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SPECIAL LIBRARIES

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Special Libraries Association

Volume 53, No. 10 **CONTENTS** *DECEMBER 1962*

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Who Owes Whom?

GROWING PAINS are no less pleasant in a corporate than in the physical body. But they are recognized as symptomatic of healthful progress, of maturing, and increasing strength. Special Libraries Association has experienced many such twinges in its youthful 50 years, both mental and physical. Organizational changes, shifts in personnel and facilities, and fiscal demands, particularly, have caused us to wince from time to time, and some have not thought it worth the struggle and have dropped away.

"What does it do for me?" is the cry heard in our Association as in others, as if the total function of the individual were to receive and that of the nebulous "Association" were continually to give—with never the twain meeting. In past years, Special Libraries Association has given greatly to its members, but it is the members themselves who give to other members and the Headquarters staff who accept more of the chores. This is no impersonal automat activated by chinking coin, but the coin is nevertheless required.

Much Association work has been possible only through contributed personal time and subsidization by generous employers. Our first secretariat functioned in this manner for some years. But as time passes, the proportionate amount of this personal and material subsidy has decreased. Not only have the needs of members passed the point of "free" return, but the kinds of services wanted no longer can be provided in this way. The larger the activity, the less chance of its being contributed and the more appropriate it is for centralization and "paid" support. This factor adds to the weight of fiscal evidence presented earlier, turning us inevitably toward a rising dues scale.

It has been noted that an increase in membership of "X" persons would obviate any necessity for dues increase, at least temporarily. This is true, and it is also bald truth that we have not gone out and gotten these members. To some extent, the small annual increase in the librarian population has not provided large numbers of prospects. Our membership requirements, now somewhat liberalized, have also hampered proselytization. But there lurks the suspicion that if "they" would only beat the bushes, several hundred new members would embrace us and save our pocketbooks. It behooves all of us who have not actively recruited, and who have left such effort to "them," to think twice before offering this defense.

To Chapters and Divisions hamstrung by limited cash, the need for more funds is painfully obvious. Here are the members with ideas for bulletins and publications. Here are the recruiters who would like to put their bid into local counselling and guidance work. Here are the bibliographic and reference aids of regional or topical significance awaiting nurture. Here are speakers we would like to bring in, other programs requiring that Yankee and Rebel dollar. There is no need to itemize, for these are our reasons for being and we hope we know them well. We know also, perhaps distantly, that the Association generally costs money. If we have read our lessons, we know it is not a small amount, and if we have our wits about us we know that it is "we," not "they," who cause this expense and are responsible in its creation.

Members of Special Libraries Association are being asked to consider the proposed dues increase in the light of rising costs, enlargement of the service program, administrative strengthening of Headquarters, and potential new activities. All of these factors are important. Perhaps the most valid factor is that spirit which, finally, brings us to support and encourage those areas of our personal and professional lives that we wish to grow.

WILLIAM S. BUDINGTON, Chapter Liaison Officer
DR. FRANK E. McKENNA, Division Liaison Officer

Report Number Chaos

MRS. HELEN F. REDMAN, Head Librarian
Los Alamos Scientific Laboratory, Los Alamos, New Mexico

IN ALL THE DESCRIPTIONS I have read of the "image" of the librarian, I have never seen one referring to him as silent, passive, or long-suffering. Even those who begin their descriptions with the term "mousey" end up with a grim description of the librarian's dragon-like manner of enforcing rules. And librarians themselves, after they get beyond basic aspects like efficiency and attractiveness, insist upon their outspokenness. So how does one explain their apathy toward report numbers? I find it difficult.

When you are confronted by a list of reports to order with designations beginning with PB—, ANL—, and AM—, what is your reaction? Undoubtedly you are delighted with the PB— report because you know immediately that you can buy it from the Office of Technical Services. Probably you are equally happy with the ANL— report because you know it originates from Argonne National Laboratory and you have or can find channels for acquiring it. But what about that AM— report? The chances are very slim that you recognize it as a report received by the Los Alamos Scientific Laboratory and assigned its number there. If you do know that, you can write LASL to determine its full bibliographic identification and then proceed accordingly. If you don't, acquisition of the report is impossible, and I would expect you to cry out in annoyance. Instead, you apparently accept the situation in silence.

Early Concern

This silence is now one of long standing. Before writing the introduction for the *Dictionary of Report Series Codes,* just published by Special Libraries Association, I searched the literature for articles about reports and their report numbers. I found astonishingly few. During the early years of reports—the war years and those immediately following—such silence was understandable. Reports dealt with the results of wartime research and carried security classifications. They were relatively few in number, were limited in distribution, and were supposedly shortlived. In the late 1940's these restrictions began to break down. Many reports were no longer classified for security reasons, and they were given wider distribution and advertising. New reports continued to appear. There began to be the expected outcry from librarians about their handling and control.

Outstanding among the early articles about the control of reports was one in *Special Libraries* by Mortimer Taube. Entitled "Memorandum on a Conference on Bibliographical Control of Government Scientific and Technical Reports," it proposed that, "What is required is the promulgation, by some organization having the requisite authority, of a scheme through which every scientific and technical report prepared and issued under a research contract with any Federal agency would bear a symbol which would identify uniquely each report and relate it systematically to all other reports."[1]

The next article of interest appeared in 1951 in the *Technical Data Digest* and was written by Major P. K. Sturm of the Central Air Documents Office.[2] Stemming from a study of report numbers conducted by CADO in 1950, it pleaded for a standard system of report numbers and proposed the criteria for such a system.

In the spring of 1952 the Science-Technology Division of Special Libraries Association conducted an Institute on the Administration and Use of Technical Research Reports. All aspects of report handling were covered, but only one speaker, Dr. I. A. Warheit, touched on the problems of report

EDITOR'S NOTE: Mrs. Redman is the co-editor, with Mrs. Lois E. Godfrey, of the *Dictionary of Report Series Codes,* a project of SLA's Rio Grande Chapter that will be published late in December by the Association.

numbers.[3] His was the last statement published for some time. At the similar Workshop on the Production and Use of Technical Reports, held at the Catholic University of America the following year, no speaker mentioned the problem.

That silence has become standard. Occasional articles—like the delightful one by John M. Connor that appeared in *Special Libraries* in 1956 under the misleading title, "The Need for Documentation to Government Specifications"[4]—have expressed the librarians' irritation at the chaos surrounding report numbers but have neither dealt with it in detail nor offered solutions. Apparently the only recent attempt at that has been Bill Richardson's "Report Numbers—Boon or Bugaboo," which appeared in the *Rio Grande Chapter Bulletin* in 1960 shortly after Bill's stint as Chairman of the Chapter's Report Series Dictionary Committee.[5]

Growing Need for Control

This apparent unconcern of librarians with the question of report numbers would seem to indicate that the problem is slight, if indeed it exists at all. Yet the *Dictionary of Report Series Codes* demonstrates that it is real and that it is horrendous. The *Dictionary* contains 12,495 codes related to 3,992 agencies. Those are codes encountered by a handful of installations represented in the Rio Grande Chapter of Special Libraries Association, augmented by others taken mostly from the few published lists of report codes. At one time the compilers of the *Dictionary* dreamed that it might be fairly complete, but during the year since the listings for it were completed we have seen hundreds of new codes spring up. Our unhappiness attests to the currency of the problem. It is serious; it is with us; if anything it is growing worse; but librarians appear unconcerned. Why?

I suspect that there are several reasons, all based on the strangeness of reports to library science. In traditional library circles they are scarcely known. Even special librarians were not faced with them seriously until after the Second World War. Since then you can divide the ranks of special librarians into the "haves" and the "have-nots" and pour the blame for silence on them equally. I imagine that many librarians have honestly remained free from the encumbrance of reports and the difficulties of their handling and that as many more have encountered them only occasionally. For them, reports have, no doubt, been an unknown quantity. Perhaps they have been able to absorb them by giving them classification numbers like books or by tossing them into the vertical file with other pamphlets. Even if they have been troubled by them, they have probably felt too unsure of themselves and the situation to complain. On the other side, the librarians accustomed to handling reports may have been afflicted with a touch of reportsmanship. After all, if you find that you can claim special honor for having learned to deal with a difficult situation, why try to change it?

I would not dare to make such suggestions except that I now recognize my position in the latter category. In 1957 the newly created Rio Grande Chapter of SLA was looking for a project—one that needed to be done, that would be rewarding, but that was limited enough in scope that it would take only a reasonable effort. In the *Dictionary of Report Series Codes* we believed we had found the ideal combination. Clearly librarians unaccustomed to reports needed such a dictionary, and equally clearly, we thought, we could produce one easily. The majority of our Chapter members came from libraries with large report collections. Most of us were as well acquainted with reports as books. Surely we could turn out a dictionary that would identify 99 per cent of the existing codes and do it quickly—within a year!

In the five years that have elapsed since then, we have learned a great deal. We have finally produced a dictionary that we consider impressive both for its size and probable incompleteness. We have come to regard the exponentially growing chaos of report numbers with horror. Our complacency has turned to reformers' zeal.

Analysis of Report Numbers

Just what is this mess, and how did it come about? For a history of report numbers

and an analysis of them, I refer you to the introduction to the *Dictionary of Report Series Codes,* but I can describe them briefly here together with their assignment and use and the problems surrounding them.

Report numbers, or report designations, are a device aimed at facilitating report control, both physical and bibliographic. Ideally they provide a simple, brief means of identifying reports. They usually consist of a grouping of letters and/or numbers known as the series code, plus additional letters and/or numbers specific to individual reports. They may be divided into three types: *1)* those that aim only at identifying reports; *2)* those that attempt to give bibliographic descriptions of the reports; and *3)* those that serve as subject classifications. Any of these types, or any combination of them, may be put to a variety of uses. The use commonly thought of first is bibliographic identification, but there are also uses for property and security control and for filing indicators. These various uses (which may or may not involve machine manipulation) have considerable affect on the makeup of report numbers and involve both their format and their components.

