. Under the vigorous and able leadership of Robert Vosper, the University Library is also expanding at a rapid rate, and several noteworthy collections in the sciences have recently been added. The Ellis collection of Ornithology and Natural History constitutes one of the finest collections of its sort in the country, and the proximity of such a collection has meant that Linda Hall could divorce itself from the responsibility for the purchase of these materials—many of them extremely rare, and extremely expensive.

Richard Sealock, librarian at the Kansas City Public Library, has contributed a great deal to an over-all effective scheme of cooperation by arranging for the duplication of the Linda Hall catalog main entries, copies of which were then interfiled in the business and technical departmental cata-

log at the Kansas City Public Library, at the main library of the University of Kansas in Lawrence, and at the Bibliographic Center in Denver.

The University of Kansas and the Linda Hall Library have installed teletype connections, so that a network from Denver to Kansas City has been established which shows every sign of increasing usefulness to the region.

The Midwest Research Institute, established a year earlier than the Linda Hall Library, has made great strides in recent years and now has a staff of more than 200 people, of whom some 50 are Ph.D.'s. Engaged in pure and applied research, the Institute has depended upon Linda Hall for many books and journals required by its staff. The Institute's new building, now under construction, will be located a short block from the library, providing even better access to the Linda Hall collection than has been the case in the past several years. A very close relationship has been built up between the two institutions, and the library participates in the publication of the Applied Mechanics Review, which is edited by MRI for the American Society of Mechanical Engineers.

Since the library establishment in 1946, Kansas City has undergone a rapid industrial and technical development. General Motors, Ford, Bendix have all established local plants of considerable size, and Westinghouse has announced that its research facilities for jet engines will be transferred to Kansas City. A number of large engineering firms, doing work throughout the United States have headquarters in Kansas City. Much of the expansion made by the chemical and petroleum industries since the end of the war, has been localized in the area immediately to the south and east of Kansas City down to the Gulf. This development is reflected in a considerable number of the current demands made upon the library.

There has been a steady growth in the volume of interlibrary loans made by the library, the requests for loans coming from all types of libraries—college, university, public and special libraries throughout the region. In 1953, about 4000 items were loaned to more than 400 institutions outside the city. Many of these libraries receive the Linda Hall "List of Serial Holdings," which is revised continuously, and thus are able to keep informed regarding additions to the serial titles. Copies of the LC cards for items in the Linda Hall book collection are filed at the Kansas City Public Library, at the University of Kansas Library in Lawrence, Kansas, and at the Bibliographic Center in Denver. Linda Hall serial holdings in chemistry are also checked in the last edition of the "List of Periodicals Abstracted by Chemical Abstracts," a listing which tends to attract many requests for interlibrary loan.

The original Hall house, its commodious garage, and a small annex building erected in 1948, have now been filled to capacity. Standard steel stack has been converted into compact storage stack on levels where the increase in weight did not represent a structural hazard. About 30 tons of material have been sent to storage. Planning for a new building began several years ago, and more than ten proposals were worked up by several firms of architects. It was hoped that the old building could be incorporated into the new structure, but one plan after another revealed the old structure affecting and determining the exterior appearance without achieving functional unity of old and new.

In 1953, trustees and architects agreed to develop an entirely independent library building. Since the library grounds are capacious (about 14 acres), it was decided

that the old house should be retained, but that all functions and services would be concentrated in the new structure. building now under construction, is scheduled for completion by September 1, 1955. Its dimensions are 230 feet by about 90 feet, with four levels, two stack levels being underground on the north side. Because of a slope to the south, there will be a ground level entrance to the small auditorium on the bottom stack level. It is to be a reinforced concrete structure, with an exterior of brick and some stone facing, to match the appearance of the old Hall mansion. The first floor contains three rooms for general, periodical and casual reading, seating about 125 readers. All stacks are free-standing, with no walls or permanent partitions, permitting considerable flexibility, to meet future needs. The reading rooms are separated by free-standing book alcoves, housing the subject bibliographies, periodical indexes, and other bibliographical apparatus. The public catalog is located to the left of the entrance, directly across from the main reference desk which backs up to the reference alcoves. At the west end of the reference alcoves two glassed-in offices and workrooms permit supervision of this end of the building.

The Technical Process Department is located on the east side of the first floor, with direct access to the public catalog and fairly close to the shipping room where truck deliveries are made from the east entrance. All levels are eight to nine feet in height except the entrance hall and the reading rooms on the south side of the building, which are 19 feet in height. Featured on the south side of the building is a 19-foot window, about 100 feet long, which is protected from direct south light by an outside loggia eight feet in width. A combination Trustee's Room and

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terms denoting classes. Such class designation does not involve direct explicit reference to the attributes involved, for example, in textiles or machines and similar devices. From this point of view, we may find logical justification for speaking of semantic factors based on class inclusion. Certainly, this concept proves helpful in establishing codes for terms.

Examples of Factors Indicating Class Inclusion Cytology CEL; SIC (cell; science) Curie RAX; LEM (radiation; element) Beer's Law RUL; BAS; RAL (law; absorption; light) Chaplain REL; PEP (religion; person) PET; FUL (petro-Gasoline leum: fuel)

In discussing the establishment of codes for terms, rendering their meaning explicit is the problem with which we have been concerned. Designating a thermometer as a device for measuring temperature (MAC; MES; TEM) does not, however, indicate in what respect a thermometer may

be involved in a given situation reported in some document. Thermometers might, for example, be referred to as being manufactured or the document may be concerned with research on thermometers. The relationships between the various things, processes, and circumstances are also important when developing a system aimed at rendering explicit as many important aspects of subject matter of a document as may be advantageous for searching and correlating.

In analyzing these relationships, guidance is provided by the same logical relationships as underlie the development of codes employing semantic factors. When indexing a document, we may note, for example, that a certain chemical compound is used as a component of a mixture (whole-part relationship) or that a given compound or mixture may be used to treat a disease (functional relationship) or that a given medicinal preparation has a certain physical consistency (attributive relationship). The class inclusion relationship will be based, when conducting indexing, on some wholepart, functional or attributive relationship, which is much more explicit in character than is the case in the establishment of terminology.

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Rare Book Room is located at the southeast corner of the first floor, adjacent to the librarian's office. A small elevator and two book-lifts to all levels are located on the lower stack levels. Book capacity of the new building is estimated at about one-half million volumes, and the total cost at less than one and one-half million dollars.

There is every indication to believe that the Linda Hall Library, with a large and rapidly growing collection in science and technology, meets a real need in a region which has shown a remarkable rate of expansion in industrial and technical facilities since the end of the war. With a new building, providing space for at least twenty years, and an endowment which should prove adequate for the steady growth of the collection, Linda Hall should become an increasingly valuable research asset.