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SPECIAL LIBRARIES

APRIL 1959, VOL. 50, NO. 4

Are Special Libraries Parasites?

Arrangement Of Maps In A Library

Retrieving Information On

Automatic Data Processing Equipment

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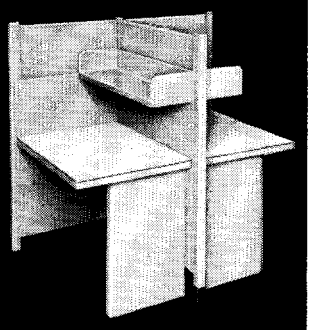

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SPECIAL LIBRARIES

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Must Special Libraries Be Parasites?

SAMUEL SASS, Librarian, The William Stanley Library
General Electric Company, Pittsfield, Massachusetts

THE SUBJECT UNDER discussion is "Cooperation Among Libraries," but I am afraid that so far as the relationship between special libraries and their larger college and public counterparts is concerned, it is largely of the host-parasite variety rather than a cooperative one. Cooperation implies more or less equal partnership, but an objective appraisal of the situation reveals that in its relationships with public and college libraries, the special library is much less than an equal partner. Perhaps some of you will consider the term too harsh, but I think it is not an exaggeration to describe the relationship as parasitic.

Let me explain right here that I do not believe this state of affairs is entirely the fault of the special libraries. At least some of the blame for it falls on the college and public libraries. I am assuming, of course, that this host-parasite relationship is not a desirable one. Some of you may well disagree with this point of view.

Interlibrary Loan Cooperation

This unequal relationship is most obvious in the interlibrary loan area. That this creates a problem is demonstrated, for example, by the fact that the Philadelphia Chapter of the Association of College and Reference Librarians is planning an exhaustive study of the field of interlibrary loan cooperation between industrial and academic libraries. I am told by a Philadelphia librarian that the burden of interlibrary loan has increased so much in the larger libraries that an effort must be made to spread the volume more evenly among the libraries in the area. Further evidence in this direction is the fact that the University of Michigan has decided not to lend any journals as of this fall. I believe that a general trend among academic libraries toward a less liberal interlibrary loan policy is inevitable.

All of us, I believe, take it for granted that special libraries do more borrowing than lending, but I don't know that we realize how lopsided this situation actually is. For example, of the total loans made by Lehigh University during the year 1957-58, 64 per cent went to industrial libraries; of the total this library borrowed, only 3 per cent came from industrial libraries. During the same year the University of Michigan loaned 442 books to industrial libraries and borrowed only 10. In addition, it supplied 72 free photocopies, as part of a short-lived experiment to supply these rather than lend recent issues of periodicals.

The question is: Why does this situation exist? An obvious answer is that it is inevitable. Large libraries have many books; small libraries, which the specials usually are, have fewer books; therefore most of the lending must naturally flow from the large academic and public libraries to the smaller specials. Some librarians have decided to accept this in a spirit that amounts to fatalism. One college librarian, commenting to me on the fact that most of his interlibrary loans went to industrial libraries, stated that this did not bother him and went on to say, "It is rather in the nature of things that an academic library has more breadth and depth than a special library."

Personally I do not think that this fatalistic point of view is justified. As a matter of fact, depth and breadth of a library should have little to do with asking it for a loan. When I am in dire need of a treatise on the cultivation of petunias, for example, I look for an outstanding collection on horticulture and don't much care if I find it in some highly specialized small library or in one with depth and breadth. Dr. Maurice Tauber analyzed the situation correctly when he stated:

Paper presented at the New England Library Association Conference, October 17, 1958, at Swampscott, Massachusetts.

Major research libraries have automatically attracted an overlarge percentage of requests simply because the borrowing library, with little or no checking, could assume that the material sought would be found there. These libraries have, in general, responded by lending to the extent of their possibilities, but it is unfair to expect them to lend material much of which can be secured elsewhere. The resources of the large library are needed for the book which is truly hard to find, and the requesting library must learn to distribute its requests among other, smaller libraries which have, nevertheless, resources larger than its own.[1]

I assume that by the phrase "resources larger than its own," Dr. Tauber means larger than its own in the *particular field in which the desired book happens to be.*

I think it can be stated categorically that the majority of titles sought through interlibrary loan are available in one or another special library. The trouble is that neither the academic nor the special library looks to the special for such loans. I don't know whether the average librarian outside of the special library field realizes what an enormous source of literature and what a variety of subject fields the special libraries represent. I wonder, as a matter of fact, whether enough special librarians realize this. *The Directory of Special Libraries,*[2] published by the Special Libraries Association in 1953, lists 2489 libraries and includes information on the size of their holdings and subjects covered. Even subtracting those which are parts of larger public and academic libraries, there are still left about 2000 special libraries covering just about every subject field under the sun. Just to see how many volumes these libraries actually represent, I spent a few minutes with an adding machine and by the time I reached the 500th library in the list, I had counted 1,000,000 volumes. Surely these libraries represent resources too great to be ignored, and yet they *are being ignored* because not enough librarians are aware of their existence.

Strong evidence of this sad fact is that sales figures for the *Directory* indicate that approximately 900 copies were sold to special libraries and less than 200 to college and public libraries. About 250 were sold to book stores, so it is difficult to say where they eventually landed. In other words, less than one-half of the special libraries can consult this source and only an insignificant fraction of college and public libraries can consult it. Obviously, librarians, special and otherwise, prefer to do it the easy way. They would rather appeal to large libraries, where they are reasonably sure to find the book they want without too much effort, rather than take the trouble to locate it in a smaller special library and thus help equalize the interlibrary loan burden.

I have dealt at some length with the interlibrary loan problem for two reasons. First, it is troublesome and demands solution. Second, it is a symptom of a generally unhealthy condition characterized by the fact that there is not enough of the equal-partner kind of cooperation between the special libraries and their public and college counterparts.

Survey Of Special Librarians

In an effort to obtain some indication of how much cooperation does exist, I devised a simple questionnaire, containing six questions, and mailed copies to 50 special libraries in different parts of the United States. I realize that from a statistical point of view this is not an adequate sample. My purpose, however, was not to make a statistical study but merely a sort of spot check. Forty-three questionnaires were returned, so if I did nothing else at least I demonstrated that special librarians cooperate in answering questionnaires. The questions I asked were:

1. Do you participate in any arrangement in your geographic area for buying material in specialized fields?
2. Does the local public library or local college library (if any) have a reasonably good idea of what your library contains?
3. Do you participate in any bibliographic center or union catalog activity in your geographic area (outside of SLA)?
4. Do you receive any requests from college or public libraries for interlibrary loans?
5. Do you receive any requests from college or public libraries for help in answering reference questions in your fields of specialization?
6. Do you exchange duplicate lists with any library?

I also asked for any comments that the librarian returning the questionnaire might wish to make concerning the general problem of interlibrary cooperation. These comments actually proved to be more revealing than the answers to the questions.

The picture presented by the returned questionnaires confirmed what most of us would suspect. There is some cooperation between the special libraries and other libraries on the local level. Although only eight libraries reported that they participated in arrangements for not duplicating acquisitions in specialized fields, 32 reported that other libraries in the area, public and college, had a reasonably good idea of what the special contained. Presumably, this could be interpreted to mean that even where there is no formal arrangement for acquisition in specialized fields, unnecessary duplication is avoided. It is worth noting that a quarter of the special libraries responding indicated that local public or college libraries had *no* idea what the special contained. It is hard to believe that this is possible outside of a large metropolis, where it might be understandable. This condition is especially worth mentioning in view of the public library standards, published in 1956, in which is found the following statement:

> The character and emphasis of the public library collection should be influenced by the existence of other library collections in the community and area. The presence of other libraries specializing in school, college and university service, or in technology, fine arts, or other limited fields should free public library funds for other areas of interest or other applications in these fields. Every effort should be made to develop cooperative plans for the public use of such special collections. The public library should have regular means to keep itself informed about the other book resources in the community and area so that unnecessary duplication will be avoided.[3]

As I stated earlier, lack of equal-partner cooperation is not entirely the fault of the special librarian. There was an interesting comment on this point on the questionnaire returned from one leading industrial science library. The librarian stated:

> I wish the colleges would call on us more often. We use their collections extensively and they are very gracious. However, the two colleges in our area are extremely reluctant to request material from us. Perhaps they prefer a more scholarly atmosphere? Maybe they *want* to be lenders and not borrowers. Sometimes I think the latter is true. They get and keep prestige from industry if they do not borrow.

Local And State Cooperation

While dealing with the situation on the local level, it should be pointed out that in a few places cooperation among various types of libraries seems to be exceptionally good. Among these places can be included Hartford, Wilmington and Kalamazoo. The Kalamazoo picture seems to be so near to the ideal that I am including an excerpt from a letter I received from Alberta Brown, librarian of the Upjohn Company and Past President of Special Libraries Association:

> We have two hospital libraries, a university, two colleges, and one public library in Kalamazoo. The head librarians of each institution get together occasionally to discuss problems which cut across our libraries. There are approximately fifteen special librarians among the group and we get together once a month at lunch to discuss mutual problems. . . . We abstract medical journals here at the company and make an index to them on cards, which becomes in fact an index to current medical literature. We send a set of these multilithed cards to each hospital library so that they have the benefit of the index to use with their own collections and for borrowing purposes. We have a special arrangement with the university and college libraries whereby students may use our library for material not available in their own libraries. In order to eliminate unnecessary service, the head librarian in each institution calls us for the service.

Here is real cooperation and an example of what can be done for the mutual benefit of all libraries in a city.

On the state level a good example of cooperation is the relationship between special libraries in the state and the New York State Library. Mason Tolman, its reference librarian, has described the program in *Library Journal*.[4] The library has recently undertaken the task of strengthening its science collection and in this program has had the advice of a Committee on State Library-Special Library Relationship of the Western New York Chapter of SLA. Among other things, the New York State Library is acquiring all the Russian science and technology journals available in translation. This fact has been well publicized among the interested libraries,

and unnecessary duplication of these expensive publications will be avoided. I should add that the New York State Library is most cooperative in lending material and has recently installed a teletype to facilitate the process. Of course, this is not an example of equal-partner cooperation, since the interlibrary loan flow is almost entirely in one direction. However, the state library people do have a good knowledge of other library facilities in the state and often refer to other libraries requests they are unable to fill.

It may be well to state at this point that I recognize the fact that a state library is tax-supported, and thus privately owned special libraries located within the state have a right, as taxpayers, to use the library's services without obligation. The same is true of the use of municipal public libraries by special libraries within any one city. It's also true that some industrial firms voluntarily contribute financially to both public and college libraries on whose services they depend. However, requests by special libraries for interlibrary loans or other help are not limited by tax unit boundaries, nor are they directed only to those libraries which owe them the service for some other reason. Although there may be instances where one library is under some obligation to another, these do not alter the thesis of this paper.

Cooperation With Bibliographic Centers

In addition to what I was able to learn from special librarians, I was interested in investigating other sources which might shed further light on how much real interlibrary cooperation actually exists. Since the degree to which special libraries participate in bibliographic center activities seemed to offer a measure of such cooperation, I wrote to the 13 bibliographic centers listed in the *American Library Directory* and asked them to what extent special libraries, particularly business and industrial libraries, were involved in their activities. If you want to know how *they* cooperate, I can tell you that I received a reply from every one.

The New Hampshire State Library reported that no special libraries contribute to its catalog, although some of the few industrial libraries in the state do borrow from it. None contribute to the Vermont State Union Catalog either. The North Carolina Union Catalog receives cards from two industrial libraries. The Northeastern Pennsylvania Union Catalog reports that there are no industrial libraries of significant size in its area; the only special library which reports its holdings is the Veterans Administration Hospital. The Cleveland Regional Catalog has six special libraries contributing to it; two of these are business libraries. The Ohio Union Catalog receives reports from public libraries only, with the exception of a few historical societies.

The Nebraska Union Catalog has two special library members, one an art museum and the other an historical society. Its reply included the comment, "There would be some advantages . . . to have business and industrial library collections listed in union catalogs, if the disadvantages to the company were not too great." It is interesting to speculate on what these "disadvantages" might be. The Rocky Mountain Region Bibliographical Center has no business or industrial libraries reporting their holdings to it. Four United States Government libraries, a medical society library and a school of theology do so. No special libraries report acquisitions to the California Union Catalog, although two special libraries in the motion picture field cooperate by checking a monthly list of titles not located in the catalog and report whether or not they have these particular titles.

At the Pacific Northwest Bibliographic Center the only special libraries which report their acquisitions are historical libraries. No industrial or business libraries report, but a number contribute financially to the Center's support and use its services. Mollie Holreigh, the director, added the following information in her letter, "A committee is now at work studying the matter of the scope of Union Catalog holdings and a proposal has been made that selective reporting of special collections of some libraries be adopted. It is felt that a number of industrial research libraries . . . might contribute unique resources of value to the region."