There are several different components that may appear in a report number:

1. Designators for the agency responsible for the origin or distribution of the report. These may refer to the agency itself, a subdivision or project of the agency, or even an individual, i.e., BMI- for Battelle Memorial Institute; DMIC- for the Defense Metals Information Center at Battelle
2. Indications of subject classification, i.e., -P- for physics, -H- for health, etc.
3. Designation of the form of the report, i.e., -QPR- for quarterly progress report
4. Date of writing, issuance, or release, given in full, in part, or by code
5. Security classification, commonly given by the letters U (unclassified), R (restricted), C (confidential), S (secret)
6. Identifier of the specific report. This is usually a serial number but may be a letter or even a date.

Any combination of any number of these components in any order is possible. The components may be run together or may be separated by spaces, slashes, periods, parentheses, or any other punctuation marks. Some components may be ignored for the assignment of serial numbers. For example, in the LA/LAMS series of the Los Alamos Scientific Laboratory, the MS- has at times been ignored and at other times treated as an indication of a separate series. Within a given report series the format of the numbers may vary in the way they are written on the reports. When they are given as references by users of the reports, they may be shortened or even expanded.

Here lies the key to the problems that now surround report numbers. There is nothing sacred about them; there is no control over them. They may be used, modified, or even assigned by anyone at will, and the unsuspecting librarian who relies unquestioningly on report numbers for identification takes a great risk.

Report numbers are not necessarily part of the reports they represent. They may not even be known to the originators of the reports. If the originating agency assigns a designation that identifies the report and connects it adequately with its source (e.g., ANL-4126 for a report from Argonne National Laboratory), the probability is high that all who handle or refer to that report will use that designation. The same is true of designations assigned by sponsoring or contracting agencies (e.g., NYO-2787 for a report by a contractor of the New York Operations Office of the AEC). Even though those numbers do not give the origin of the report, they indicate a source for it and they usually belong to well-known report code series. Report numbers assigned by large distribution centers such as the Armed Services Technical Information Agency (e.g., AD—) or the Office of Technical Services (e.g., PB—) are also acceptable even though they do not show the origin of the reports. Their codes are well-known, they show the availability of the reports, and they enjoy the special advantage of appearing in standard announcement media. It is the report numbers other than these, the report numbers assigned or modified by individual recipients of reports, that present the dangers.

Almost every library with a report collection is committed to a system involving some kind of report numbers. Depending on the kind of system and its purposes, the librarian will inevitably find himself assigning numbers to reports without any, or modifying the numbers appearing on the reports to fit them into his system. If his system is based on simple accession numbers, he will be assigning a number to every report. The designations appearing on the reports will be of concern to him only as troublesome cross references; but his accession numbers, advertised in his accession lists, and referred to in correspondence, other reports, or articles written by scientists or engineers in his organization, will be added to report numbers plaguing colleagues.

On the other hand, if the library's system attempts to use the designations appearing on reports, the librarian will find himself scrutinizing every report to locate an acceptable number. For some, like ANL-4126, he will accept the designation as it comes. For others, like TR-123 (standing for "technical report"), he may preface the designation with a code of his own choosing representing the issuing agency. If he finds no number at all he will construct one. He may translate the title of the report into an acceptable designation. For instance, the "Quarterly Progress Report Number 5" of the Analytical Division of the ABC Corporation may fit into his system as ABC-AD-QPR-5.

If the title offers no opportunity for translation, he may throw the report into a general catch-all category like the Los Alamos AM- numbers (standing for American Miscellaneous), or perhaps he will assign an arbitrary number after his code for the issuing agency. If he does that, he may slip into the designation a signal that the number is bogus. For instance, an unnumbered report of the DEF Corporation may be assigned the designation DEF-LA-1 at Los Alamos Scientific Laboratory, or DEFC-Q-1 at Sandia Corporation. Here the -LA- and -Q- are signals used at these installations to indicate numbers unknown to the originator of the report. Unfortunately, they are not recognizable by others as danger signals.

Regardless of the technique the librarian applies or the caution he uses, he will have created another report designation not readily identifiable by the originator of the report or anyone else. And his number will look just as good as any other to the unsuspecting librarian. This proliferation of report numbers is going on in report libraries all over the United States. Tens of thousands of reports are being issued each year by thousands of agencies. Obviously the situation is chaotic. It must not be allowed to go on. After these long years of silence and endurance, librarians must act.

Hopeful Signs of Action

Fortunately there are some glimmers of light on the horizon. First, there is the just published *Dictionary of Report Series Codes.* Although necessarily incomplete and out of date before it was published, it does identify over 12,000 codes, and should therefore be of some help. Furthermore, by its bulk and by its gaps it will force librarians to recognize and admit to the problems of report numbers.

Second, there is evidence that some government agencies are becoming concerned about the complications being added to the present "technical information crisis" by the uncontrolled use of report numbers. In the fall of 1961 the National Science Foundation announced the awarding of a contract to Herner and Company for a study of categories and documentation of United States Government technical reports.[6] The study is supposed to analyze the various name categories and code designations that are assigned to government scientific and technical reports by federal agencies and their contractors, and to determine the need and practicability of developing and adopting a coordinated government-wide system of improved report code designations. This interest by the government, which controls the contracts under which the great majority of reports are written, is very encouraging.

Finally there will presumably be the results of the Herner study itself. It is idle to speculate on what those results will amount to, but it seems inconceivable that they will not at least include a strong recommendation

that some system of control for report numbering be adopted.

This combination of developments seems to me to be very hopeful. The *Dictionary of Report Series Codes* and, if necessary, a supplement to it, offer a key to the report numbers that have been used already. The Herner study offers the hope for control in the future. Here we have a basis on which we as librarians can act.

The action I propose has several stages whose exact nature will depend on the conclusions of the Herner study, the extent to which Herner and Company have dealt with the problems, and the resulting actions by the National Science Foundation. Regardless of these, I believe that we should first become informed about report numbers, looking into both their problems and their advantages. I believe we will become convinced that the advantages offered by a controlled system of report numbers that would provide brief and positive identification of reports would be worth a great deal of effort on our parts. If that does indeed prove true, I believe that through SLA or some part of it like the Science-Technology, Metals, or Documentation Divisions, we should develop and adopt a statement of our criteria for report designations. Such a statement might include the following points:

1. The requirement that every report, whether formal or informal, final or interim, distributable or strictly internal, bear a report number.
2. The necessity for that number to be a unique identification of the report, and the desirability of its being simple and brief.
3. A listing of the essential components of a report designation, such as a code for the originating, sponsoring, or distributing agency plus an identifier of the specific report.
4. A recommendation of format, including the order of components and the spacing and punctuation between them.
5. A permissive statement about other components that might be appended to the essential designation.

The next step might be the development of a system for determining and controlling the codes used to indicate agency in report designations. Perhaps a set of rules would suffice; more likely a dictionary recognizing the already established satisfactory codes and developing others will be needed.

Perhaps the report of the Herner study will include a list of criteria for report designations; possibly it will recommend means for determining agency codes. If so, the action required of us might amount only to a critical examination of those proposals and a hearty endorsement of them. The recommendations of the Herner study will hold the built-in advantage of having a direct line to government ears, and certainly a system for controlling report designations would be most effective if it could be applied to the agencies originating and issuing reports.

But if nothing should come of that study, a strong, well advertised stand by librarians on the question of report numbers might have considerable affect on their assignment and use. Librarians are among the principal users of report numbers, and their opinions should carry considerable weight with those issuing reports. Even if that did not prove true, the adoption of standard criteria for developing report designations by librarians receiving reports would reduce the proliferation of numbers markedly. Clearly we can improve the situation if we want to. So let's break our unnatural silence and speak out like the librarians of the "image" we favor.

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Goals to be Reached in Newspaper Libraries through Standards

ROSE L. VORMELKER, Library Director
"The Plain Dealer," Cleveland, Ohio

THE PURPOSE of establishing standards in industry was to increase efficiency or production and to lower costs. The *need* for establishing standards became evident with the demand for increased production. These facts seem axiomatic. They grew out of the scientific management movement and have a parallel today so far as purpose and need are concerned in special libraries, including newspaper libraries.

An authoritative yardstick for measuring accomplishments or effectiveness of libraries has long been felt, and the need for such has become evident because of increasing numbers of libraries and increased use thereof.

Standards are nothing more or less than rules or models or yardsticks that are established by a recognized authority and accepted by reliable practitioners in the field to measure something. In the physical world these might refer to quantity, weight, quality, extent, or monetary value. Translated to special libraries, standards would refer to objectives, services, collection of materials, staff, space, equipment, and budget. (These you will recognize as the phases of standards for study mapped out by the SLA Standards Committee.)

Other library associations in the United States and in other countries have been at work on various phases of library standards and the results of some of this work are now available in print.[1] In the main, these apply to public and school library services, equipment, and reporting of statistics. To a degree special librarians, including newspaper librarians, could benefit from a study of these publications.

Based on a paper presented before the Newspaper Division, May 31, 1962, at the 53rd Special Libraries Association Convention in Washington, D. C. The author has since retired from the *Plain Dealer* but will continue to teach the Special Libraries course at Western Reserve University.

However, because many newspaper libraries grew like Topsy and vary with the demands made on them by editors and publishers, it seems appropriate to give special attention to the "who, what, where, when, why, and how" of standards for newspaper libraries and what they might accomplish for them.

Special librarianship is a relatively new service profession. It is not as old as law, medicine, or religion and therefore is not as well understood. And yet, because the physical products with which it deals—books, clippings, reports, pictures, microfilms, maps, charts, magazines—are recognizable by any human being, many people, including executives, assume they know all that needs to be known about it. How often have we heard, "All you need to do is keep track of the things, stamp the books, and answer the phone." Many still think that anyone who loves to read or who may have served as a reporter on the paper would make a good librarian. What it takes to find, select, and organize for use needed sources of information and to locate a pertinent fact or material in these resources to put them to work at the right time and in the right form is not at all generally understood. No one would expect to practice in the field of law or medicine today without special training in those disciplines, yet many fail to realize that librarianship too has developed to the point where training is essential for success.

To be sure, there are excellent practitioners in libraries who do not have graduate library school degrees—some not even undergraduate degrees. Yet they are doing outstanding work. They have acquired proficiency the hard way—through years and years of experience and growth on the job. For them, experience has been both the undergraduate school and the graduate li-

brary school. Their degree came from personal and continuous study and from experience on the job. For many such, their equal will not be found among degree holders.

Why then all this emphasis on standards, one of which is training for special librarians? It's really very simple. The world today is going at so fast a pace, there isn't time to wait for experience. When the experienced people retire, if the work in which they pioneered is to progress from where they leave off, they will have to be replaced by those who took a short course in experience, namely the graduate library school. After all, that is what school does for a student, it provides a concentrated short course in experience.

The first surgeons were barbers, but through experience and research they developed training standards for schools of medicine. Abraham Lincoln was an attorney who never attended a law school, but would you engage an attorney today who hadn't met law school standards?

It behooves special librarians to work with enthusiasm, cooperation, and interest in SLA's effort to produce measuring devices or standards both for themselves and their organizations so that their work may progress and not retrogress. If this challenge is not met now, another generation will have to face it. Therefore this is a call to action on the part of those whose pioneering work has made the proposal for standards necessary.

Dr. J. L. Rosenstein of Marquette University once said, "Progress is not made by taking pride in our present standards but by critically examining these standards, hypothetically setting higher standards, and attempting to achieve them."[2]

Goals to be Reached

What may be expected in the way of goal achievement from setting up high standards? Is it possible to set standards for as variable a field as that of special libraries as a whole and newspaper libraries in particular? Doesn't the very term *special* imply something that isn't standard? What can be learned from the efforts of other professions to set up standards? Are the potential results worth the time and effort required to make an approved manual of standards a *fait accompli?* How far have we come in setting standards?

Goal 1: An Adequate Collection Adequately Processed for Use

Good performance standards depend, among other things, on an adequate collection adequately processed to make "finger tip control" of information possible. This means that every item, be it a clipping, a report of an official or scientific body, a microfilm, a picture, a magazine article, a book, a statistic, or an idea must be so classified or indexed that it may be produced instantly on request or called to the attention of clients whose work indicates a potential use for it.

Goal 2: Adequate Space and Proper Use Thereof

Good performance depends too on adequate space and equipment designed and placed for maximum use with least "backing and forthing." The resources should be so organized that not one unnecessary item is taking up space, which is at a premium in most libraries.

Goal 3: Recognition of the Library and of the Library Staff

One goal good standards would help promote is recognition on the part of the Board of Directors, the President, the Editor and all of his assistants, feature writers, secretaries, reporters, advertising departments, business departments, production departments, circulation departments, and indeed the entire staff of the paper of the library as the organization's information power house rather than a file room, or as one librarian put it, "a cemetery for dead facts."

A reasonable goal for the status of the library director in the organization would be that of department head, assuming the newspaper served followed the federal government's organizational breakdown of department, division, section, office. This would most likely assure the library director's membership in professional associations, attendance at meetings, including policy-making and decision-making ones, and professional contributions on his part. As such the library

director would assume responsibility for continual study of the fantastic developments in machines for library service and be especially alert to possible applications to his library. He should be familiar with microfilming, microprinting, coordinate indexing, preparation of codes, reprography and all other copying devices for that ultimate goal —machine retrieval of information and the elimination of extensive files.

GOAL 4: PUBLIC RELATIONS

Good public relations are a by-product of good performance. No procedure or technique is as effective in promoting good public relations as good service. Yet there are avenues of approach that may be consciously cultivated with a public relations end in mind. One of these concerns new employees, for whom a tour of the library with explanation of its services might well be part of a new employee's orientation program. Bulletins, memos, exhibits, a page in the house organ, open houses, and tours repeated until all have seen and heard of the library's services are other obvious public relations promotion devices.

While it is most important for the library staff and the organization staff to have such excellent two-way communication, the newspaper librarian's public relations awareness must go still further. Today's newspaper may be likened to a mirror of the local community, the state, and the country, and as such has an unexpected need for information on myriads of subjects. Since it would be impractical to attempt to assemble, even if it could, all the resources for which there would be occasional use, a knowledge of other sources of information in the community is essential. Another good public relations effort is to establish cooperative measures for making possible ready access to these resources for reference, copying, or borrowing. At the same time remember that cooperation is a two-way street and watch for and cultivate opportunities to reciprocate.

So far we have discussed goals relating to the resources of materials and their organization for effective use, best use of space, recognition of the library and status of the library director in the organization, efficient operation, and cooperative use of other libraries and agencies in the community. Additional goals that might be achieved through acceptable standards concern budgets, equipment, forms, and supplies.

Are Standards Possible?

Although we take great pride in our specialization, which in many ways defies standardization, yet there are certain common denominators among special libraries. All have librarians. Most have some staff assistants. All deal primarily with recorded information, though at times the information needed may still be in some expert's head. All need to process materials for use. All exist primarily to give information service. For these and other common denominators official standards would prove most helpful.

The new Webster's Dictionary defines a standard as an "accepted or established rule or model" and also ". . . . established by authority, custom or general consent as a model or example."

Without standards there can be no reliable guide to or yardstick of accomplishment. It means little to say, "the Library answered 50 questions today," unless the nature of the queries is known. Did they involve professional knowledge or were they of a general informational type? Were any concerned with the origin of the European Common Market idea or were the questioners asking for President Kennedy's middle initial? Possibly the Library should have answered 100 questions to indicate a good day's work. Who can say—until official, authoritative, reliable, and accepted standards are available?

There is a wealth of business and technical literature relating to standards for production and for cost accounting from which some parallels for library work may be drawn. On the whole, however, libraries fall more logically into the management fields. For these, Ralph Currier Davis has suggested the following classification: *1)* standards of service, *2)* standards of policy and function, *3)* physical standards, *4)* personnel standards, and *5)* performance standards.[3] With the additional item of budgets, this is in essence the breakdown planned by the SLA Standards Committee.

Standards in Other Professions and the SLA Standard Committee

Many technical societies and professional associations have a continuing project on developing standards for their fields. These are designated by the letter "I" in C. J. Judkins' war-time directory of trade associations.[4] He explains in later editions that most associations listing this activity make it a continuing project.

Fifteen library associations in the United States and Canada have committees working on standards.[5] Some of these have already published their established standards.[6]

The Professional Standards Committee in SLA has been in existence for a number of years. Its annual reports, which usually have appeared in the September issue of *Special Libraries,* are well worth studying to learn the thinking of the various committees.

The 1961-63 Chairman of this Committee is Samuel Sass, Librarian of the General Electric Company's William Stanley Library in Pittsfield, Massachusetts. With the approval of SLA's Board of Directors he has worked toward compilation of a comprehensive manual of standards for special libraries under the following heads: *1)* objectives, *2)* services, *3)* collection, *4)* staff, *5)* space and equipment, and *6)* budget. He has enlisted the help and interest of SLA's various Divisions on this project by inviting them to select one of these categories for their special study of it.

This approach follows standard procedure. George Terry put it this way in his *Principles of Management:* "When a standard is to be established, a committee is founded, with all parties interested in the standard being given representation, which includes association members, consumers, and those having a general interest. Usually, a tentative standard for a period of one year is submitted in order to elicit criticism and suggestions which, after due cognizance, determine the standard offered."[7]

Of the categories suggested for Divisional study by Mr. Sass, the Newspaper Division chose staff. Jack Burness, Librarian of the Washington *Post,* was appointed Chairman of the Division's first Standards Committee. His report presented at the SLA Cleveland Convention in 1960 included suggestions covering all phases of newspaper library operation: administration, reference materials, physical facilities, hours of operation, and service. Specifically, this report recommended that the possibility of acquiring funds from a Foundation be explored for the purpose of employing a person to write for publication a manual on newspaper library operation and management. Also it was recommended that a permanent Committee on Standards be established for the Newspaper Division, which would suggest improvements from time to time in keeping with changing conditions.

Robert Diehl of the Detroit *News* was Chairman of the Newspaper Division's second Standards Committee. His report was read at the SLA San Francisco Convention in 1961. This included a list of job descriptions for newspaper library functions and emphasized desirable standards of educational requirements for personnel but pointed out the difficulty of attaining these because opportunity for professional training in this field is lacking.

No definite action was taken as a result of these reports, but they served to clarify our thinking as a Division and helped direct the Committee's work in 1962 in pursuing its assignment of drawing up standards for staff in special libraries.

The report of the third Newspaper Division's Standards Committee followed the outline suggested by Mr. Sass and is appended to this article. After discussion of this report at the Washington, D. C. Convention in 1962, two motions were passed: *1)* to submit to the Association Committee on SLA standards the Newspaper Division's contribution on staff standards, and *2)* to hold these as standards for the Newspaper Division and to maintain a Standards Committee as a continuing group to suggest changes, if needed, from year to year.

CITATIONS

1. *The Bowker Annual of Library and Trade Information.* New York: R. R. Bowker, 1962, p. 102-11.

2. BRAUDE, J. M. *Braude's Second Encyclopedia of Stories, Quotations, and Anecdotes.* New York: Prentice-Hall, 1957. No. 2007, p. 287.

3. DAVIS, RALPH CURRIER. *Industrial Organization and Management.* New York: Harper, 1957. p. 67.
4. JUDKINS, C. J. *Trade and Professional Associations of the United States.* 1942, p. 16.
5. *The Bowker Annual of Library and Book Trade Information, op. cit.* p. 287-8.
6. AMERICAN LIBRARY ASSOCIATION. *Public Library Service: a Guide to Evaluation and Minimum Standards.* Chicago: 1956.
7. TERRY, GEORGE R. *Principles of Management,* 3rd ed. Homewood, Ill.: Irwin, 1960, p. 495.