The Union Catalog of the Atlanta-Athens Area in Georgia receives part of its financial support from special libraries and reports that of 26 libraries participating "some 17 could be classified as special." However, the definition of "special" in this case is too broad, since Georgia Tech and Emory University School of Business are mentioned as being in this category. Only three industrial and business libraries are actually represented. For the purposes of this discussion, I believe that libraries connected with academic institutions or special collections that are part of larger public libraries should be excluded from the category of "special libraries."

I have saved reports from two centers for the last because the comments of their directors are especially informative. These two are the Philadelphia Bibliographic Center and the Union Catalog of the Library of Congress.

The Philadelphia Center serves about 100 industrial firms in the area, and the holdings of 13 industrial libraries are included in the union catalog. Of approximately 11,000 inquiries received by the Center in 1957, about a third came from business and industry sources. It is worth noting that the heaviest users were those whose holdings *are not* included in the catalog. Eleanor Campion, the director, emphasized that those industrial libraries that agreed to have their holdings included did so because they were especially anxious to demonstrate their willingness "to share their library assets with academic and related non-profit libraries." However, some industrial libraries have been reluctant to have their holdings included. Miss Campion stated that new industrial libraries established within the past ten years have given the following reasons for not wanting their holdings listed:

1. Specialized collections are needed by their own research staff.
2. Research administrators feel that library operation costs are spent for company benefit only.
3. Librarians are not really interested in extra time involved in preparing and sending accessions.
4. Librarians consider themselves as custodians of highly specialized collections for a unique industrial clientele.

Whether these reasons are adequate excuses for not cooperating in a union catalog is very much debatable. What is less debatable is that even when they are willing to cooperate, industrial libraries often constitute a problem. Miss Campion lists the following facts as tending to discourage the listing of holdings of industrial libraries:

> Quite frequently a new industrial library ceases operations after ten or fifteen years; or moves out of the area; or changes its management or its importance in the company structure; or has a constant turnover in its staff and sometimes nonprofessional management. All these situations are difficult for the Catalog because the quality of the cataloging varies from excellent to poor. The Catalog must jog the librarian to keep the accessions reporting up to date.

Comments in response to my letter made by George Schwegmann, Jr., Chief of the L. C. Union Catalog, support Miss Campion's opinion. Among the factors he lists as discouraging participation in the National Union Catalog by special libraries are "the absence of cataloging controls and the fluctuating character of such collections."

The present situation in the L. C. Union Catalog is that very few business and industrial libraries report their serial acquisitions to *New Serial Titles,* and reports of monographic materials are negligible. Mr. Schwegmann states that "There can be no doubt that a larger number of industrial libraries should be reporting specialized serials to *New Serial Titles.*" He ends his comments with "We are hopeful that your paper will stimulate both cooperation between special libraries and their college and public counterparts and the beginning of an effective participation in the National Union Catalog by at least some of the special libraries."

Present And Future Outlooks

I have presented what I believe to be an objective review of the state of cooperation between special libraries, especially those connected with business and industry, and the larger academic and public libraries. The

conclusions to be drawn from this review are plain.

First, special librarians must awaken to the fact that they cannot indefinitely continue to be the beggars of the library world. If they want to have the facilities of other libraries available to them, they must be willing to make their resources available in return.

Second, special librarians must look to their professional standards; if they want to participate in cooperative library activities as the equals of their professional academic and public library colleagues, the quality of their personnel and their standards of workmanship cannot be inferior. I have already referred to comments on this point by two directors of union catalogs. Another statement on this most important subject was made by Agnes Tysse, reference librarian of the University of Michigan Library. In a letter to me concerning interlibrary loan statistics she wrote as follows:

> A good deal of the service given to industrial firms, however, is not represented in these figures. References are often inadequate and require a good deal of searching. Much of it is for reports, cited in articles, and difficult to identify. Many references turn out to be PB reports, unpublished Engineering Research Institute research, etc., requiring much time and searching in running down. Another time-consuming problem, peculiar to this library, is the confusion in people's minds concerning the difference between the University of Michigan and University Microfilms, Inc. Requests often include only author and title for a dissertation which often enough is not a University of Michigan dissertation at all. In order to identify it properly, much time may be spent in going through *Dissertation Abstracts*.

I think this kind of criticism must be given serious thought by special librarians. On the other hand, the college and public librarians must become more aware that the special libraries constitute an important literature source and that a great many of them do function on a high professional level. By becoming acquainted with their facilities and turning to them for help more often, they will not only help equalize the burden of interlibrary loan but will create, to mutual advantage, a more professional bond between the special librarians and the librarians in other types of libraries.

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The Ideal Arrangement For Maps In A Library

ROBERT C. WHITE, Map Librarian
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THE PROBLEM OF HOW to arrange maps in a library has long been recognized, yet no one uniform scheme for arrangement has been accepted. There are perhaps two basic reasons for this: first, when standardized schemes for classifying books were adopted, little consideration was given to maps because map collections were small and presented no major problem, and second, the physical form of a map and the nature of its information create special problems.

The objective of map classification does not differ from that of book classification since its purpose is to group like maps together. Boggs and Lewis have stated it this way: "Bringing together those maps which the consultant will most frequently want to

This paper was prepared as part of the work of General Seminar 301, Department of Geography, University of Michigan, given in the fall semester of 1957 by Dr. Arch C. Gerlach, Chief, Map Division, Library of Congress.

use together is a feat possible of accomplishment largely by the map classification. For the several aspects in which this is impossible, the catalog must assume the burden." With this aim in mind the ideal arrangement is sought.

The scope of the present discussion is limited to college, university or public libraries whose map collections are 50,000 sheets or more. It is assumed that the library has the means in trained help, funds, space and equipment to make an ideal arrangement. That these assumptions do not hold for all libraries and that compromises from the ideal may be necessary are recognized. Any compromise should be made knowingly because at some future date it may be regretted, and the cost of rectifying an earlier error is rather expensive.

A map collection of the size considered here requires space of its own, either a separate room or an alcove of sufficient size, to bring maps and related material into one location for convenient use. Besides flat maps the collection will include folded maps, three-dimensional maps, rolled maps, globes, atlases and gazetteers and other book material that the map user will desire to be easily available to him. Arrangement of the book material part of the map library, other than locating it near the maps, will be disregarded because that should be in accordance with the library's existing scheme for classifying that sort of material. It would be most confusing to have two classification schemes for books in the same library. Furthermore, book material generally does not present a serious problem; satisfactory schemes for classifying and filing books have been worked out long ago.

Classification Considerations

Why do maps present a problem in classification that cannot be solved by using the scheme employed for books? The most obvious difference between a book and a map is physical make-up, but that does not prevent applying the same classification scheme to them any more than it prevents using the same scheme for a small pocket pamphlet and a large folio volume. Primary interest in a book is subject matter, with interest in authority and date varying in degree. The subject matter presented on a map is also of importance, but no matter what the subject matter is it is always in relation to one other thing—geographic area. In fact if no geographic area is presented, there is no map.

If a map presents physical features, the features are of a geographic area; if it presents coal resources, they are resources of a geographic area. No matter what is presented it is in relation to a geographic area. For this reason it is generally agreed that geographic area is the main subject matter of a map and that therefore geographic arrangement is of first importance in map classification. Other factors of map classification in order of importance are: *1)* subject content depicted; *2)* date; *3)* authority; and *4)* scale. Before discussing specific classification schemes, it would be well to consider each of these factors further.

Geographic arrangement of maps may be accomplished in various ways:

1. Alphabetically by the name of the mapped area, which will eliminate the need for a classification number.
2. Under selected large regions or countries either alphabetically by name or in planned order by symbols. In either of these, there may be sub-arrangements by form, e.g. S for sets, G for general and P for maps of any part of the region.
3. Logical breakdown for large regions into step by step subdivisions for smaller areas. This will keep every separate map under its next larger area, city maps under country, and will require complex notations representing steps in the breakdown.

Subject matter of a map may be depicted in one of the following ways:

1. By a few very comprehensive subject terms, such as general, economic, physical, social and special, with the map filed either directly by the word itself written on the map or by a simple symbol for it.
2. By a larger number of subject terms all on an equal plane, recorded by a simple number.
3. By a logical breakdown of major concepts into their subdivisions.

Date, authority and scale present no particular problem. All may be translated into symbols, and the various ways of doing so are not too different and appear to be a matter of individual preference.

Dewey Decimal Classification

When the Dewey decimal classification scheme was developed, no provisions were made for the classification of maps. However, since this classification is so well known and since it has been modified so frequently to provide for the arranging of maps, it is worthy of consideration.

The simplest way to use Dewey for the classification of a map is to use the history number for the area represented on the map. For convenience the initial number 9 may be omitted. But it soon becomes apparent in a short study of Dewey's schedule that his grouping of political entities for history purposes leaves much to be desired, not only for history but much more so for the arranging of maps. He has no number that may be used for the whole world, or a hemisphere or an ocean area. His number for Germany includes Austria, Hungary, Poland and Czechoslovakia; his number 949 is used to include all European countries to which he did not assign individual numbers, countries widely separated geographically such as The Netherlands, Switzerland and Turkey in Europe. Any classification scheme that groups together maps of widely separated areas is illogical and should not be used for a large collection.

Williams Classification

The Williams classification scheme is one devised by Archibald B. Williams for the Army General Staff Map Collection and is still the basis for the Army Map Service Library which evolved from it. (My information concerning the Williams scheme is taken from a thesis by M. R. Spence.) In this scheme the world is divided and subdivided alphabetically into regions, countries, provinces and so on. Under each region atlases, books, map sets, general maps (those covering a whole country) and part maps (those covering only part of a country or unit) may be classified. Numbers from 1 to 30 are used to designate subjects, e.g., 24 for road maps. These numbers may be divided decimally, e.g., 25 for airports, and 25.8 for air strips.

The notation system consists of a series of letters and numbers containing five parts: *1)* geographic area, *2)* designation of map as sets (S), general (G) or part (P); *3)* subject classification number, *4)* authority and/or date and *5)* scale. An example call number is Europe, P26-1944-2000, which indicates a partial communication map of Europe as of 1944 with a scale 1:2,000,000 (the last three digits of scale always being omitted).

This notation system is almost self-explanatory, the only part that is unintelligible to the uninitiated is the subject number. With a little familiarity it would not take long to learn the 30 subject classification numbers.

For a large map collection the Williams scheme does not appear to be specific enough with respect to either area or subject.

American Geographical Society Classification

To meet its own particular needs, the American Geographical Society has devised a classification schedule for its map collection. This collection is used by the staff in connection with research, by Fellows of the Society and by the general public. For this reason the Society says its arrangement "is adapted to general use rather than to any particular line of approach." The classification scheme is rather simple; general divisions for geographical areas are represented by three-digit numbers that may be subdivided decimally, and form divisions are represented by letters.

In the numbering scheme, for example, 100 represents North America (except United States and Mexico), 200 Latin America, 300 Africa, and so forth. The significance of the form division letters are:

a—As a whole and large parts, chronologically
b—Sets, whether by scale or subject (except as noted below)
c—Local maps, as cities, A-Z
d—Transportation: air routes, roads, touring maps
g—Geology and soils

University of Michigan News Service

The Map Room of the University of Michigan General Library

Using the above notations an air transportation map of Canada would be 120-d and a geology and soils map of Michigan 843-g.

It is apparent that this system is very simple and that all available maps on a particular area can be found readily. However, the lack of subclassification is a distinct disadvantage. To find maps for specific subjects such as coal, population density or hydroelectric plants can only be accomplished through the Society's research catalog; its classification scheme is of no help.

Boggs And Lewis Classification

When classifying maps most advantageously for geographers, historians, economists, technicians or other specialists and students, Boggs and Lewis believe the categories of information desired in order of importance are area, subject and date, with author frequently necessary. Hence they have devised an area-subject classification with the addition of date and, when necessary, author. They feel that a notation in which area is represented by numbers and subject by letters logically follows from their classification scheme.

In this scheme the emphasis is on geographical region, the main criterion being the actual location on the surface of the earth, regardless of political entity or other kind of place name. The notation scheme used is numerical and decimal, three digits with frequently an additional decimal, ranging from 100 through 996.6. The sequence of divisions is from large geographical areas to subdivisions, from world to continents and countries to sections of countries and smaller units. It should be noted that one block of numbers is reserved for oceans and the islands pertaining to them.

In their schedule 000 is used for the universe, 200 and 300 for Europe, 400 for Asia, 500 for Africa, 600 for North America (with exceptions) and so on. The United States is 630, New England 640 and Maine 641, for example. To indicate counties of a state the number 7 is added. Thus 641.7 indicates a map showing the counties of Maine, but if a map is of a specific county, two additional digits are added, e.g., 641.712 is Androscoggin County.

The number 9 is added to indicate city maps; a map of Belgium being 234, a map showing cities in Belgium is 234.9. To designate a specific city, it is necessary to use the "Notation Table for Cities" devised by Boggs and Lewis. It is based on the first letter of the city's name which determines a one-digit number to follow the number 9 in the notation. City names beginning with A-B use .1, C-E use .2, F-H use .3 and so on to W-Z which use .9. Thus Brussels, Belgium, is 234.91 and Westbrook, Maine, 641.99. To prevent conflict between two cities having the same number, an expanded table for city notations is provided. In it Aa-Ak use .11, Al-Aq .12, Ar-As .13, and so forth to Qu-Qz which use .66. If the expanded table were not used, Aachen and Brussels, Belgium,

would both have the same number, 234.91, but with it, Aachen is 234.911 and Brussels 234.918.