Newspaper Division Standards Committee Report, 1962

The Newspaper Division's section of the SLA Standards Committee was devoted to staff standards. The check list for this section as sent out by the Association Chairman, Samuel Sass, William Stanley Library, General Electric Company, 100 Woodlawn Avenue, Pittsfield, Massachusetts, and proposed standards filled in by this Committee, follow:

Staff

A. Professional

I. HEAD LIBRARIAN

(Responsible for development of policies consistent with those of the management, for selection and interpretation of the collection, and for selection and supervision of the staff.)

a. QUALIFICATIONS

1. *Education*
   (a) Library science degree (five-year degree) or
   (b) Bachelor's degree in arts or sciences with major in library science or
   (c) Bachelor's degree in journalism with newspaper library seminars or special courses in newspaper library work and at least twelve hours in general library administration and classification, cataloging and reference work.
   (d) Equivalent of any of these through self-study and development
2. *Experience*
   Ordinarily Head Librarians should have had at least one year in more than one library to assure perspective. He or she should have at least five years of professional experience in libraries of recognized standing of which at least three should be in special libraries with at least one in a newspaper library. While special courses might substitute for some of the special library experience, library administration should not be cut short. Experience in a newspaper library might replace the library science requirements if the person demonstrated exceptional abilities and aptitudes.
3. *Personal*
   (a) Intellectual curiosity coupled with desire to serve
   (b) Analytical news sense
   (c) Articulate in communication
   (d) Administrative ability
   (e) Good health
   (f) Poise and stability
   (g) Tact
   (h) Sense of humor

b. DUTIES

1. *Administrative*
   (a) Selects personnel in cooperation with personnel department
   (b) Supervises and trains library personnel
   (c) Prepares job descriptions that define all positions in terms of requirements, duties and responsibilities
   (d) Prepares work manuals for use of staff
   (e) Maintains communications among library staff and between them and other departments of the organization
   (f) Continually evaluates library service in terms of its stated objective. Such evaluation can be implemented by the use of statistical surveys of:
      1. Materials that are being used at a given time
      2. Publications requested but not supplied because not part of the collection—or missing
      3. Reference questions answered and not answered
      4. The character of interlibrary loans
   (g) Contacts key officials to obtain information of future company activities in order to keep abreast of new developments
   (h) Keeps informed and even contributes to possible developments in use of machines for library services; e.g., information retrieval, duplication processes, microfilming, etc.
   (i) Represents library in any organizational matter affecting the library
   (j) Plans and justifies library budget

(k) Promotes library services by interpreting program for management, through the use of orientation talks to company personnel, articles in company publications, and displays and exhibits

(l) Works with architects, methods, and planning personnel on space and equipment requirements of library

2. *Acquisitions*
   (a) Responsible for and determines scope, selection and development of collection and retention policy
   (b) Checks sources of listings of new titles for those to be purchased
   (c) Supervises centralization of all publications ordered for the company. Works out with purchasing department most expeditious method of placing orders
3. *Organization of Collection*
   (a) Determines policy as to type of publications to cataloged, indexed, and classified
   (b) Selects cataloging form to be used
   (c) Selects classification code to be used
   (d) Plans physical layout of collection
   (e) Formulates method for mechanical preparation of materials
   (f) Performs or supervises the cataloging and classification of materials
   (g) Determines policy on materials to be bound
4. *Performs or Supervises Services Listed under Section 2*
5. *Determines Policy To Be Used in the Circulation and Control of Materials*

c. STATUS

1. *Title*
   Chief Librarian, Director of Libraries, Head Librarian or Director of Library Research
2. *Organizational Level*
   Head of department
3. *Exempt Class of the Fair Labor Standards Act*
4. *Civil Service Rating*
   If applicable, GS-11 rating or above
5. *Accountability*
   Accountable to highest policy-making executive. This accountability is required to assure that library operations, policies, and plans coincide with overall information program of newspaper

d. SALARY
   Comparable to that of other professionals on the staff or in the locality served

II. ASSISTANT LIBRARIANS

a. QUALIFICATIONS
   Since ideally most assistant librarians should have the abilities to become Head Librarians, the educational requirements should not be appreciably lessened from those for Head Librarians. In practice, experience will often be substituted for formal educational requirements. However, at least some college work should be mandatory

b. EXPERIENCE
   Educational attainments might be substituted for experience

c. DUTIES
   1. Reference work involving use of books, services, indexes, files of clippings, pictures, special pamphlets, etc.
   2. Cataloging and classifying
   3. Circulation of material
   4. Such duties as assigned by the Head Librarian, always bearing in mind that professional people should do professional work insofar as possible
   5. One must be designated as Deputy to act in absence of the Head.

III. LITERATURE SEARCHERS, TRANSLATORS, AND OTHER PROFESSIONAL CATEGORIES

a. QUALIFICATIONS
   Certainly a general college education would be desirable but might be waived in favor of experience or demonstrated ability. At least one college-level course in bibliography and reference should be required. Preference would be given to people who could be promoted

b. DUTIES
   1. Classifying newspaper
   2. Searching for items published in newspaper
   3. Answering telephone and written questions from readers
   4. Classifying pictures
   5. Deciding retention of negatives and/or pictures, clippings and other resources.

IV. PROFESSIONAL RESPONSIBILITIES

a. Membership in professional organizations at national and local level. When

possible, all people on the professional level should belong to professional organizations.

b. Participation in professional projects and studies. One aspect of this responsibility lies in close cooperation with other local librarians.

c. Attendance at meetings of professional organizations

d. Contribution to professional journals and publications

B. Nonprofessional

I. QUALIFICATIONS

a. High school education, some college preferred, business school encouraged. Typing necessary

b. Personal intellectual curiosity

c. Good health

d. Conscientiousness

e. Accuracy

II. DUTIES

a. Clipping marked papers

b. Filing

c. Identifying pictures and cuts

d. Periodical checking

e. Office correspondence

f. Photoduplication

g. Shelving books, magazines, newspapers

h. Messenger work

i. Catalog card preparation

j. Maintaining and requisitioning supplies

C. Size of Staff

I. MINIMUM of one professional and two clerical assistants

II. RATIO OF NONPROFESSIONAL TO PROFESSIONAL

There should be at least one professional and one nonprofessional to each twenty-five staff members served

NOTE: The number of staff members should be sufficient to perform the duties involved in assembling, organizing, searching, and putting to use the materials needed by the newspaper—or other organization served.

Respectfully submitted:

Marian Orgain, Houston *Chronicle*
Helen Orcutt, Toledo *Blade*
Chester Sanger, *Christian Science Monitor*
William Chase, Flint *Journal*
Rose Vormelker, *The Plain Dealer,* Chairman

FID Latin American Commission Report

THIS IS A REPORT on the Third Meeting of the Latin American Commission of the Fédération Internationále de Documentation (FID/CLA), which I attended as a representative of the Special Libraries Association.

The meeting took place October 9-12, 1962 in Buenos Aires, Argentina, under the sponsorship of the Consejo Nacional de Investigaciones Científicas y Técnicas. The host was Dr. Raúl Luis Cardón, Secretario Asesor of the Consejo. About 40 people were at most of the sessions; seven Latin American countries were represented. The meetings and the social events were arranged with traditional skill and hospitality.

The Chairman of the meeting was Madame Lydia de Queiroz Sambaquy, President of the Instituto Brasileiro de Bibliografia e Documentacao, retiring Latin American Vice-President of FID, and chairman of FID/CLA.

Sessions were devoted to: *a)* the extension of FID in Latin America; *b)* projects, which FID/CLA can undertake; *c)* consideration of the recommendations of the Seminar on Scientific Documentation held at Lima, Peru, September 3-8, 1962; and *d)* election of the new Vice-President of FID for Latin America. I noticed a significant interest in the Universal Decimal Classification among those present, which should help to make FID more widely known. The Secretariat of FID/CLA exhibited a preliminary, two-volume edition of the Latin American Periodicals Catalog (CAPPAL).

Dr. Cardón was elected the Latin American Vice-President of FID for the period 1962-65. He thus becomes the Chairman of the Latin American Commission for the same period.

I spoke briefly on the recent 28th Conference of FID in The Hague and about some of the work of the US National Committee for FID.

The next meeting is scheduled for Montevideo, Uruguay, in November 1963.

KARL F. HEUMANN
Vice President, FID

Problems of Reorganizing a Newspaper Library

MARIAN ORGAIN, Librarian
Houston "Chronicle," Houston, Texas

A LIBRARY IS a collection of books, pamphlets, clippings, maps, pictures, or other appropriate material—organized for use—and libraries ought to be correctly organized in the first place. Certainly newspaper libraries with the pressure of deadlines and the need for speed should be carefully set up in the beginning. When one talks about reorganizing a library—or anything else—he is talking about changing the relationship of interdependent parts or resystematizing the functions of the various aspects of the whole operation. This is revolution. Simply improving the operation is not reorganization.

In many situations, however, eliminating inefficiencies of practice, improving techniques, and expanding some function will bring the library to a level of operation that, while not optimum, will be good enough so that real reorganization, major surgery, should not be undertaken. Anyone of us has seen situations we would not plan that nevertheless work. Completely changing an established library may well entail too much time, money, and effort to be practicable. It is perhaps better to function with an unmodish or old-fashioned set of subject headings, which can at least be updated by means of cross references, than a turmoil that lasts for years or an ambitious plan that simply cannot be accomplished in the situation at hand. The first problem, then, in reorganizing a newspaper library is to avoid it if improvement of the existing system can be reasonably expected to suffice for the needs of the users.

Preliminary Planning and Surveying

Unfortunately, there are libraries that were not set up sensibly in the first place. Because of poor planning—or none—newspaper morgues that just grew like Topsy may be so chaotic and so failure-prone that basic reorganization is necessary. The older the library, the more clippings, pictures, books, pamphlets accumulated, the greater the difficulties. Usually the person who surveys a situation and decides that it must be redone is—as I was two years ago—approached by management and asked to report on how to upgrade it.

The next problem is setting up a basic plan of operation. Even if one is the incumbent who cannot stand the mess he has made himself in his library or cannot bear to face retirement because his successor might expose to the world the shortcomings of the library, a plan is still necessary. To quote the editor of the Houston *Chronicle,* William P. Steven, "if you have enough brains, money and people you can do anything." In planning reorganization it is essential that one use all his own brains as well as anyone else's on to obtain enough money and people to do the work.