Boundary maps are provided for; in fact this is the only scheme which does provide for this type of map. Maps of this kind are always a problem, and Boggs and Lewis's solution to it is to classify the map under the country which comes first in the area classification schedule, e.g., a United States-Canada boundary map would be classified under 610 since in the schedule Canada is 610 and the United States 630.

The subject classification of Boggs and Lewis is based on the letter-decimal plan with 10 main divisions. The first letter establishes the general classification and subsequent letters progressively narrow the scope of the subject. Only as many letters as are needed are used. Thus as a first letter "a" represents general maps, "b" mathematical geography, "c" physical geography, "d" biogeography, "e" human geography and so on. Hence a map which is more specific in its subject matter than human geography, say geography of population, may be more closely classified by adding "c" to the "e" notation. And still closer classification can be obtained, if needed, by adding an additional letter to indicate a still more specific subject.

The date of the information presented on a map is the one used in arranging maps in filing order sequence. When it is necessary to differentiate individual maps, author and title may be used in the call number.

At this point it would be well to look at the complete composition of Boggs and Lewis call numbers. They consist of at least three main items:

1. Three or more digits represent the area covered, e.g., 647, a map of New York State.
2. One or more letters represent the principal subject of the map, e.g., gcc to indicate agricultural regions.
3. Date of the information presented by the map, e.g., 1956.

Putting all these together $\frac{647\ gcc}{1956}$ is the notation for a map of the agricultural regions of New York State as of 1956. Other items sometimes used in the call number when necessary are: author's initial (or that of the publisher) and a title letter, the initial letter of the first word of the title, not an article, in lower case.

To continue the example above, in the notation $\frac{647\ gcc}{1956\ Ra}$, keys have been added to indicate that the map was published by Rand McNally & Company and that its title is Agricultural Regional Map of New York State. In practice, it probably would not be necessary to use the letter "a."

It appears that the Boggs and Lewis classification scheme is complete and detailed. With use the notation system can easily be learned and all maps of a particular area readily found without going to the card catalog. The subject classification breakdown is quite logical. It does require learning a new classification system for maps.

Library Of Congress Classification

In the Library of Congress classification scheme for the classification of maps, as described in its classification schedule published in 1954, there is this important statement: "An essential feature of the map classification is the provision of tables of uniform subdivision for geographic areas by their regions, political divisions, and cities, and for each area on a subject basis."

The numbers in the schedule assigned for maps are 3160 to 9980 and follow those for atlases, thus grouping them next to each other for convenience. Classification starts with celestial globes and maps and then world maps with subdivisions following for hemispheres, continents, countries, regions and states or other political subdivisions. Following land areas the ocean areas are listed. These are subdivided into large regions such as North Atlantic and South Atlantic with further subdivisions into island groups. Unlocalized maps such as theoretical, imaginary and unidentified maps are grouped in the classification schedule after ocean areas.

Each area, large or small, is assigned a block not exceeding five consecutive four digit numbers, with the first number in each block ending either in 0 or 5. For the sake

of simplicity only areas having 0 as the final digit of the first number of its block will be used in explaining the scheme. As an example, consider the area of New York State which has been assigned the block of numbers 3800-3804. The last digit of each number in the block signifies some major aspect presented on a map: 0 indicates a general map, 1 a map that presents a subject, 2 means a regional map, 3 indicates a major political division and 4 indicates cities and towns (this is an exception for the United States for cities and towns of most countries are grouped under country and not under the political subdivision in which they are located). Specifically then, we have:

G 3800—New York State (general map number)
G 3801—New York State
(map subject-area number)
G 3802—New York State (map regional number)
G 3803—New York State (map county number)
G 3804—New York State
(map city and town number)

In the table for area subdivision regions are designated by letters A through Z as are counties and cities. An assigned number is also used with each letter. Examples of this are:

G 3802—New York State (regional map)
.A2—Adirondack Mountains (specified region)

G 3803—New York State (county map)
.E6—Erie County (specified county)

G 3803—New York State (county map)
.E6—Erie County (specified county)
.B9—Buffalo (specified city)

There are 17 major subject divisions lettered A through S omitting I and O in the Library of Congress schedule. For example the letter F represents political geography, G economic geography and K forests and forestry. Each is subdivided using a number designation for more specific aspects of the broad subject. It was noted above that a fourth place digit 1 was used to designate maps presenting subject matter. Hence, a New York State railroad map would be $\frac{G\ 3801}{.P3}$. Maps of smaller areas can also have notations indicating subject matter. For example, a land ownership map of Erie County, New York, would be $\frac{G\ 3803}{.E6G4}$, the second G representing economic geography and the 4 subdivision land ownership.

The foregoing has indicated fairly well the notation system used in the Library of Congress classification scheme. There are still, however, two other elements to be added, date and authority. These can be shown by giving an example of a full notation for a New York State, Monroe County, road map issued by Monroe County Good Roads Committee in 1955: G 3803
.M6.P2
1955
.M7

The .M6 and .M7 are Cutter numbers for sub-area and authority respectively.

Filing Maps

Problems in filing maps and the closely related material that belong in the map library are due to the dissimilarity in form of the different types of material, to lack of protective covers and, to a degree, to the various sizes of map sheets. Atlases, globes, three-dimensional maps, rolled maps, folded maps, folded maps that come as part of and in books and map sets and series are the sort of things that require special consideration. Of course, the filing must follow the classification scheme and be in accordance with the notation system used.

Previously it was mentioned that the map library should follow the general library's scheme for classifying books, regardless of how maps are classified, so as to avoid confusion of two schemes for the same sort of material in the same library. All that need be said here is that pertinent book material should be conveniently shelved in the map room for use in connection with maps.

Globes do not present a problem because generally a library has only a few placed in various locations. Those in the map room should be placed where they catch the eye. This will serve two purposes, one of usefulness and the other of adding attractiveness to the room. A library with a large number of globes will need special space for them either in a section of the map room set off for that purpose or in a conveniently adjoining room.

Three-dimensional maps and rolled maps that are to be left permanently on their rollers must be withdrawn from the grouping provided by the classification scheme because of their distinctive physical form. They should be hung on hooks or placed in racks in space specially provided for them. The order in which they are filed should, of course, follow the classification scheme.

Maps are received both flat and folded. If they are to be filed together, it is obvious that either the folded maps must be unfolded or the flat maps folded. Some libraries fold all their maps to the same size in order to economize on storage space. The British Museum and the Marylebone Public Library in London, for example, follow this practice. It is felt that this economy is not warranted in the light of the disadvantages of having folded maps. A folded map is not as convenient to use as a flat map, and it may be a distinct nuisance when trying to make an overlay from it. But still a greater disadvantage of the folded map is the wear it receives in folding and unfolding.

If it is agreed that maps should be filed flat, the problem is what to do with maps that come folded. They should be unfolded and interfiled in their proper place with other flat maps. Frequently, however, they are folded because of their large size and when unfolded will not fit in the ordinary size map drawer. Whether it comes folded or unfolded, a map too large for the filing cabinet drawer should be dissected so that it will file flat. Among the many libraries that have adopted this practice are the Library of Congress and the St. Louis Public Library.

Then there is the problem of what to do with maps that come folded in books or with other descriptive material, both pocketed and unpocketed. Many such maps are valuable references and should not be hidden away in the book collection with only an entry in the book catalog card, "map." Furthermore, often a map from a pocket of a book becomes badly damaged or completely lost. The map librarian should always have an opportunity to evaluate maps that come with books, and when, in his opinion, they are of sufficient value to be placed in the map collection, they should be removed from the book, unfolded and so placed there. Of course, a cross reference in the book catalog card and in the book itself will need to be made to indicate the map's location. No doubt it will be argued that the user of the book is greatly inconvenienced by having to go to the map library to see a map provided with the book in the first place. The answer, of course, is that a choice must be made between inconvenience or no map at all or, perhaps at best, a damaged map. The more valuable the map, the greater becomes the danger of damage or loss because of the likelihood of greater use. Consideration must also be given to the difficulty or even the impossibility of replacing a map lost from a book.

Perhaps an exception should be made to unfolding maps that can be replaced at little or no cost and that have no historical value to the particular library. Road maps issued by the large oil companies of the United States might be an example of this kind. The vertical file is a good place to keep such maps.

One type of large map that presents a filing problem is the hydrographic chart published by the United States Coast and Geodetic Survey. This chart is too large for the size map drawer in which the bulk of flat maps are filed. Because of its considerable value, the fact that it comes in a series and that dissecting, though often necessary, is not desirable, this chart is justifiably filed separately.

Even though the majority of the flat maps are filed together according to a classification scheme, the user of the map library needs an additional aid besides the catalog to help him find the maps he seeks, particularly maps in sets and series. The library should provide a graphic index, which will readily indicate the availability of the maps in the set or series and also where each is filed. Such an index is especially useful for locating a map that includes parts of two or more geographical areas as is often the case with United States Geologic Survey topographical quadrangles. The index will show under which state the map is filed.

As has been explained, it is frequently necessary to separate some material in the map library from the group with which it is classified. This requires that the user be

ded to the appropriate location to find e material he is seeking. A place entry bol on the catalog card will meet this re- rement. The Newark Public Library uses following place symbols:

Env—Envelope
M. P.—Map platform
H—Hook
S—Sheet

Besides the location symbols, one other aid should be provided in a prominent place near the card catalog. This is a diagram of the map room showing locations indicated by the symbols on the catalog cards.

Conclusion

Which of the classification schemes discussed best accomplishes the purpose of map classification, that is the grouping of like maps together? It was noted that Dewey made no provision for map classification and that only by modification could his scheme be used. By use of his history numbers no logical order or grouping can be obtained, and further history numbers are not provided for many areas of the world. In view of these defects the Dewey scheme is not acceptable.

The Williams classification scheme has a distinct advantage of being simple. However, its designation of geographical areas with alphabetical subdivisions is too broad to provide close grouping of maps that should be filed near each other. A sufficient number of broad subjects are provided by Williams but these cannot be subdivided finely enough to provide adequate close subject classification. A more specific map classification scheme is needed.

In contrast to Dewey and Williams, the American Geographical Society scheme provides a close and logical area grouping of maps with its three number digits that can be subdivided decimally. But, again, close subject classification is lacking, and therefore for the ideal arrangement this is an unsatisfactory scheme.

Boggs and Lewis and Library of Congress both provide for close and logical classification of maps by geographical area and by subject matter. One scheme does not appear to have any particular advantage over the other. However, if a library is using Library of Congress classification for its book collection, then it is only logical that it also use its map classification scheme too.

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Information Retrieval On Automatic Data Processing Equipment

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AUTOMATIC DATA-PROCESSING equipment for information retrieval may be roughly divided into three classes: punched-card accounting equipment, high-speed data-processing equipment and special purpose equipment.

This classification, of course, is not rigid. There are machines that fall between the class of the smaller punched-card accounting variety and the larger high-speed data-processing variety. Likewise, the distinction between general purpose accounting and data-processing equipment and special purpose information retrieval equipment cannot be absolute; there are in-between cases where a general purpose machine has undergone substantial engineering modifications to adapt it to information retrieval needs. But the distinction between the three classes of equipment is, I think, sufficiently real and meaningful to be a useful departure point for discussion. The development of information retrieval methods for small punched-card machines has resulted from a cross-fertilization of new ideas on how to describe library documents and new ideas on how to use machines. The new ideas in document description center around the concept of co-ordinate descriptors; the new ideas in machine usage center around the concept of superimposable codes.

Describing Contents of Documents

Description by co-ordinate descriptors involves abandoning the practice of classifying documents by subject headings broken down into main headings and various orders of subheadings. Instead a document is described by a set of descriptive terms, called descriptors, and all descriptors that apply to the document are considered on an equal footing. The record describing the document lists all the descriptors the cataloger considers applicable. No attempt is made to evaluate the relative importance of descriptors nor to consider one as a subheading of another. Rules, traditions and policies have to be evolved so that descriptors can be used in a reasonably consistent manner. In principle, two persons cataloging the same document should come up with approximately the same set of descriptors. These descriptors should be as consistent as possible with the terminology ordinarily employed by users of the library when specifying the nature of the information they are seeking.

Descriptors may be single words, or they may be phrases or expressions denoting single ideas. The development of a set of descriptors adequate to a particular information retrieval application is the major part of the battle. Existing machines and machine techniques are adequate to mechanizing the search process; evolving adequate descriptor techniques is the crucial problem each library must solve for itself.

In recording the description of a document, descriptors may be spelled out in full or they may be coded into numerical or alphabetic codes. Most machine techniques use numerical descriptor coding. The use of a four digit code would allow for ten thousand descriptors, coded 0000-9999, which is plenty for most applications. Numeric coding usually requires the maintenance of a code dictionary, wherein the code number corresponding to a descriptor can be found.

It is of the essence of the method that it is not necessary to pre-establish all the descriptors to be used. New descriptors can be added to the system, coded and entered into the code dictionary as the need arises.

We will assume the rather drastic simplification that the description, in terms of de-

scriptors, allows of no grammar, syntax or relationship-expression of the descriptors; we have simply a list of applicable topics and ideas. Thus, an article on "The Use of Acids in Glass Manufacture" might be described by the descriptors, Acid, Glass and Manufacturing. An article on "The Use of Glass in Acid Manufacture" would also be described by Acid, Glass and Manufacturing. Thus, when searching for material of the type contained in the first article, unwanted material of the type contained in the second article would also be retrieved. In simple applications of machine searching, using a minimum of equipment, occasional retrieval of irrelevant material may be expected. (It will be shown later that in more elaborate machine retrieval methods it is possible to record and recognize relationships and groupings among descriptors and therefore minimize this type of irrelevant retrieval.)

A typical document might be described by something like eight to twelve descriptors. Some articles will require fewer, some will require more. It is part of the nature of the modern approach that the system impose little restriction on the number of descriptors applied to a document; the librarian should feel free to use as many as seem necessary. Similarly, the number of descriptors in a typical search request might be four or five, but the system should be able to accept requests bearing as many descriptors as needed. For purposes of this discussion, we will suppose that the requestor phrases his request in language natural to him, giving the librarian as much information as possible about his needs, and the librarian then codes the request in terms of the descriptors.

A search request record might look, in principle, something like this:

061058 135901 1327, 1483, 2750, 0377

The first number is the date; the first four digits of the second number identify the person making the request and the last two digits of this number are a suffix code to allow for the possibility that the same person presents several requests on the same date; the remaining four numbers are the descriptors describing the nature of the information desired.

Identifying Documents

It is obviously necessary to have some identification of the documents themselves. In large machine systems, it is quite feasible to have complete identification spelled out in full, i.e., title, publisher, date and so forth, but for smaller systems, compactness of numerically coded identification is desirable.

Let us suppose, as a definite example, that a six digit number for the identification code will be used. (This allows reference to a million documents, which should be more than adequate for most collections; you may prefer to think in terms of a five digit code or a seven digit code if the potential size of your collection so suggests.) We will assume that the identification coding is entirely arbitrary, the numbers being assigned serially as the documents happen to come to the desk for descriptive indexing. This will again usually require the maintenance of a code dictionary, so that given a document identification number, one can look it up in the dictionary and find the title, author and other bibliographical information and the location of the item.

It should be noted that the feature of the identification coding being arbitrary and requiring consultation of a dictionary to fully specify and locate the document, can be bypassed in certain cases. This is so particularly where it is known that the collection consists of individually bound reports whose formats impose no special shelving, filing or storage requirements. In such cases the identification number can be a file or shelf or access number. When the document bearing a certain identification number meets the requirements of a search request, the identification number will guide one directly to the place on the shelves where the document is to be found. But this is a highly special case, and even when it is feasible, it may not be especially useful since it is not usual operating procedure to furnish the requestor directly with all the documents which meet his search specifications but, rather, to furnish the requestor with a list of documents meeting the specifications, from which he may select those he wishes to consult.

Finally, it seems to me against the spirit of the thing to impose requirements on a stor-

age system for the sake of a specious simplification of the retrieval system. It is true that retrieving the identification number, consulting the dictionary and locating the document is a three-stage operation, while retrieving the identification-access number and locating the document is a two-stage operation. But it is necessary to realize that because of the character of automatic information handling, there may be a net gain in using a multiple-stage operation, which can be performed highly efficiently by machines and by personnel who have acquired special systems knowledge, in place of a fewer-stage operation, which can be performed by non-specialists or does not make full use of the specialists' abilities and training.

Let us suppose that in the majority of cases of information retrieval on smaller equipment, one will want to use an arbitrary code identification scheme. Think of the document records as looking, in principle, like this:

010356 | 3149, 5278, 1143, 0027, 0075

The number to the left of the vertical bar is the document identification code. The numbers to the right are the applicable descriptor codes. Both codes are completely arbitrary. There is no implication that a document identified by code 010357 is similar in content to a document bearing code 010356. Similarly for the descriptor codes, there is no implication that a descriptor coded 3149 is similar to the descriptor coded 3148.

Methods of Recording and Searching

What type of records will be needed to incorporate the document descriptions for purposes of searching? There are three more or less distinct types of records or files that may be used for this purpose: document records, descriptor records and unit records.

From the point of view of receiving and describing documents, the document record appears the most natural type. By a document record I mean a record whose identification is the identification of a document, and which contains as detail information a list of all the descriptors that have been applied to the document. Since the process of applying descriptors to a document necessarily creates such a record, at least informally, it seems from this point of view natural to establish such a record in machine-readable form and make it the basis of the search procedure.

The search procedure consists of examining each of the document records to see if the list of descriptors includes the descriptors on the search request. This type of searching will be called "scanning for inclusion-matching." Here the word "scanning" connotes the fact that in principle it is necessary to examine every record. The term "inclusion-matching" is coined in recognition of the fact that what is wanted here is a little different from what is ordinarily called matching. If the search were restricted to documents having only the requested descriptors, this would be matching in the ordinary sense; here it is expected that the desired documents may have several other descriptors besides those of the search request, and hence the term "inclusion-matching" seems fitting.

Secondly, there are descriptor records. By a descriptor record I mean a record whose identification is that of a descriptor, and which contains as detail information a list of all the documents to which that descriptor has been applied. Supposing that documents are identified by a six digit code and descriptors by a four digit code, then a descriptor record might look something like this:

3149 | 002597, 006984, 010356, 023946

This denotes that the four documents whose numbers are shown to the right of the slash have material pertaining to descriptor 3149.

When records of this type are used, the operation of recording the document description into the retrieval scheme consists of posting the document number on the various descriptor records involved. Records of this type are sometimes called inverted records or inverted files, an allusion to the fact that the information is arranged in the order alternate to that which seems natural when describing the documents—from the point of view of searching there is no reason to characterize this type of record as inverted.

When this type of record is used, the search procedure consists of obtaining the descriptor records for the descriptors specified

by the search request and examining them for document numbers common to all the records—these being the documents which meet the search specifications. Usually it is necessary to keep the descriptor records in order by descriptor number to facilitate the process, whether manual or mechanical, of looking up or obtaining the records for the descriptors specified by the search request. Such searching will be called "look-up and compare."

Thirdly, there are unit records. In this type of recording, a separate record is made for each conjunction of document and descriptor. The records may be kept in sort by document number, in which case there is a document file subdivided into unit records, or they may be kept in sort by descriptor number, in which case there is a descriptor file subdivided into unit records.

If the unit records are filed by document, the section of the file devoted to document 010356 would consist of the unit records:

010356	3149
010356	5278
010356	1143
010356	0027
010356	0075

If the unit records are filed by descriptor, the section of the file devoted to descriptor 3149 would consist of the unit records:

002597	3149
006984	3149
010356	3149
023946	3149

An attractive feature of machine-processable unit records is the ease with which they may be sorted into either order—typically the records may be created in document files at the time the documents are being described and then sorted into descriptor files for look-up and compare type searching.

I have now roughly defined the types of records to be studied—document, descriptor and unit—and have similarly defined the types of processes involved—scanning and inclusion-matching, and look-up and compare. Future articles will describe the machines and machine methods available for doing the processing automatically.

NOTE: This is the first in a series of four articles.

Special Libraries Fifty Years Ago

"In this issue we publish a directory of special libraries prepared by Miss Anna Sears, Librarian of the Merchants' Association of New York, and Mr. Herbert Olin Brigham, State Librarian of Rhode Island.

"This list includes about one hundred special libraries devoted to twenty-three general fields. Some of these fields may be further subdivided, so that it is probable that this list includes many more lines of activity or of research than appears. It is hoped that this list will be supplemented by members of the association, to the end that an accurate directory of special phases of library development may be made.

"Special Libraries will publish each month a description of the work and methods of representative libraries in each group. It will be the design of these articles to explain the objects, material and use of the library and the methods of collection, classification and preservation of material. The March issue contained the first of these articles upon the library of the Public Service Commission of New York City, by Robert H. Whitten.

"In this issue we publish a description of the editorial library, by Mr. Paul P. Foster, Librarian of the Youth's Companion. The methods described are the kind which are effective for ready reference, such as demanded in a newspaper office.

"Information as to how far such libraries have been developed by the leading newspapers and magazines is not available. It is to be hoped that the list of special libraries may be supplemented as a result of this issue by complete data on the development of editorial libraries. Such libraries are essentially general in the scope of their material, but highly specialized in regard to its character and classification. They serve the same reference function for the whole field of knowledge which the legislative and municipal reference libraries serve in their limited fields.

"Newspapers and magazines, which are devoted to particular interests, find that a special library is a business asset. Efficient methods in editorial libraries, like those explained by Mr. Foster, cannot fail to raise the character of journalism."

SPECIAL LIBRARIES, April 1910, p. 25

Planning The New Library:
A. E. Staley Manufacturing Co.

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THE A. E. STALEY Manufacturing Co. has started construction of a large new research building to be completed in 1960. Within three years the technical information center will have made the transition from its establishment to its operation in beautiful, spacious quarters in this new building.

Planning a technical information center in a new situation differs radically from expanding a technical library already operating with a staff. In the case of the Staley Co., research management is new, the research pace is accelerating, a great part of the research staff is new and the information center staff itself is newly employed.

The Staley Co. has been in the corn processing business since 1909 and is a pioneer in soybean processing. Chemists began piling up their literature in the early years of the company and, in 1932, space was assigned as a library. It has been under the direction of library committees and stenographer custodians since then, except that in 1946-47 a librarian was employed who cataloged the collection by the Library of Congress classification system.

This library, now about 7,000 volumes, was the base of the information center established in the fall of 1957. Until the completion of the new building we, with the laboratories, are in the administration building. The library is a pleasant 20 x 60 foot room located in the center-front of the third floor, in nice relationship to the laboratories, which occupy the east wing of the third and fourth floors.

There were three concurrent projects when the technical information center was organized: *1)* organization of services with space for a staff to work; *2)* redistribution of the library floor load; and *3)* planning the technical information center quarters in the proposed research building. The first two projects were urgent.

Three handsome, very heavy, bronze chandeliers for lighting the two-story lobby hang from the present library floor. The heavy shelving was located in the center of the room with aisles along the walls. The room is composed of three 20 x 20 foot modules, but there were three doors and only one desk space. The symbols (X, Figure 1), are the stress points where the chandeliers hang, which the building engineers had requested be given immediate attention.

The present arrangement has the stacks along the steel supporting beams of the modules and along the supporting walls. The three open areas above the chandeliers are utilized for the basic necessities: an abstracts searching section, a staff work area and a reading room. Some reading room space had to be sacrificed to the patents collection, a 3-M reader-printer, a copying machine and a couple of staff desks. This plan leaves the floor stress areas either spanned by a long table or occupied by light steel desks away from the centers of stress.

The center door was closed but we hope to leave the door to the abstracts section open. It helps give the abstracts section a pleasant uncrowded effect. The remainder of the library is packed according to the nine-inch squares on the vinyl floor, and materials are stored on three floors. The journal holding record gives the location of the older parts of the long journal runs we stored.

Maximum usage of a given space is one thing; tearing down an old crowded library and reassembling it is a different matter. In our case the immediate problem was load redistribution on the floor. We found five different types of metal shelving. No two types could be used in the same range, and variations existed in apparently identical types so they were difficult to assemble. It took eight days to complete the work and place the books back onto the shelves. Only one sec-

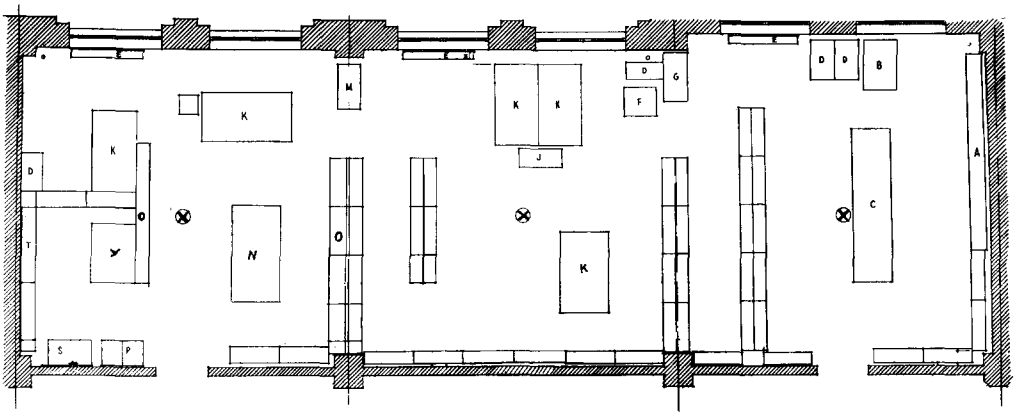


Figure 1: Floor plan of the present library of the A. E. Staley Manufacturing Co.