A written plan plus a timetable and a cost estimate are essential as is an exploration of the available literature. Two very helpful articles are: "Problems of Reorganizing a Newspaper Library" by Milton Prensky in *Special Libraries,* December 1957, and "Weeding and Other Space-Saving Methods" by Ralph Shoemaker in *Special Libraries,* October 1956. The ANPA library bulletins may also be checked for suggestions. The reports of SLA Newspaper Division meetings will be useful. The seminars conducted by the Schools of Journalism and Library Science at Syracuse University would be helpful, I am sure, although I have not been there.

At this point the librarian will need to survey in detail the actual practice of the library under consideration. During the pre-

Paper presented before the Newspaper Division, May 30, 1962, at the 53rd Special Libraries Association Convention in Washington, D. C.

liminary survey or study when it was decided that a radical change in the library operation was necessary, the librarian may have gone on the theory that it is not necessary to eat a whole egg to tell that it is rotten. In the planning stage, however, the librarian must savor the last fume of the odious operation and fathom, if he can, the logic behind the seemingly pointless routine whose origin may be shrouded in antiquity, whose usefulness may be negative but whose intent once had some significance.

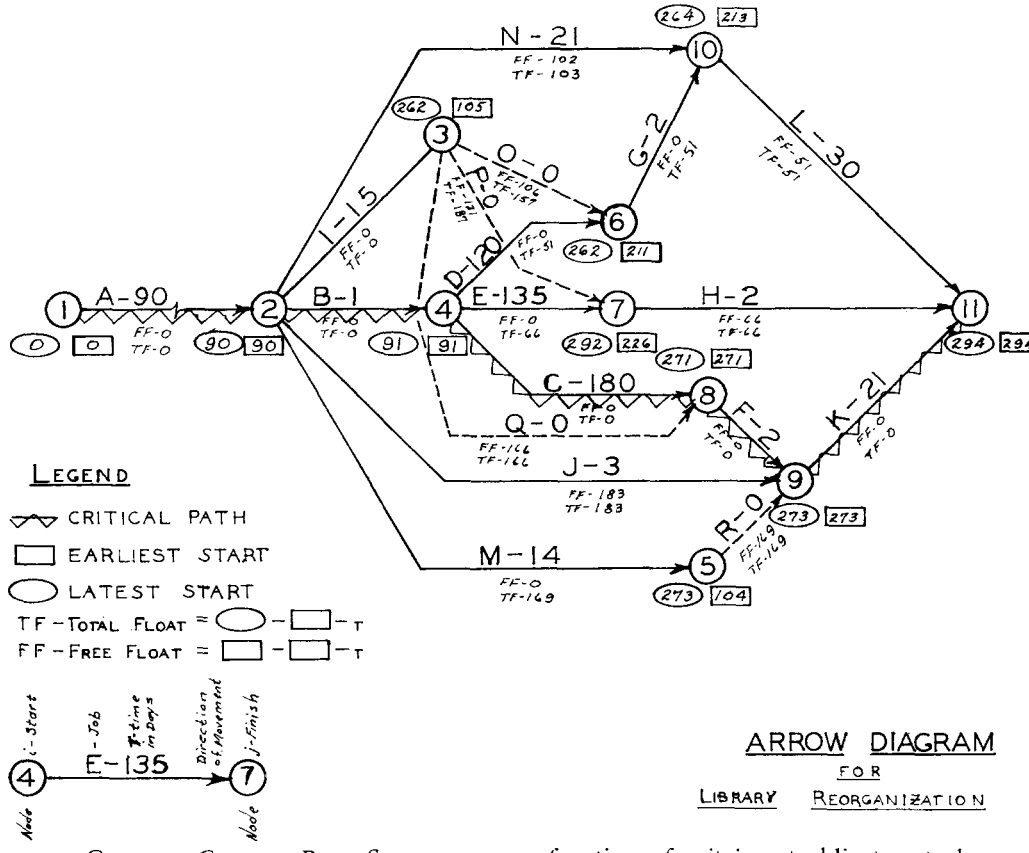
At the *Chronicle* there were four separate alphabetical files—a Houston file, a Texas file, a dead file (people, not issues, fortunately), and a general file. How the staff tossed on its Procrustean bed! Humble Oil and Refining Company stories, for instance, could go in three different parts of the room with all the company founders out in the back in the dead file. Changing this setup, however, implied understanding that originally the library had filed people only and that Houston and Texas were the only subject files, which begun as a temporary side project in a shoe box and mushroomed with the years into being as large as the biographical files. The dead people were put in the back because of space problems; the quick in the front for quick reference. Explanations helped the library staff to see that with more space and with the insured permanence of the subject files, it was no longer necessary to segregate in this manner. Actually you cannot plan to change what you do not know about.

After the operations of the library have been reduced to paper, a comparison of it with a good one will be of enormous advantage, whether or not emulation of the good one in all phases of its operation is considered. I spent a whole week in Louisville at Ralph Shoemaker's heels, and in his generosity of soul he gave freely of his and his staff's time to explain how the Louisville *Courier-Journal* and *Times* library merits its excellent reputation. Other librarians answered letters and questions, and I benefited greatly from many conferences with the *Chronicle's* managing editor and other members of the news and editorial staffs. It is always well to know what the patrons of a library want from that library. Sometimes a librarian can raise their sights; sometimes he must limit their demands. Then he must write down his own goals, devised by him—this his professional responsibility.

Use of Critical Path Method

At this point the steps toward the goal—the numbers of people needed, amount of equipment desirable, the amount of money essential and the many tasks involved—may become a jumble. Time sequences and logical progressions may be impossible because of delivery problems. Training programs may wait on books. To help in actually making a plan to take care of contingencies, investigation of the relatively new planning and scheduling technique, the Critical Path method, is urged.

For several years a prerogative of engineering planning, the Critical Path method is now showing up in all sorts of professional literature. A recent ad in *Scientific American* features it. In essence it is setting forth all the jobs involved in a project arranged to show sequence, restraints, and interdependence. The Critical Path is the longest route through the project and therefore represents the minimum time for completion. If delay occurs in the jobs in this chain, the time of project completion will be affected. PERT or Program Evaluation and Review Technique, the prototype of the Critical Path method, was developed in connection with the Polaris Missile and is explained in *PERT . . . a Diagram Project Planning and Control Method,* published by International Business Machines Corporation, Data Processing Division, White Plains, New York, n.d., in a General Information Manual. Arrow Diagramming is a simplified Critical Path technique and is explained in *Review of the Arrow Diagramming Technique in Planning, Scheduling and Evaluating Business Programs* published by E. I. DuPont de Nemours, Petrochemical Division, Washington, Delaware, n.d. These publications explain how such techniques aid in planning and in communication, how they simulate the effect of alternative decisions, and establish probability of meeting deadlines.



ARROW DIAGRAM
FOR
LIBRARY REORGANIZATION

GUIDE TO CRITICAL PATH SHEET

A. Lead time—survey, preparation, presentation of plan, approval, and funds authorization
B. Order equipment
C. Arrival of book cases
D. Arrival of file cases
E. Arrival of desk, chairs, tables
F. Unpacking book cases
G. Unpacking file cases
H. Unpacking desks, chairs, tables
I. Removing old partition, repainting room
J. Ordering books
K. Receiving, cataloging, shelving books
L. Shifting files to new file cabinets
M. Ordering library supplies

It is not necessary to consider programming computers to give alternative times if decisions are altered or to show the effect if manpower is increased in some Critical Path functions, for it is not obligatory to have a computer to use Arrow Diagramming in scheduling. It *is* necessary to list the operations indicated, their sequence, and the time for each to plot the Arrow Diagram, which will show the Critical Path through the jobs that may go on simultaneously. The accompanying chart is a diagram of the physical reorganization of the Houston *Chronicle* library. It shows the length of time, 294 days, from the beginning of the planning until the time the files were moved into new cabinets, the first books were shelved, and an open house was held for all the employees of the paper. The Critical Path lay from A-B-C-F-K. That is, the time necessary to perform these phases of the operation was longer than any other of the ordered sequences. Here in the Critical Path is the place for extra money and effort—the total time of the project may be shortened here.

Obtaining approval is the problem after sequence planning. Regardless of how much

management may want an efficient library and how much the news and editorial staffs may need one, money will always be a problem. One of the reasons for carefully laid plans, the Critical Path diagram or diagrams, is that a detailed budget will demonstrate precisely what is entailed. I advocate five per cent of the total budget of the organization as the standard library figure; $15,000-$20,000 a year above the regular budget is a modest sum to need for reorganization. If much expensive microfilm copying or reading equipment is planned, the sum may be higher. It must be remembered that it is very foolish to underestimate the money it will take to put a reorganization plan into effect. Many a librarian lies buried under an avalanche of work, without adequate help, and unable to deliver the goods. The final decision on whether the newspaper can afford to reorganize the library, of course, will rest with management. The clearer and the better justified the plan, the more likely it is to win approval.

Retraining and Rearrangement

Assuming that one has scheduled, planned, and received approval, the next problem is training people to carry out the project. The best laid plans of librarians can be undone by the junior clerks. It is madness to assume that 15 years of experience in alphabetical files means that a person can alphabetize accurately. It was my experience that the personnel I inherited had no concept of ordinary filing rules; that there was no carefully worked out set of local ground rules that said to file names of people word by word and names of places letter by letter. There were not any rules, manuals, or instructions, but there were a whole group of things "we do not do here" or "we do do here." We are now, as we revise drawers and check Mr. Shoemaker's subject list, following the *ALA Rules for Filing Catalog Cards,* with local variations noted.

Much more time than is usually allowed for in-service training is needed if one is changing routines, but keeping people who have performed those routines for years. If the staff is thoroughly grounded in the new routines before they actually perform them and if they have accepted the plan itself, the success of the project is almost insured. The conflict of old and new, fanned by insecurity, can be obviated by thoroughly grounding personnel.