A. Abstracts section
B. Uniterm Index to U. S. Chemical Patents
C. Table
D. Vertical files
E. Radiators
F. Supply cabinet
G. Journal holding record
J. Mail delivery
K. Desks
M. Catalogs
N. Reading table
O. Journal display
P. Classed patents file
S. Thermofax book-copier
T. Patents
V. 3-M reader-printer

tion of shelving was not disturbed. *Chemical Abstracts* remained against the end of the room, and the chemists continued to use them through the whole remodeling process!

After rearranging the present library, we turned to the plans for the new building. Design data for the technical information center had already been prepared for the architects, and during the interval before they sent their initial proposal for the layout, we did more research on structural fundamentals.

Previous experience in moving from an old crowded library into a spacious new one, which had some unexpected faults, was a spur to research. We also visited libraries where the librarians were cordial and helpful. We would like to have attended the Institute on Library Planning held by the New York Chapter of SLA, but it came just after plans had to be ready.

Reference to the literature and visiting libraries is a great help in making plans, but often the heart of a problem is not touched. Conferences seem to be the most fruitful source of ideas, but there is too little time for small discussion groups having the same interests. We need something like the Gordon Conference. Actually the greatest help comes from talking with the thoughtful, interested men in your own company. They have not made the decision to advance in research without giving serious thought to their technical information and communication needs. It is most necessary to know their philosophy in regard to the research man's use of the literature.

Our information center services the entire company. The distance from large metropolitan research libraries requires that we have a sound and fairly extensive collection in the areas of main research interests, which are organic chemistry and biochemistry, and smaller collections in other areas of company interest. The journal collection, while good, must be supported by union lists of serials to provide access to the thousands of chemistry journals abstracted. The physical layout of the plant and the customs of the company indicate a central research library is needed with special collections located close to the users, e.g. chemical engineering in the pilot plant and a business library in the administration building. The Law Division also has a library.

The technical information center has been planned as an active contributing force in the research program. As a working unit of the Research Division, the center is granted

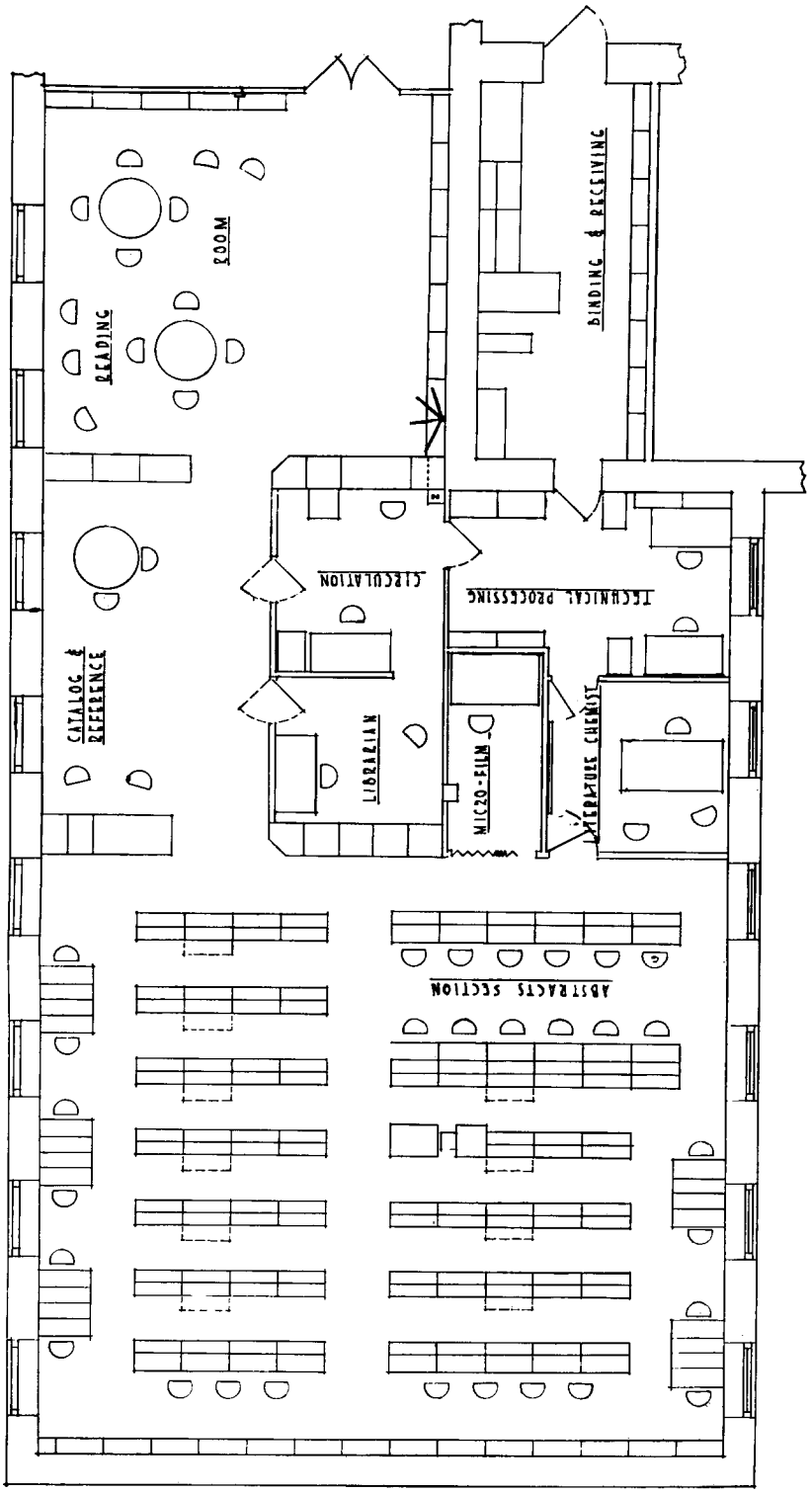


Figure 2: Floor plan of the proposed new library of the Technical Information Center, to be completed in 1960.

the same freedom to experiment as the research staff. This philosophy permits flexible planning. Within the limits of reason and our share of the budget for the new building, we have planned for present needs and extrapolated for ten years. This means the forecasting of the possible activities of the group as well as its housing.

The research staff will probably increase to about 200 individuals. It has been decided that study areas can be most adequately provided in the library. We must provide for exhaustive literature research and for work areas where the various types of literature can be consulted. The seating space and its distribution was arrived at empirically: basing our estimate of the number of research men to be seated at one time as one out of five, we think we have allowed for use from other divisions during the research development period. The flexible plan will have to accommodate other developments.

We were encouraged to incorporate in the original planning provisions for expansion. Our services will develop; we are, for instance, interested in machine retrieval of information. We went through several stages in planning, but it was the expansion allowance that moved the library from the second floor to the first, from a split-level with a mezzanine to a one-level floor.

There is plenty of outdoor area and an extension can be added to the library wing at any time. It was thought to be expedient, however, to allow storage room in the basement. Provisions for this adaptation are the drop-out floor panels located in *1)* the microfilm room and adjacent corner of technical processing, where a stair and book lift can be installed, and *2)* in the off-center back of the library where another stairway is planned. Except for the walls of the module assigned as receiving and binding, all walls are movable.

The plans as finally approved, Figure 2, were the result of cooperation between architects, research administration, company engineer and librarian. The librarian held countless conferences with the research men, and the plans reflect many of their ideas, among them the glare-reducing glass in the windows. The engineer's help was without parallel, defining company building policy, suggesting new materials and acting as liaison between all parties.

The library will occupy the east wing of the ground floor in the new four-story building. This location is at the hub of the building, providing central access from all the laboratories.

The locations of other facilities, flow of traffic and use of the reading room induced us to place the reading room at the library's entrance. This arrangement puts the circulation and reference staff on one side and the stacks, study and research areas beyond in a quiet zone. We concentrate the catalogs, reference, circulation and current periodicals for service convenience and reduction of traffic in the research areas. The entire area, back to the cross aisle, will be carpeted, lighted and decorated to unify it.

In the reading room periodicals will be displayed on wall units. The hinged bulletin board will occupy as little space as possible yet provide for the subject division of materials. Bulletins and posters from different organizations in the company tend to overwhelm library materials on a board.

The abstracts section will be in a quiet area which can be expanded. Carrels are to be placed by the windows along the stacks at the request of the research men. A copying machine will be located off the center aisle for their use.

We expect to place unbound journals in a section of the slotted pamphlet shelving across the back of the library. The collection of trade literature will be placed in another section of this shelving. The last ranges in the stacks will be five feet from the wall shelving and will be provided with hanging carrels on the back. Chairs here will allow additional work and study space.

The working area of the information center will occupy about 1,000 square feet of the total 3,700 square feet. This should be about right, though some conveniences were left out to square it up architecturally.

The literature chemist will be located adjacent to the abstract section because of his research. This will also conform to the idea we have of using the service points as a shell around an internal work center. The receiving room, close to the elevator and opening

VITAL STATISTICS FOR A. E. STALEY MANUFACTURING CO.
TECHNICAL INFORMATION CENTER

Total square foot area in present location	1,200
Total square foot area in new building	3,700
Staff (incomplete)	
Professional	3
Nonprofessional	1
Employees served	3,000
Volumes (books and bound periodicals)	7,000
Current journal subscriptions	216
Current services: Reference, literature research, book circulation and journal routing, copying service, three internal publications including an abstract bulletin.	
Special equipment: 3-M reader-printer; Thermofax book copier	

off the laboratory corridor, will have a four-foot door. Its width is convenient for hand-truck passage and it will be divided in half so that mail can be delivered to an inside bin from the corridor. Twelve-inch shelving will be placed down one side of this room; the other side will be fitted with a hood and bench facilities. This room can be adapted to various equipment.

Our most recent acquisition in equipment is a 3-M reader-printer. We are using it in conjunction with a 35mm camera for special duplicating problems and we expect to use it to reduce time spent for selecting, ordering and filing patents. University Microfilms is developing a film subscription to patents indexed in the Uniterm Index of U. S. Chemical Patents.

In chemistry the fastest growth of the literature is in journals, and these take priority in planning. The increasing availability of technical journals on film, in conjunction with subscriptions, and the 3-M reader-printer have influenced us to turn to film even in planning new facilities. We find the technical man's aversion to microcopy greatly reduced when he can make a full-sized copy anytime.

General features incorporated in our new plans are: *1)* dry fire protection system; *2)* 150 pounds per square foot live load over the entire floor; *3)* vertical as well as perimeter air conditioning; *4)* a 75 foot candle lighting level; *5)* acoustical control of noise; and *6)* glare-reducing window glass.

There are many decisions still to be made on the furnishings; this contract is separate from the building contract. We plan, however, to use stock library equipment.

No information or library service is ever static, and therefore, we have planned a flexible facility. As we look out the windows at the big red construction trailers on the new site, we believe we have planned well for a dynamic information service.

Coming Events

A LIBRARY BUILDINGS AND EQUIPMENT INSTITUTE will be held at the University of Maryland in College Park Thursday evening June 18 through Saturday evening June 20, immediately preceding the ALA Conference in Washington, D. C. Sponsored by the Section on Buildings and Equipment of the Library Administration Division of ALA, the Institute will include four general sessions and three periods of specialized group meetings. In addition there will be a display of building plans and materials. The registration fee, payable in advance, is $26 and includes room and board; the ALA Section fee is $10 payable on arrival. All reservations must be made in advance. For information about accommodations, registration, transportation and the program write Director of Institutes, University College, University of Maryland, College Park, Md. Address general inquiries to Keith Doms, Chairman, Section on Buildings and Equipment, Carnegie Library, Pittsburgh, Pennsylvania.

This Works for Us . . .

Multilithed Catalog Cards

The item on Multilithed catalog cards by Louis A. Schultheiss, which appeared in the May-June 1958 issue of SPECIAL LIBRARIES, p. 223, has undoubtedly aroused considerable interest. As Multilithed catalog cards have been used by the library of Aluminium Laboratories Limited, Kingston, for the past ten years, it is felt that a report of the experience gained and the method of preparing the cards there may prove a useful corollary to Mr. Schultheiss' remarks.

Originally, main entries for three documents were typed vertically down the center of each mat, using a standard typewriter. The mat was then run off in the printing room on card stock perforated in strips of three. When the cards were received in the library, the tracing was typed on the reverse of the author card, and added entries were typed on the other cards as required.

Although significant amounts of typing time were saved by this method, in 1954 it was decided that even greater economies could be effected by the adoption of the side-margin type of catalog card. In order to accommodate both tracing and main entry on the face of the card, it was necessary to use a microtypewriter. As such machines are normally equipped with a wide carriage, it was possible to insert the mat sideways and to type entries for four documents on each mat. The following space guides were worked out for Multilith DupliMAT masters:

Horizontal:

Start at 6 (beginning of tracing)
1st tab: 19 (beginning of author entry)
2nd tab: 36 (beginning of tracing for second card)
3rd tab: 49 (beginning of main entry for second card)

Vertical:

Start at 83 (first line of upper entries)
46 (first line of lower entries)
End at 11

In the interests of economy, an effort is made to type on any one mat entries for four documents requiring approximately the same number of cards. The mats are run off on the Multilith machine, the number of sheets printed in each case depending on the entry requiring the greatest number of cards. The card stock consists of sheets six inches by ten inches, perforated in both directions to make four cards three inches by five inches, each with a hole punched in the appropriate place. Such stock may be ordered from most stationery suppliers in a quality closely approximating that of standard catalog card stock but light enough to be run easily through the Multilith machine.

As the added entries are shown on the face of the side-margin card, when the cards are received by the library all that is required is to underline the heading under which each card is to be filed. Red pencil is used to underline subject added entries, and blue pencil for author and series added entries.

Printing has also made feasible the preparation of cards in sufficient quantity for distribution to other libraries in the Aluminium Limited Group of companies. Cards are now being issued with research reports from the three centers of Aluminium Laboratories Limited in Arvida, Quebec; Kingston, Ontario; and Banbury, England. In addition, an exchange of cards for patents has been set up between the Kingston and Banbury laboratories. In 1957 these arrangements reduced by approximately 500 the number of documents cataloged by each library.

It is suggested that any library which has Multilith or equivalent printing facilities at its disposal will find it economical to reproduce catalog cards. Also, large companies may avoid duplication in cataloging documents held in common by several libraries.

MOIRA C. JONES, Librarian
Aluminium Laboratories Limited,
Kingston, Ontario, Canada

SLA PUBLICATIONS

Cumulative Statement on Publications in Print as of December 31, 1958

Date	Name of Publication	Cost*	Number Printed	Inst. & Review Copies Given	Copies Sold	Total Receipts To Date
1949	*Aviation Subject Headings*	$ 552.99	1,000	254	411	$ 700.49
1949	*Brief for Corporation Libraries*	790.26	1,500	412	992	1,652.66
1949	*Creation and Development of an Insurance Library*	411.59	1,000	252	525	977.20
1949	*Subject Headings for Aeronautical Engineering Libraries*	1,373.51	1,000	225	533	2,037.87
1950	*Contributions Toward a Special Library Glossary*	350.14	1,000	405	419	489.44
1951	*Technical Libraries, Their Organization and Management*	9,032.37	5,077	520	3,993	22,864.92
1951	*Nicknames of American Cities*	864.10	1,500	19	1,304	2,269.34
1953	*Source List of Selected Labor Statistics*	1,010.47	1,000	33	711	1,120.06
1953	*Correlation Index Document Series and PB Reports*	4,173.19	1,000	14	741	6,052.50
1953	*Directory of Special Libraries*	7,505.11	2,090	19	1,616	11,962.39
1954	*Map Collections in the U. S. and Canada*	1,024.51	1,000	22	717	1,855.74
1954	*Subject Headings for Financial Libraries*	1,314.21	1,000	23	434	1,725.00
1955	*Libraries for Research and Industry, SLA Monograph No. 1*	3,226.37	2,060	27	1,926	4,899.45
1955	*Bibliography of Engineering Abstracting Services*	992.59	1,202	20	987	1,158.90
1956	*Handbook of Scientific and Technical Awards in the U. S. and Canada, 1900-1952*	8,370.96	2,000	44	906	7,701.30
1956	*Handbook of Commercial, Financial and Information Services*	3,599.31	2,000	51	1,669	7,077.50
1957	*Bibliography of New Guides and Aids to Public Documents Use, 1953-1956*	1,173.85	1,026	33	953	1,133.25
1957	*National Insurance Organizations in the United States and Canada*	1,106.44†	1,009	39	441	1,193.50

* Cost of handling now included.

† $37.31 of this cost represents a share of the profits paid to the Insurance Division.

Why Work Standards?

HELEN E. LOFTUS, Chairman
Division Relations Committee

IT IS NOT INTENDED that this discussion should provide an answer to the question posed in the title. The primary objective is to stimulate the thinking of SLA members for or against the development of standards for special libraries. In addition, it is hoped that they will contribute their thoughts to their Divisions' round-table discussions on the subject during the Convention in Atlantic City. These discussion groups are intended to provide a means for developing a common understanding regarding the concept of work standards and to provide a forum through which the membership of the Association may indicate their wishes as to the direction future activities of the Association should take in relation to a standards program.

Establishing standards for any activity is not an easy job, and in the beginning every professional association that has undertaken the task has been overwhelmed with the enormity of the assignment.[1] The American Library Association spent five years developing new minimum standards for public library service,[2] and after two years of operation under these standards, they are currently in the process of re-evaluating them.[3, 4]

If a dozen librarians were asked to outline their understanding of what work standards mean to them, there would be, very likely, as many different definitions of the concept. Anything that on the surface suggests standardization or sameness is immediately in conflict with the basic and fundamental philosophy of the special librarian. The reason for being of every special library is to serve the special information needs of a particular organization. How then is it possible to develop standards applicable to all special libraries?

Perhaps work standards is not the most appropriate terminology for our purposes. A more compatible description of the objective toward which we are moving might better be expressed as the development of standards of service and performance.

Every library has standards of some sort since the tendency is to inherit or adopt standards of operations based on what has been done in the past. These standards provide the foundation for an informal program of standardization for the individual library. The question now is whether or not the Association wishes to undertake a formal program to determine what the standards of service and performance should be for all special libraries and then to strive to have them accepted and followed by all special librarians.

Essentially there are two types of work standards: quantitative standards and qualitative standards. Each has a place in evaluating library operations. In quantitative standards, the principal consideration is the number of units produced in a given period of time. For example, a quantitative standard may call for typists to produce a certain number of catalog cards each day. With qualitative standards, the principal consideration is the level of efficient performance and service a well organized and efficiently managed library should provide under a given set of circumstances.

There are many activities in the special library for which it would be difficult to develop quantitative standards.[5] Among these are reference work, cataloging and abstracting. Standards for these activities on the whole must be derived from value judgments based upon the experiences of many special librarians in many special libraries over a long period of time. Before standards can be developed for these activities, much data must be gathered, analyzed and evaluated. It will require sharing results of studies already completed as well as active participation in surveys to be undertaken. The success of a formal standards program would require the cooperation and coordination of the efforts of the entire membership over a long period.

Dr. E. C. Schleh, discussing the importance of control in executive action in his

book *Successful Executive Action,* made the following statement, "Every job, no matter what it is, needs some kind of standard. But you can't set up standards for a job until you know what results you expect from it. Deciding the results you expect from a job leads you to standards of performance for it."[6]

He suggests that the answers to the following two questions and the appraisal necessary to arrive at the answers to these questions will automatically lead to some kind of an over-all standard for every activity. The questions are: *1)* What do we hope to accomplish through this activity? and *2)* What do we expect it to do for us?[7]

In response to the statement that standards cannot be set for a particular type of work, Dr. Schleh suggests that what these people are saying in effect is that their activity is not expected to accomplish anything for the organization of which it is a part.[8]

One need only substitute the word special library in the above discussion to emphasize the appropriateness of these comments in our consideration of standards.

Do we know what management expects of the library? Do we presently have any way of determining whether or not we are being successful in our efforts to provide an efficient and effective service?

Can we as special librarians say that the job that is being done in our libraries is the job that needs to be done?[9] Is the fact that management is satisfied with what is being done the answer that should be accepted in response to this question? How are we going to know the answer as long as there are no standards against which we can compare and measure?

How are formal standards of performance to be established? The following plan of attack might be used: *1)* list the major functions of the library, *2)* define these functions in detail and *3)* formulate a standard for each function listed by answering the two questions previously posed. As indicated earlier, judgment will play an important role in developing a formal standard of performance for many library activities. The question then arises whether or not standards based solely on value judgments are adequate. If not, in what areas and to what extent should we strive to develop quantitative standards?

These are but a few of the questions which should receive careful consideration before a formal standards program for special libraries is undertaken. Your Division round-table discussion groups will provide an opportunity for you to explore these and many other aspects of the question, why standards?

CITATIONS

1. Developments on Standards for Statistics. *The American Statistician.* February 1955, p. 4.
2. AMERICAN LIBRARY ASSOCIATION. *Public Library Service: A Guide to Evaluation and Minimum Standards.* Chicago: The Association. c1956.
3. MARTIN, L. A. Do The Standards Come Up To Standard? *ALA Bulletin,* November 1958, p. 755.
4. ZIMMERMAN, C. R. Using the Standards in Studying Library Needs. *ALA Bulletin.* November 1958, p. 760.
5. WASSERMAN, P. Measuring Performance in a Special Library—Problems and Prospects. *Special Libraries,* October 1958, p. 177.
6. SCHLEH, E. C. *Successful Executive Action.* Englewood, N. J.: Prentice-Hall, Inc. c1955, p. 28.
7. *Ibid.,* p. 29.
8. *Ibid.,* p. 29.
9. STEVENSON, C. G. Work Measurement in Technical Information Activities. *Special Libraries,* November 1956, p. 409.

Advisory Committee On Classification For Anglo-American Law Formed

The Library of Congress, the American Association of Law Libraries, the Association of American Law Schools and the American Law Institute have formed a joint committee of specialists to advise the Library of Congress on the development of a classification scheme for the literature of Anglo-American law as a part of Class K. Meetings of the committee will be convened through a grant of $4,500 to LC from the Council on Library Resources, Inc.

NOTICE OF ANNUAL BUSINESS MEETING

As required by Bylaw VIII, Section 1, notice is hereby given that the Annual Business Meeting of Special Libraries Association will be held **Wednesday morning, June 3, 1959,** at Chalfonte-Haddon Hall, Atlantic City, New Jersey, with the Annual Convention of the Association.

MARIAN E. LUCIUS, Executive Secretary
MARGARET H. FULLER, President

New York Chapter Libraries

Most of the libraries in the New York Chapter are located in the Boroughs of Manhattan, Brooklyn, Queens and the Bronx with a few in Westchester, Nassau and Suffolk Counties.

Direct service is available from Atlantic City to New York City either by the Pennsylvania Railroad or by the Lincoln Transit Company or the Public Service Coordinated Transport Company bus lines. Travel time is approximately three hours.

If you are driving to New York City, map information will be available at the Information Desk at Convention Headquarters. The major oil companies such as Socony, Esso and Gulf have available excellent maps of the New York Metropolitan area. Many of these can be obtained from service stations near the Lincoln and Holland Tunnel approaches to Manhattan. Because overnight parking facilities in New York City are always crowded, it is best to check with your hotel in advance as to availability.

Following is a list of New York Chapter libraries that will be open to SLA visitors on Thursday and Friday, June 4 and 5, 1959. In most cases, it would be advisable to contact in advance the librarians of the libraries you plan to visit so that proper arrangements can be made. Unless otherwise specified, all libraries listed below are located in the Borough of Manhattan.

AMERICAN BIBLE SOCIETY
Margaret T. Hills, Librarian
450 Park Avenue
Plaza 9-4300
Open: 9 a.m.–5 p.m.

AMERICAN CRAFTSMEN'S COUNCIL
Joan Carvajal, Librarian
29 West 53rd Street
Circle 6-6840
Open: 2–5 p.m.

AMERICAN GEOGRAPHICAL SOCIETY
Miss Nordis Felland, Librarian
Broadway at 156th Street
Adirondack 4-8100
Open: 9 a.m.–4:45 p.m.

AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS
Miss K. I. Michaelsen, Librarian
270 Madison Avenue
Murray Hill 4-3410
Open: 9 a.m.–5 p.m.

AMERICAN IRON AND STEEL INSTITUTE
Mrs. Margaret H. Fuller, Librarian
150 East 42nd Street
Oxford 7-5900
Open: 9 a.m.–5 p.m.

AMERICAN MANAGEMENT ASSOCIATION
Elizabeth B. Farrell, Librarian
1515 Broadway, Times Square
Judson 6-8100
Open: 10 a.m.–4 p.m.

AMERICAN MERCHANT MARINE
Marine Library Association
Axel E. Landerholm, Librarian
45 Broadway
Bowling Green 9-0200
Open: 9 a.m.–5 p.m.

AUSTRALIAN REFERENCE LIBRARY
Mr. T. D. Sprod, Librarian
Australian Consulate General
636 Fifth Avenue
Circle 5-4000, Ext. 89
Open: 9 a.m.–5 p.m.

BANKERS TRUST COMPANY
Margaret Siegmund, Librarian
16 Wall Street, Room 2418
Rector 2-8900
Open: 10 a.m.–4 p.m.

BATTEN, BARTON, DURSTINE & OSBORN, INC.
Aina Ebbesen, Librarian
383 Madison Avenue
Eldorado 5-5800
Open: 10 a.m.–4 p.m.

BELL TELEPHONE LABORATORIES, INC.
New York Laboratory
Loretta J. Kiersky, Librarian
463 West Street
Chelsea 3-1000, Ext. 3443
Open: 9 a.m.–5 p.m.