Where to begin? I suggest physical rearrangement and reorganization first for several reasons. One has to have space, equipment, and tools to be able to work efficiently. Secondly, improved physical facilities will raise the morale of the library staff, which has been upset by all of the training! Library prestige within the newspaper will be enhanced by attractive quarters, and, as the general status of library improves, it will be easier to do whatever retraining of the users that may be necessary. Personally, I approve of bright colors and comfortable furniture and think that they have contributed immeasurably to my comfort and that of the staff during the long haul of file revision. The Library Bureau of Remington Rand and several other library supply houses will be glad to help with redecorating ideas.

Let us say then that the plan is completed, there is money in the budget, the staff is trained, the physical facilities as attractive as possible, and the librarian is set to lead subject headings out of the wilderness, re-do circulation routines, make new job descriptions, revise filing methods and catalog pictures—happy hunting! Now the librarian is ready for the biggest problem of all—doing the work.

VICE-PRESIDENT'S CHAPTER VISIT SCHEDULE

Mrs. Mildred H. Brode, SLA's Vice-President and President-Elect will start 1963 with a tour of Chapters in the western states. Her schedule will take her to:

Colorado	January 11	Southern California	January 18
Puget Sound	January 14	San Diego	January 22
San Francisco	January 16	Rio Grande	January 25

Georgia Tech and the NSF Study Grant for Training Personnel for Scientific and Technical Libraries

MRS. DOROTHY M. CROSLAND, Director of Libraries
Georgia Institute of Technology, Atlanta, Georgia

AT THE DEDICATION of the Price Gilbert Memorial Library at Georgia Tech in November 1953, Dr. Alan Waterman remarked that the development of new knowledge has in the last half century far outstripped the rate of development for all the preceding centuries. This has been particularly true in the scientific and technological fields. Dr. Waterman raised this question: "Have we not reached a new crisis in the history of learning that calls for a revolution in the methods of disseminating information that are as far reaching and as radical as the invention of paper and the printing press?"

It is our serious attempt to answer this question that has, I believe, led us to attack the overwhelming literature problem before it engulfs us completely. In fact, we have consistently turned to science and to technology in our search for a successful solution. Our efforts in this direction have led us to new concepts in education and training for work in the field of science information.

It is not my purpose here, however, to discuss why new concepts are needed. Librarians are aware of the scope and the size of the problem. We know that the growth of the literature and the development of new types of information services, as well as attempts to apply new methods to retrieving and disseminating information, have resulted in additional informational problems. At the same time, these very problems themselves suggest that one possible solution lies in the training of personnel to study the over-all information problem and to render solutions to that problem.

This does not mean a revolution in education and training, but it requires the development of new ideas about training—training for the science librarian, training for the information specialist, and the development of a new profession, which we in the NSF-Georgia Tech study have called the information scientist.

In recent months we have heard a great deal about education for science library personnel. It is significant, I think, that the SLA Engineering Section during the 1962 Convention devoted its meeting to a discussion of this topic. It is a vital one. At that meeting the Georgia Tech-NSF feasibility study for training, as well as plans for the future, were discussed as actual developments taking place in the field today. This article reports the progress that has been made since the study began.

October Conference and Study Committees

In March 1961, we in the library at Georgia Tech and several faculty members of the science and engineering departments began to consider the possibility of training students to handle technical information effectively. We were stimulated by the encouragement and enthusiastic support from the National Science Foundation. When our proposal for a feasibility study was submitted, NSF endorsed it, suggesting that two conferences be held at Georgia Tech, one in October 1961, and the second in April 1962. The conferences were designed to bring together interested people throughout the United States to generate ideas and exchange suggestions that would serve as guides dur-

Up-dated paper presented before the Engineering Section, Science-Technology Division, May 30, 1962, at the 53rd Special Libraries Association Convention in Washington, D. C.

ing the year of study. The first conference was held on October 12 and 13, 1961, in Atlanta, at which time a selected group of scientists, librarians, and information specialists assembled to explore both short- and long-range solutions to the problem of adequate training of information personnel.

The 32 participants at the first conference were divided into four small discussion groups to cover such topics as concepts, curriculum, faculty, and recruitment in terms of science training for librarians and information training for scientists. Those in attendance addressed themselves to the problem with earnestness. The group felt that a significant start had been made in dealing with a complex problem, and we left the conference room with great expectations, with interest aroused but with some confusion about definitions as well as many questions as to future developments. A summary of the October Conference has been included with the *Proceedings* of the April Conference published earlier this year. (Editor's Note: *See* book review in this issue of *Special Libraries.*)

During the months following the October Conference we worked diligently at Georgia Tech. The first meeting not only stimulated us and set the pace, it also suggested additional facets of the problem and new avenues of pursuit. Ours became a positive, a determined, approach to the science information problem.

Our group was divided into two working committees, one headed by Dr. Vernon Crawford, Professor of Physics, and the other chaired by Dr. Waldemar Ziegler, Regents' Professor of Chemical Engineering. Dr. Ziegler has been teaching a course in chemical literature for many years. One committee concentrated on the short-range approach of non-degree educational programs, usually called short courses, while the other studied the feasibility of degree programs. Each committee took a dualistic view of its assignment. On the one hand they began to formulate general principles that would aid other institutions in establishing educational programs in technical information; on the other hand they attempted to solve specific problems associated with inaugurating a new program of this kind on the Georgia Tech campus.

In the course of their work both committees visited many centers in the United States and in Europe where active educational programs exist. Questionnaires were sent to some 200 industrial organizations and to librarians in all the engineering schools accredited by the Engineers' Council for Professional Development. The ALA-accredited graduate schools and library school students currently enrolled at those schools were asked for pertinent information. A study of almost 300 science and technical library advertisements appearing in *Special Libraries* for the period 1957-1961 was also made to gather additional data for the study. Results of these studies were presented at the April Conference and published in the *Proceedings.*

April Conference Proposals

At the second conference, which convened on April 12, 1962, almost 50 scientists, research librarians, and information specialists from throughout the United States (many of them participants in the first conference) assembled in Atlanta. Represented officially were the American Association of Library Schools, the American Documentation Institute, the American Library Association's Library Education Division, and the Special Libraries Association.

While the October Conference had initiated the study, the second one reported the progress made by the Georgia Tech group conducting the study. Educators and information specialists throughout the nation also reported on specific programs either currently being offered or in the planning stage. Their short-course, in-service training, and curricular offerings were presented and discussed.

The April Conference began with the idea that recognition of an existing problem was a major step toward its solution. We felt that the initial step had already been taken. It was our belief that although the problems associated with the efficient handling of technical information are enormously complex, they are not insuperable. Further, we believed that from our conference would emerge solutions to some of the problems as

well as ideas suggesting methods of attack on some of the others. We did not assume, however, that these solutions would necessarily be unique. Certainly we thought that experimentation with varied approaches was needed to select better alternatives.

Neither did we assume that work toward the solution of the problems should be the exclusive province of any one segment of the professional community. There is plenty of room for all, and problems enough to go around. Technical universities, colleges of arts and sciences, library schools, and industrial organizations all are concerned with the problem, and all should contribute to the solutions. The combined insights of scientists, engineers, librarians, information officers, mathematicians, computer experts, linguists—all are needed for the kind of frontal attack that will spell success.

Just as varied approaches to the training programs were presented at the conference, so a broad spectrum of information specialists emerged. Illustrative of this breadth is the shading existing between the extremes of the scientist who knows nothing about the theory or technique of information handling and the librarian who knows nothing about traditional science.

The Georgia Tech committees' reports at the conference emphasized three significant points. *First,* a tremendous need exists both in quantity and quality for science librarians and other science information personnel. *Second,* three distinct types of science information specialists can be recognized and defined: *1)* the science librarian, *2)* the technical literature analyst, and *3)* the information scientist. These terms as used within the framework of the conference are defined at the end of this article. The *third* point the committees emphasized is that personnel needs can and must be met by a variety of programs.

Immediate needs call for short-course or institute programs at every level of sophistication for the librarian with little science background as well as for the highly specialized scientist engaged in research in the information field. Long-range needs require the expansion of existing programs, such as those in library schools, and the development of new curricula in universities with strong technical programs and facilities.

Descriptions of currently operating programs or proposed short courses were presented at the conference by representatives from the University of California at Los Angeles, Drexel Institute, Emory University, the University of Tennessee Medical Units, Georgia Institute of Technology, and Western Reserve University. Institutions describing curricular offerings were the University of California at Berkeley, Drexel Institute of Technology, Georgia Tech, the University of Illinois, Lehigh University, and Western Reserve University.

Existing programs in communications and computer science at Harvard University, Massachusetts Institute of Technology, the University of Michigan, and the University of Pennsylvania were also outlined. These programs are closely related to those suggested for training the information scientist.

Reaction to the conference by the participants indicated that the meeting was highly informative in a number of ways. It demonstrated a wide interest in training specialists in the science information field. It offered evidence of an acute shortage of such personnel and described a variety of long-term and short-term programs in progress or being planned. Participants found it extremely helpful to compare their varying approaches, the content of their offerings, and the duration of their training periods.

The conference has been referred to as a landmark in the history of training for the science information field. Certainly it has contributed toward a realistic evaluation of problems created by the growing volume of technical literature.

Initiation of Training Programs

A report of the feasibility study has been submitted to the National Science Foundation. At Georgia Tech the first two short courses were offered in the fall of 1962. By the fall of 1963 we expect to begin our degree program for training the technical literature analyst, an outline of which is given at the end of this article. A second phase of the proposed degree program at Georgia Tech deals with training of the information

scientist. The outline following this article does not include the curriculum for that program.

The first short course, conducted October 29-November 9, 1962, was designed for industrial information specialists. The second one presented by Dr. Robert Hayes, December 3-7, 1962, was entitled "Mathematics for Information Retrieval." It was planned as the first presentation of a mathematical model for the designing of information retrieval systems.

Other institutions are also moving ahead in this area. The approach at Georgia Tech at present is to develop practical applied programs but to initiate them with the attitude that they must gradually be replaced by more theoretical and more fundamental approaches as basic principles are recognized. There is much to be done. The administrative problems involved in the approval of new degree programs alone, for example, are tedious and time-consuming tasks.