BRITISH INFORMATION SERVICES
Ruth Isaacs, Librarian
45 Rockefeller Plaza, 24th Floor
Circle 6-5100
Open: 10 a.m.–5:30 p.m.

BROOKHAVEN NATIONAL LABORATORY
Research Library
John P. Binnington, Librarian
Upton, Long Island, N. Y.
Yaphank 4-6262
Open: 8:30 a.m.–5 p.m.

BROOKLYN MUSEUM LIBRARY
Michele Chandless, Acting Librarian
Eastern Parkway
Brooklyn 38, N. Y.
Nevins 8-5000
Open: 10 a.m.–5 p.m.

CHASE MANHATTAN BANK
Annchen Swanson, Librarian
18 Pine Street
Hanover 2-6000
Open: 10 a.m.–5 p.m.

CHEMISTS' CLUB
Dr. A. D. Duca, Librarian
52 East 41st Street
Oregon 9-6382 or 9-6383
Open: 9 a.m.–5 p.m.

COLUMBIA UNIVERSITY
Avery Architectural Library
James Grote Van Derpool, Librarian
University 5-4000, Ext. 443
Open: 9 a.m.–12 noon

COLUMBIA UNIVERSITY
Fine Arts Library
Mary W. Chamberlin, Librarian
University 5-4000, Ext. 525
Open: 1–5 p.m.

COMMUNICATIONS COUNSELORS, INC.
Mrs. Elizabeth Casellas, Librarian
750 Third Avenue, 21st Floor
Oxford 7-7330, Ext. 7910
Open: 9:30 a.m.–1 p.m., 2–4:30 p.m.

CONSOLIDATED EDISON COMPANY
Josephine I. Greenwood, Librarian
4 Irving Place
Open: 9 a.m.–5 p.m.

CONTINENTAL INSURANCE COMPANY
Dorothea M. Sommer, Librarian
80 Maiden Lane
Open: 9 a.m.–5 p.m.

COOPER UNION MUSEUM LIBRARY
Miss Gerd Muehsam, Librarian
Cooper Square
Algonquin 4-6300
Open: 10 a.m.–5 p.m.

CORNELL UNIVERSITY MEDICAL COLLEGE
Anna Frances Burke, Librarian
1300 York Avenue
Open: 10 a.m.–4 p.m.

COUNCIL ON FOREIGN RELATIONS
Ruth Savord, Librarian
58 East 68th Street
Lexington 5-3300
Open: 10 a.m.–4 p.m.

DESIGN CENTER FOR INTERIORS
Regina Marrus, Librarian
415 East 53rd Street
Plaza 3-5550
Open all day

DUN AND BRADSTREET, INC.
Harriet L. Taylor, Librarian
99 Church Street
Digby 9-3300
Open: 9 a.m.–5 p.m.

ENGINEERING SOCIETIES LIBRARY
Ralph Phelps, Librarian
29 West 39th Street
Pennsylvania 6-9220
Open: 10 a.m.–9 p.m.

FEDERAL RESERVE BANK OF NEW YORK
Janet Bogardus, Librarian
33 Liberty Street
Rector 2-5700, Ext. 435 or 673
Open: 11 a.m.–4 p.m.

FREE EUROPE COMMITTEE LIBRARY
2 Park Avenue
Lexington 2-8902
Open: 9 a.m.–5 p.m.

FRICK ART REFERENCE LIBRARY
Mrs. Henry W. Howell, Jr., Librarian
10 East 71st Street
Butterfield 8-8700
Open: 10 a.m.–4 p.m.

GRAND LODGE, F. & A.M. LIBRARY AND MUSEUM
Wendell K. Walker, Librarian
71 West 23rd Street
Oregon 5-3720
Open: 9 a.m.–8 p.m.

HANOVER BANK
Nanette H. Copeland, Librarian
70 Broadway
Hanover 2-3300, Ext. 638
Open: 9 a.m.–5 p.m.

HISPANIC SOCIETY OF AMERICA
Jean R. Longland, Librarian
Broadway between 155th & 156th Streets
Watkins 6-2234
Open: 1–4:30 p.m.

INSTITUTE OF LIFE INSURANCE
Elizabeth Ferguson, Librarian
488 Madison Avenue
Plaza 9-8520
Open: 10 a.m.–4 p.m.

INSURANCE SOCIETY OF NEW YORK
Harry S. Weeks, Librarian
107 William Street, 14th Floor
Worth 2-4111
Open: 9 a.m.–5 p.m.

INTERNATIONAL NICKEL COMPANY
Mrs. V. B. Seidel
67 Wall Street
Whitehall 4-1000
Open: 9 a.m.–5 p.m. June 4 only.

LEHMAN CORPORATION
Mrs. Lillian S. Jory, Librarian
1 South William Street
Bowling Green 9-3904, Ext. 51
Open: 9 a.m.–5 p.m.

MCCALL'S MAGAZINE
Miss Marion Rynn, Librarian
230 Park Avenue, Room 703
Murray Hill 6-4600
Open: 9:30 a.m.–4:30 p.m.

MCCANN-ERICKSON, INC.
Katherine Dodge, Librarian
485 Lexington Avenue
Oxford 7-6008
Open: 10 a.m.–4 p.m.

MCGRAW-HILL PUBLISHING COMPANY, INC.
Rose Boots, Librarian
330 West 42nd Street
Longacre 4-3000, Ext. 8225
Open: 9 a.m.–5 p.m.

MANNES COLLEGE OF MUSIC
Mortimer Davenport, Librarian
157 East 74th Street
Regent 7-4476
Open: 9 a.m.–5 p.m.

MERRILL LYNCH, PIERCE, FENNER & SMITH, INC.
Mrs. Elizabeth Gibson, Librarian
70 Pine Street
Whitehall 4-1212
Open: 9 a.m.–5 p.m.

METROPOLITAN LIFE INSURANCE COMPANY
Miss E. Fair, Librarian
1 Madison Avenue
Oregon 9-2211, Ext. 6479
Open: 9 a.m.–5 p.m.

METROPOLITAN MUSEUM OF ART
James Humphry III, Librarian
Fifth Avenue at 82nd St.
Trafalgar 9-5500
Open: 10 a.m.–4:30 p.m.

MUNICIPAL REFERENCE LIBRARY
Eugene J. Bockman, Librarian
Room 2230 Municipal Building
Chambers and Centre Streets
Whitehall 3-3600, Ext. 2779
Open: 9 a.m.–5 p.m.

MUSEUM OF PRIMITIVE ART LIBRARY
Allan D. Chapman, Librarian
15 West 54th Street
Circle 6-9494
Open: 1–5 p.m.

NATIONAL BROADCASTING COMPANY GENERAL LIBRARY
Mildred L. Joy, Librarian
30 Rockefeller Plaza
Circle 7-8300, Ext. 4031 or 4032
Open: June 4, 1–5 p.m.
June 5, 9 a.m.–5 p.m.

NEW YORK ACADEMY OF MEDICINE
Gertrude L. Annan, Librarian
2 East 103rd Street
Trafalgar 6-8200
Open: 9 a.m.–9 p.m.

NEW YORK PUBLIC LIBRARY
Edward G. Freehafer, Director
Fifth Avenue and 42nd Street
Oxford 5-4200
Open: 9 a.m.–10 p.m.

NEW YORK STOCK EXCHANGE
Mrs. Rita Braswell, Librarian
11 Wall Street
Hanover 2-4200, Ext. 401
Open: 9 a.m.–5 p.m.

NEW YORK UNIVERSITY—BELLEVUE MEDICAL CENTER LIBRARY
Gilbert J. Clausman, Librarian
550 First Avenue
Oregon 9-3200, Ext. 180
Open: 8:45 a.m.–11 p.m.

CHAS. PFIZER AND COMPANY
Alice M. Kelly, Librarian
11 Bartlett Street
Brooklyn 6, N. Y.
Evergreen 8-3800, Ext. 242
Open: 9 a.m.–5 p.m.

PORT OF NEW YORK AUTHORITY
Sara M. Price, Librarian
111 8th Avenue at 15th Street
Algonquin 5-1000, Ext. 552
Open: 8:45 a.m.–4:45 p.m.

PRICE WATERHOUSE & COMPANY
Rosemary R. Demarest, Librarian
56 Pine Street
Whitehall 3-5900
Open: 10 a.m.–5 p.m.

ROCKEFELLER INSTITUTE
Esther Judkins, Librarian
66th Street and York Avenue
Lehigh 5-9000
Open: 2–4 p.m. June 4 only

STANDARD AND POORS CORPORATION
Eleanor S. Cavanaugh, Librarian
345 Hudson Street
Watkins 4-6400
Open: 10 a.m.–4 p.m.

STANDARD OIL COMPANY (NEW JERSEY)
Central Library
Paul S. Allen, Librarian
30 Rockefeller Plaza
Plaza 7-3000, Ext. 7512
Open: 9 a.m.–4:45 p.m.

J. WALTER THOMPSON COMPANY
Mrs. Helen Fledderus, Assistant Librarian
420 Lexington Avenue
Murray Hill 6-7000, Ext. 2396
Open: 9–11 a.m.

UNION CARBIDE CORPORATION
General Purchasing Library
Jean E. Flegal, Librarian
30 East 42nd Street, Room 814
Murray Hill 7-8000, Ext. 855
Open: 2–5 p.m.

UNITED NATIONS HEADQUARTERS
Joseph Groesbeck, Deputy Librarian
42nd Street and First Avenue
Plaza 4-1234, Ext. 2514
Open: 10 a.m.–5 p.m.

UNITED STATES MERCHANT MARINE ACADEMY
Lieut. Comdr. Luis E. Bejarano, Librarian
Kings Point, Long Island, N. Y.
Hunter 2-8200, Ext. 344, 345
Open: 1–5 p.m.

VETERANS ADMINISTRATION HOSPITAL
General and Medical Libraries
Margaret M. Kinney, Librarian
130 West Kingsbridge Road
Bronx 68, N. Y.
Ludlow 4-9000, Ext. 433
Open: 8:30 a.m.–5 p.m.

WINTHROP LABORATORIES
Mrs. Mildred P. Clark, Librarian
1450 Broadway
Lackawanna 4-6400
Open: 9 a.m.–4 p.m.

YOUNG AND RUBICAM, INC.
Hazel Conway, Librarian
285 Madison Avenue
Murray Hill 9-5000
Open: 9 a.m.–5 p.m.

SLA Sustaining Members

The following organizations have expressed their interest in supporting the activities and objectives of the Special Libraries Association by becoming Sustaining Members for 1959. These are additions to the Sustaining Members listed in previous 1959 issues of SPECIAL LIBRARIES.

BELL TELEPHONE LABORATORIES, Technical Information Library, New York, New York
BETHLEHEM STEEL COMPANY, Bethlehem, Pennsylvania
BREWINGTON BOOK COMPANY, Houston, Texas
CALIFORNIA STATE LIBRARY, Sacramento, California
CORNING GLASS WORKS LIBRARY, Corning, New York
ELI LILLY AND COMPANY, Indianapolis, Indiana
MCGRAW-HILL PUBLISHING COMPANY, INC., New York, New York
STANDARD OIL COMPANY OF CALIFORNIA LIBRARY, San Francisco, California
WAYNE STATE UNIVERSITY, Detroit, Michigan

EDITOR'S NOTE: This list includes new applications received through March 18, 1959. Supplements will appear in future issues.

SPECIAL LIBRARIES ASSOCIATION—CONVENTION PROGRAM CHART

Atlantic City, New Jersey, May 31-June 4, 1959

	BREAKFAST	MORNING	LUNCHEON	AFTERNOON	DINNER	EVENING
SUNDAY MAY 31		**Executive Board Meeting**		**Executive Board Meeting** Tea: Charter members, SLA Presidents, First Conventioneers Open House: Insurance		Entertainment Open House: Exhibitors, members, Convention guests Dutch Treat
MONDAY JUNE 1	Business & Finance Hospital Newspaper Picture	**OFFICIAL OPENING OF THE CONVENTION** **General Session**	**Association Honors "Hall Of Fame"**	Advertising Biological Sciences Business & Finance Geography & Map Hospital Museum Newspaper Picture Transportation Joint Meeting: Documentation, Metals, Military Librarians, Science-Technology Cocktail Parties: Advertising, Business & Finance, Documentation, Hospital, Social Science	Geography & Map Science-Technology Chemistry Section Petroleum Section Pharmaceutical Section Joint Dinner: Advertising, Business & Finance, Insurance, Transportation Joint Dinner: Newspaper, Picture	CHAPTER CONSULTANT OFFICERS Joint Meeting: Geography & Map, Publishing Joint Meeting: Newspaper, Picture Open House: Business & Finance, Metals, Military Librarians, Science-Technology
TUESDAY JUNE 2	BULLETIN EDITORS EMPLOYMENT CHAIRMEN Hospital Newspaper Science-Technology Petroleum Section	Metals Documentation **GENERAL SESSION** "It's Work Standard Time"	Hospital Metals Newspaper Picture Science-Technology Paper & Textiles Section Joint Luncheon: Advertising, Business & Finance, Geography & Map, Newspaper, Publishing, Social Science	**All Divisions: Round Table Discussions** "Meeting The Challenge of the Future"	**Executive Board & Advisory Council** (Closed) **Past Presidents**	**Advisory Council** Open House: Business & Finance
WEDNESDAY JUNE 3	CHAPTER PRESIDENTS Publishing	DIVISION CHAIRMEN **ANNUAL BUSINESS MEETING**	Insurance Social Science Transportation Joint Luncheon: Advertising, Publishing Science-Technology Advisory Council	**GENERAL SESSION** "Planning: A Prelude To Progress" Convention-Wide Dutch Treat Cocktail party	**BANQUET**	
THURSDAY JUNE 4		Post Convention Session on International Cooperation in Documentation Sponsored by Documentation, Metals, Military Librarians and Science-Technology Divisions Tours: Business & Finance, Insurance, Newspaper, Picture, Transportation				

Have You Heard . . .