These are extremely worthwhile experiences, however, and we shall move ahead in this direction to reach our goals. Present aims consist of a program of short-range courses to alleviate immediate shortages of trained personnel. These will be followed by carefully planned and approved long-range degree programs in those institutions interested in the training of science information personnel.

DEFINITIONS

LIBRARIAN: A person having formal training in library science and possessing a degree from an accredited library school. It is used here in preference to the term "professional librarian."

SPECIAL LIBRARIAN: "A librarian who, by virtue of special interests and talents, chooses to operate in a special discipline, and for that purpose requires a broadened and intensified knowledge of his selected field—to which he must adapt the library techniques basic to all library practice" (SLA Sub-Committee on Library Education, 1950).

SCIENCE LIBRARIAN: A librarian with a broad, though not necessarily deep, acquaintance with science, and a comprehensive knowledge of the literature of science. He differs from the literature analysts in two respects: *1)* he is a librarian and therefore is qualified to deal with the usual problems associated with the operation of a library; *2)* while he can and does perform science literature searches, he cannot, in general, critically evaluate the scientific content of the literature. The technical literature analyst interacts with information in the books; the librarian interacts with the books.

TECHNICAL LITERATURE ANALYST: One who is trained in a substantive technical field, who has, in addition to the depth thus provided, some breadth of technical knowledge and a thorough knowledge of the technical literature. He can analyze the literature for researchers who are investigating problems in the areas of the analyst's technical competence. Analysis implies a search, an organization, and an evaluation of the literature in question. In his ability to deal with the technical literature, the analyst differs from the conventional science librarian in that he is sufficiently deep in science to be able to make value judgments of its literature. At higher levels this person generally performs not only analysis but synthesis of the literature as well.

INFORMATION SCIENTIST: One who studies and develops the science of information storage and retrieval, who devises new approaches to the information problem, and who is interested in information in and of itself.

SHORT COURSE: A course of study of varying lengths, generally not carrying credit toward a degree, having a specific objective, and aimed at a specific clientele.

IN-SERVICE TRAINING: A program of supervised experience or internship in which one learns by actually doing the work under supervision rather than through classwork, although classwork may be a part of the training program. The aim of in-service training is to teach broad professional concepts rather than at the operational activities of the institution at which the program is offered.

INFORMATION: Knowledge of a factual kind, usually gathered from others or from any of the various storage media and ready for communication or use.

INFORMATION SCIENCE: The science that investigates the properties and behavior of information, the forces governing the flow of information, and the means of processing information for optimum accessibility and usability. The processes include the origination, dissemination, collection, organization, storage, retrieval, interpretation, and use of information. The field is derived from or related to mathematics, logic, linguistics, psychology, computer technology, operations research, the graphic arts, communications, library science, management, and some other fields.

DOCUMENTATION AND DOCUMENTALIST: The use of these two terms was avoided during the conference because of the wide variation in their use and in the numerous interpretations of their meaning. Conferees using these terms were requested to state their own particular definitions.

CURRICULUM OF THE PROPOSED DEGREE PROGRAM FOR THE TECHNICAL LITERATURE ANALYST

1. The curriculum of the Technical Literature Analyst Program will be based upon undergraduate preparation in the scientific and technological fields, and a bachelor's degree awarded by an accredited higher institution in one of these fields will be required for admission. Admission of students with other backgrounds will be only by special permission. The common purpose of the curriculum is to develop an understanding and mastery of the substantive content in each area and to prepare the students for successful professional practice and research.

2. Students will be required to submit a thesis for the master's degree and a dissertation for the doctor's degree. The formal research thesis requirement for the master's degree may be waived in those special cases where the director of the program may consider additional course work of more importance in meeting the student's approved objective.

3. To satisfy the requirements for the master's degree in the program, students must complete successfully at least 50 quarter hours of work approved for graduate credit, normally including 17 hours of credit for thesis research. Students completing this program will also be expected to possess a reading knowledge of at least two modern languages other than English, preferably German, Russian, or French. This requirement is to be satisfied by special examination.

4. The purpose of the program is to develop in each student competence in three broad areas: science information, modern languages, and advanced subject specialization in a particular field of science or engineering. The total of at least 50 quarter hours of graduate credit required for students in this program is to be accumulated through the completion of work in the principal course areas indicated below, including the thesis. With prior approval, a limited number of graduate credit hours may be substituted by completing courses in appropriate areas in other departments.

SCIENTIFIC AND TECHNICAL LITERATURE: Introduction to the functions, characteristics, and history of recorded science information and the technological, economic, and social forces operating on it; the communication cycle; principles of evaluation and selection of literature.

BIBLIOGRAPHIC DESCRIPTION: Study of the elements of description and the types of description (listing, descriptive cataloging, annotation, abstracting, extracting, reviewing, etc.) including the study of the basic mechanized and non-mechanized methods and systems.

ORGANIZATION OF INFORMATION FOR STORAGE AND RETRIEVAL: Study of indexing elements and the principles of subject and non-subject indexing. Includes the consideration of hierarchical, faceted, and dictionary systems primarily in terms of theoretical models and not of specific existing systems.

INFORMATION SOURCES AND SEARCH TECHNIQUES: Study of the types and characteristics of bibliographic publications, institutions, and systems. Considers the principles of search strategy and techniques and grounds the student in the bibliography of specific subject fields.

INFORMATION SYSTEMS: Study of the types, functions, and elements of information systems as organic entities. Includes a survey of the major storage and retrieval systems now in use and an analysis of libraries and information centers as systems. Also considered are the major bibliographic systems currently devoted to the dissemination and control of information.

SPECIAL PROBLEMS IN LITERATURE ANALYSIS: Study of special problems in the interpretation and presentation of information; the evaluation and analysis of technical information in all forms and from all sources; and the preparation of abstracts, reviews, bibliographies, and reports.

LANGUAGES FOR SCIENCE AND TECHNOLOGY: A survey of the chief languages in which scientific and technical literature are published. Emphasis is on the written appearance, systems of writing, sounds, relation to other languages, basic grammatical structure, and a practical technical and bibliographic vocabulary of German, French, Russian, other major Teutonic, Romance, and Slavic languages, Japanese, and Chinese, with descriptive information concerning other important languages.

SUBJECT SPECIALIZATION COURSES: Students will take additional graduate-level courses in subject fields other than information science in order to strengthen and broaden their preparation in areas related to their undergraduate majors. Up to 20 credit hours may be accumulated in this manner.

THESIS RESEARCH: Normally the thesis for students in the program will be addressed to literature problems in their areas of specialization. Seventeen hours of credit will be awarded for thesis research.

5. The optimum distribution of the above subject areas by specific courses and the exact number of credit hours to be awarded per course are to be determined in the initial period of this program. It is anticipated, however, that the specific course designations will approximate closely the course areas indicated in the outline above and that an average of three quarter hours of credit will be awarded for each course.

Preliminary Survey of Science and Technology Libraries in Canada

JACK E. BROWN, Past Chairman, Research Section, Canadian Library Association
Librarian, National Research Council, Ottawa

DURING 1960-61 the C.L.A. attempted to determine the present state of library service in Canada. The Research Section of C.L.A. took part in this program of inquiry by carrying out a preliminary survey of the resources of those Canadian libraries whose collections emphasize the fields of science and technology.

Because of time limitations and the many ramifications of the problem, it was decided to limit the survey to seeking data relating to the size, experience and educational background of staffs, and the size and subject specialties of the science and technology collections. It was hoped that the personnel data obtained would be of interest and value to the directors of Canadian library schools, and that the information on subject specialties would form the basis for a subject directory of these collections.

Accordingly, a questionnaire was prepared and, during February 1961, was distributed to appropriate libraries. A brief summary of the findings obtained up to June 1961 was presented at the annual meeting of the Research Section held June 19, 1961 at St. Andrews, New Brunswick.

The present report brings up-to-date the St. Andrews' statement and elaborates on the information obtained through the questionnaire. The data which follows is largely statistical, and little or no attempt has been made to interpret the figures. This phase of the study must await a more thorough examination of the survey's findings.

Distribution of Questionnaire

Questionnaires were mailed to 185 libraries which specialize in one or more fields of science and technology. University libraries were included in the mailing if they maintained science collections which are physically or administratively separate from the main collection.

Of the 185 questionnaires distributed, 80 were completed and returned—a return of approximately 43%. The information from 71 of these questionnaires was tabulated. 9 questionnaires were not included because of the incompleteness of the answers.

Library Personnel

Part A of the questionnaire dealt with the number of people employed by each library, the levels of education, and professional training or library experience.

Part A, Item 3, attempted to obtain an expression of opinion from the head librarian regarding the need to have staff members possessing library training, science or engineering training, or both. The manner in which this part of the questionnaire was answered or ignored suggested that the librarians concerned held no strong feelings in the matter, or that the questions were not understood. In any case, of the 71 questionnaires tabulated, only 45 contained answers to Part A, Item 3.

Size and Education of Library Staffs

The 71 libraries included in the tabulation reported a total staff of 388—an average of 5 staff members per library.

Professional Staff: For purposes of the survey, a professional librarian was defined as one possessing a university degree plus a B.L.S. or M.L.S. degree or its equivalent.

Out of the total staffs of 388 people, 116 were classified as professional librarians. Their educational attainments are as follows:

Professional librarians with science degrees	21
Professional librarians without science degrees	95
Total	116

Reprinted from *Canadian Library*, vol. 18, no. 6, May 1962, pages 260-61.

Non-Professional Staff: Staff lacking a B.L.S. or M.L.S. degree or its equivalent.

Out of the total staffs of 388 people, 272 were classified as non-professional. Their educational attainments are as follows:

Non-professional staff with university degrees	58
Non-professional staff without university degrees	214
Total	272

Analysing these figures more closely, it is found that 19% of the 116 professional librarians have science degrees.

Of the 272 non-professional staff, 58 or 21% have university degrees. Of this latter number, 30 have degrees in science and 28 have degrees in other fields.

Taken as a whole, the proportion of professional staff to non-professional compares favourably with the 30-46% found in the majority of libraries in Canada and the United States. It should be noted however that 26 of the 71 libraries reporting do not employ either a trained librarian or a person with a university degree.