Grant To Further Use Of Microfilm

The National Microfilm Association has been granted $15,000 by the Council on Library Resources, Inc. to be used in connection with its annual meeting in Washington, April 2-4, and for extending understanding of the applications of microfilm to library and similar uses. The grant will be used to defray the costs of the preparation, publication and distribution of the *Guide to Micro-Reproducing Equipment* (see SPECIAL LIBRARIES, March 1959, p. 133), to enable the display of experimental, special purpose and other equipment not commercially available and to defray some of the expenses of selected archival and library technical personnel from distant parts of the country attending and participating in the meeting.

Members In The News

RAYNARD C. SWANK, Director of Libraries, Stanford University, has been appointed Director of the American Library Association's International Relations Office, effective in the fall of 1959.

MELVIN VOIGHT, currently a Fulbright scholar in Denmark, has been appointed Professor of Library Service and Director of the Kansas State College Library. Mr. Voight, formerly assistant director of the University of California Library, Berkeley, succeeds JOHN W. HARVEY who is now Dean of the Graduate School of Library Science and Director of Libraries at Drexel Institute of Technology.

Standards Program For Supplies And Equipment Established

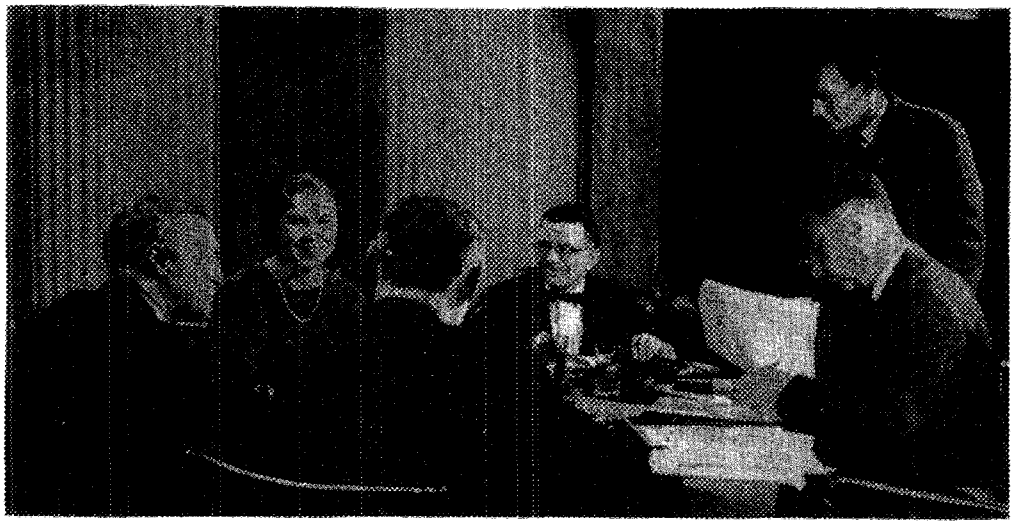
A national service to provide libraries with accurate information on the quality of library equipment and supplies will be inaugurated this spring by the American Library Association and administered by an advisory committee. The Council on Library Resources, Inc. has just granted ALA $136,395 to support the project, "Library Technology: A Standards Program on Supplies and Equipment," for two years. Plans include the collection and incorporation into a handbook of all existing information on standards for library supplies and equipment and the establishment of a free information service to answer inquiries. Long-range plans envision the establishment of a testing laboratory and the full development of research programs.

In Memoriam

ELEANOR S. CAVANAUGH, librarian at Standard & Poor's Corporation, died March 18, 1959, after a short illness. Miss Cavanaugh was a Director of the Association, 1930-32, and President, 1942-44. She was the first chairman of the International Relations Committee and was the SLA representative on the CNLA Joint Committee on Library Education. She was also president of the New York Chapter, 1924-26 and 1934-35. In addition, she served on many Association committees, among them the Committee on Committees and the War Activities Committee. In 1954 she received the SLA Professional Award in recognition of her outstanding achievements in the special library profession.

MARGARET E. EGAN, an Associate Professor at the School of Library Science, Western Reserve University since 1955, died on January 26, 1959. She was a Past President of the SLA Illinois Chapter, the author of *The Communication of Specialized Information* and the co-author of *Bibliographic Organization* and *The Classified Catalog*. At the time of her death, Miss Egan was engaged in the Western Reserve study of education for librarianship under a grant from the Carnegie Corporation of New York.

DEBORAH MORRIS, an honorary member of the University of Pennsylvania faculty, died in Hammonton, New Jersey, on January 30, 1959. Miss Morris was the first librarian of the University's Fine Arts Library where she served until her retirement in 1952. She was one of the founding members and Chairman for two years of the Special Libraries Council of Philadelphia and was an active member of the Museum Division.



Participants in the WCBS-TV program "Are We Underrating Our Libraries" included (left to right): Dr. George Royer, Catharine Heinz, Alex Drogichen, Martin Schneider, producer, Dallas Townsend, moderator, and Francis R. St. John

TV Discussion Of Library Problems

"Are We Underrating Our Libraries?" was the theme of a WCBS-TV panel discussion presented on Saturday, March 7, as part of a series entitled "Right Now." SLA's 50th Anniversary made this a particularly pertinent program, and the Association has purchased a print of the telecast. The four panelists were Catharine Heinz, librarian at Mutual of New York, Francis R. St. John, Brooklyn Public Library, Alex Drogichen, president of the Queensboro Library Council and Dr. George Royer, American Cyanamid Company. All four panelists agreed that libraries are the universities of the community and, as such, that their most important task is the dissemination of information to interested persons at the time it is published. Special librarians particularly, said Miss Heinz, go to the people they serve rather than waiting for people to come to them.

One of the urgent problems facing libraries today is the problem of caring for and utilizing vast quantities of material. Although there is cooperation among libraries at present, there is a definite need for greater cooperation among those librarians who regularly need the lesser-used materials. Among the solutions advanced were the development of regional libraries and a program designed to overcome the current resistance to microphotography. Another problem is the quandary of the librarian with limited funds available for acquisitions at a time when there is a continual need for new books to better service readers and when the materials from which to select are rapidly increasing. The panelists also discussed the question of obtaining better salaries for librarians.

A 16mm black and white sound film of the TV discussion, running 27½ minutes, will be available for use by any meeting at which there is no entrance fee or by any CBS affiliate. The film will be especially useful for Chapter meetings as a prelude to general discussion. Details on where and how to book the film will be published later. Prints may be purchased from Special Libraries Association for $100.

Creation Of International Association Of Law Libraries Proposed

A special committee of the American Association of Law Libraries under the chairmanship of Professor William R. Roalfe has just completed a study of the problem of international channels of communication and cooperation for those responsible for the organization and servicing of legal materials. As a result of this study, the committee has

planned a meeting on June 24 in New York City during the annual AALL Convention to discuss the advisability of establishing an international association of law libraries. All interested are invited to communicate their opinions and suggestions to Professor Roalfe, Northwestern University Law School, 357 East Chicago Ave., Chicago 11, Illinois.

Coming Events

The Second Annual Conference of the Association of Records Executives and Administrators will be held at the Hotel Commodore, New York City, on May 8, 1959. The topic of the all-day program will be "Space Saving in a Space Age." For further information write: Registrar, Judith Gordon, 900 East 18th Street, Brooklyn, N. Y.

The preliminary planning meeting of the International Cataloging Conference will be held July 20-25, 1959, at Chaucer House, London. Present plans are that the Conference will concern itself only with the alphabetical catalog of authors and titles, its agenda being limited to questions regarding the choice and form of entry-words or headings. It has been suggested that the Conference should aim first for a general agreement on the purpose of the alphabetical catalog and then attempt to formulate general principles of catalog construction. Inquiries or suggestions should be sent to Dr. Ludwig Sickmann, Joint Executive Secretary of the Working Group, Bibliothekar-Lehrinstitut des Landes Nordrhein-Westfalen, Albertus-Magnus Platz, Köln-Lindenthal, Germany.

CLASSIFIED ADVERTISING

Positions open and wanted—50 cents per line; minimum charge $1.50.

POSITIONS WANTED

MALE, 34, married. BA in Econ., ThM and MSLS, extensive knowledge of languages, 3 years' library experience. Desires librarian position in sizable theological library. Reply Box B 10.

TRAINED LIBRARIAN, B.A., M.A. History and Literature, experienced in historical reference, research, and cataloging, desires position in college or reference library in New England. Miss Charlotte D. Conover, 47½ S. Spring Street, Concord, New Hampshire.

POSITIONS OPEN

ASSISTANT ENGINEERING LIBRARIAN (L20). Salary range $4608-$6036 in six steps. A beginning position, but an increment for experience is possible. PHYSICS LIBRARIAN (L21). Salary range $4884-$6336 in six steps. Requires year or two of experience. An increment for experience is possible. Science background desirable for both positions. Positions open July 1, 1959. The general perquisites of employment at Cornell University Library are: group life insurance (compulsory), hospital insurance (optional), T.I.A.A. retirement system, Social Security coverage, vacation of one month, sick leave, thirty-nine hour week, five-day week in Technical Process departments, position classification and pay plan and abundance of intellectual and recreational opportunities. Direct inquiries to: G. F. Shepherd, Jr., Assistant Director, Cornell University Library, Ithaca, New York.

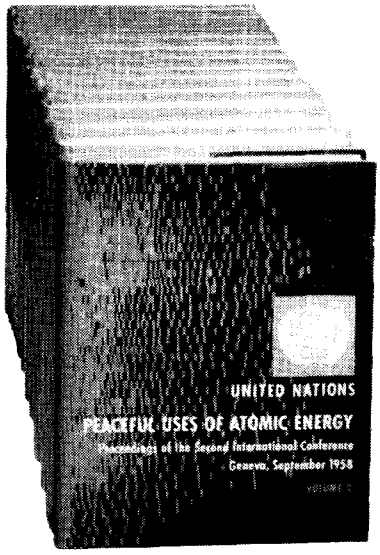
EDITOR-TRANSLATOR. Attractive permanent position for able literature scientist with strong technical background and fluency in English, Russian and preferably one more language. We have excellent facilities, 10-yr. record of continuous growth and offer opportunity for good income, professional development and recognition. Send resume to: Technical Director, A.T.S., Inc., Glen Ridge, New Jersey.

HEAD TECHNICAL LIBRARIAN. Technical library for a large manufacturing company with a growing research organization in physical sciences and engineering. Large collection at present but must be expanded to cover new basic fields. Real challenge in being a vital part of dynamic organization with a long established history in field of research. Duties: to supervise the library in a way to make it a vital part of the research program, develop the staff to be of real service, keep the library up-to-date, do searches, answer questions. A college degree in science or engineering plus library degree required. Salary commensurate with experience. Extensive fringe benefits, excellent Mid-West location. For confidential and personal interview, send resume to Box B 9.

LITERATURE SCIENTIST

GOODYEAR ATOMIC CORPORATION, LOCATED IN SOUTHERN OHIO, HAS AN OPENING FOR A TECHNICAL LITERATURE SPECIALIST IN A WELL EQUIPPED, MODERN TECHNICAL LIBRARY. WORK INVOLVES CATALOGUING, PREPARATION OF BIBLIOGRAPHIES AND LITERATURE SEARCHES, ABSTRACTING, AND TO SOME EXTENT THE SELECTION OF BOOKS AND OTHER LIBRARY MATERIALS. REQUIRE B.S. DEGREE IN A PHYSICAL SCIENCE AND DEGREE IN LIBRARY SCIENCE OR EQUIVALENT LIBRARY EXPERIENCE. SALARY IN THIS POSITION EQUIVALENT TO THOSE PAID IN OTHER SCIENTIFIC AND ENGINEERING POSITIONS. SUBMIT RESUME TO:

GOODYEAR ATOMIC CORPORATION
P.O. Box 628
Portsmouth, Ohio



PROCEEDINGS OF THE SECOND INTERNATIONAL CONFERENCE ON THE PEACEFUL USES OF ATOMIC ENERGY

(Geneva 1 - 13 September 1958)

The official U. N. Edition in English will consist of the following 33 volumes:

Volume 1	PROGRESS IN ATOMIC ENERGY	appx. $12.50
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NEW YORK

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