Library Training Versus Science Training

Part 3 of Section A was answered by only 45 librarians. The opinions expressed were as follows:

29 felt they needed some staff with both science and library training.
11 felt they needed some staff with only library training and no science training.
5 felt they needed staff with science training but no library training.

These answers indicated that the majority of the librarians reporting felt it was highly desirable for the senior librarian to have training in both librarianship and the subject specialty of their library. This should be compared with the figures cited earlier showing that only 19% of the professional librarians have science degrees.

Size of Collections

The size of the collections held by the libraries answering the questionnaire ranged from 500 volumes to 450,000 volumes.

Number of Volumes	*Number of Libraries*
1,000 or less	3
1,001- 5,000	26
5,001- 10,000	13
10,001- 20,000	12
20,001- 40,000	6
40,001-100,000	8
100,001 or more	3

The number of periodicals or serial titles received ranged from 20 to 8,000.

Number of Periodical Titles Received	*Number of Libraries*
100 or less	13
101- 300	26
301- 500	16
501- 800	10
801-1,000	1
1,001-3,000	3
3,000 or more	1

A good indication of the subject specialties of the libraries reporting has been received, but as yet there has been no tabulation of this information.

Your Help Is Solicited!

Recognizing that very little published information exists about the growing number of commercial firms that sell library services, the Special Libraries Committee is anxious to gather pertinent data on as many such organizations as possible for a survey to be published in a future issue of "Special Libraries." If you know of any firms that offer, on a single contract or continuing basis, literature searching, bibliographic, or information services or that do consulting on systems or library planning, please send their names and addresses to the Editor, Mary L. Allison, Special Libraries Association, 31 East 10th Street, New York 3. Firms offering exclusively acquisition or processing services or whose primary purpose is issuing published material will not be covered in the projected survey.

Planning the New Library:
Pickard & Burns, Inc. Library

ANN T. CURRAN, Librarian
Pickard & Burns, Inc., Waltham, Massachusetts

PICKARD & BURNS, INC., founded in 1945, is a research, development, and manufacturing firm specializing in the fields of communications, navigation, and electronic systems. In 1960 it became a wholly-owned subsidiary of the Gorham Corporation.

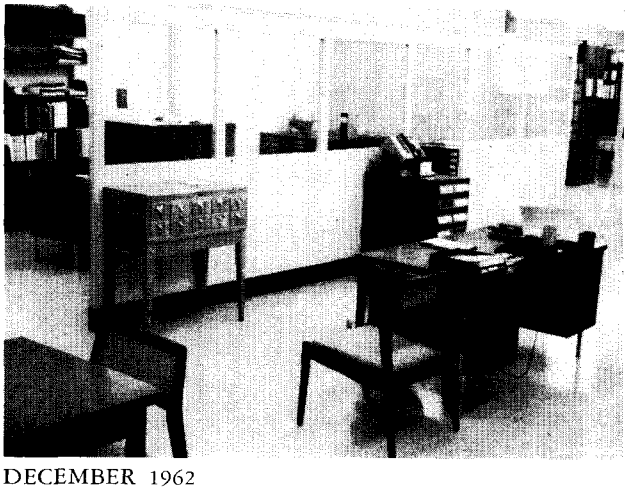
In June 1960, I was hired as Pickard & Burns' first librarian to organize and operate their library. At that time the company was housed in two buildings—the Engineering Department in one, the Research Department in the other. The library was in the building with the Research Department.

A short time after joining the company, plans for a new building were initiated, and I was asked to estimate how much space the library would require to accommodate at least five years' growth. Time was not available for visiting other libraries. Consequently, past experience as a user, worker, and visitor in other libraries plus a heavy reliance on the literature, particularly the *Special Libraries* "Planning the New Library" series, had to suffice.

Estimating expansion is always difficult, but it is especially so for the librarian new to the job. With the help of the Library Committee, *American Book Publishing Record* and ASTIA's *Technical Abstract Bulletin* were scanned to establish what growth rate might be expected for new books and unclassified and classified reports. The Committee also helped to estimate how many older books would be needed.

In addition to the materials already in the library, the slides, specifications, trade literature, and catalogs elsewhere in the company were taken into consideration. It seemed reasonable to expect that eventually some of this material would migrate to the library.

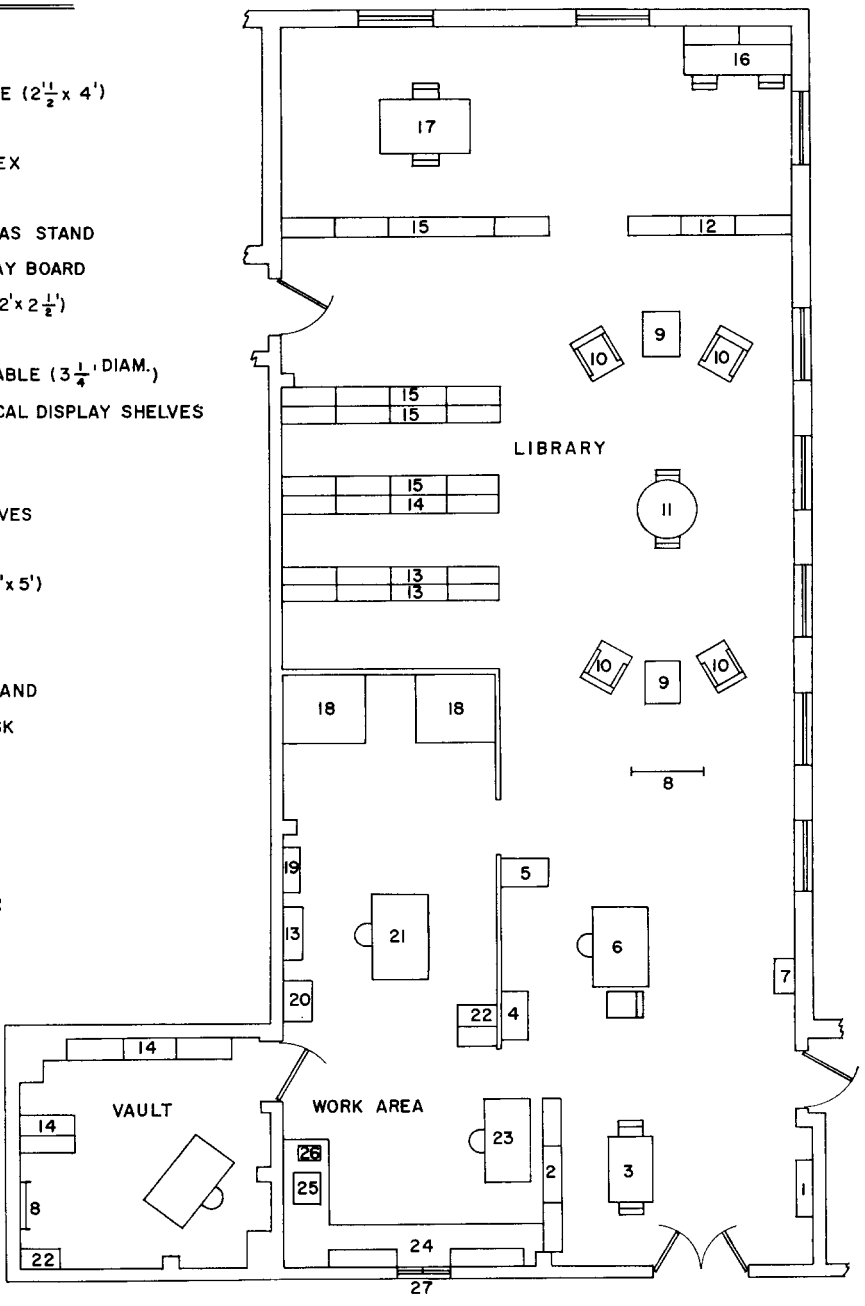
As suggested in M. P. Hilligan's *Libraries for Research and Industry Planning and Equipment,* published by SLA in 1955, seven books and five bound periodicals per foot of shelving were taken as standards. Since reports were to be stored on divider-type shelves, a rough count on a sampling of our reports was made to complete the shelving estimate. Forty reports per foot was decided upon. This figure would vary with the percentage of ASTIA photocopies in one's collection. Hilligan's recommended allotments for



One librarian is readily accessible at the service desk, while another works in relative quiet behind the glass partition. Area is near library entrance.

KEY TO FLOOR PLAN

1. EXHIBIT CASE
2. REFERENCE
3. REFERENCE TABLE ($2\frac{1}{2}$' x 4')
4. BOOK CATALOG
5. IBM REPORTS INDEX
6. SERVICE DESK
7. DICTIONARY / ATLAS STAND
8. PEGBOARD DISPLAY BOARD
9. LOUNGE TABLE (2' x $2\frac{1}{2}$')
10. LOUNGE CHAIRS
11. ROUND READING TABLE ($3\frac{1}{4}$' DIAM.)
12. CURRENT PERIODICAL DISPLAY SHELVES
13. BOOK SHELVES
14. REPORT SHELVES
15. PERIODICAL SHELVES
16. ABSTRACT BAR
17. STUDY TABLE (3' x 5')
18. MAP CASES
19. BOOK TRUCK
20. TYPEWRITER STAND
21. CATALOGING DESK
22. FILE CABINETS
23. ORDER DESK
24. WORK COUNTERS
25. SINK
26. VERIFAX COPIER
27. DELIVERY PORT



Floor Plan of the Pickard & Burns, Inc. Library, Waltham, Massachusetts

The current periodicals and lounge area are away from the mainstream of traffic. Wall phone is for convenience of readers.

space between bookstacks, desks, tables, etc., were also followed.

The result of the above procedure admittedly does not have any claim to great precision. However, had the estimate of space requirements been questioned by management, two facts would have been evident: *1)* a method was used to arrive at the figure and *2)* the figure could be substantiated.

After this space estimate was accepted, we were requested to submit a floor plan. At this time the building was still in the discussion stage. Although it might seem to be wasted effort to lay out a library arbitrarily, assigning it a shape, dimension, and windows, this did not prove to be so. From this planning, a clear understanding of the basic relationships of the desired design was obtained.

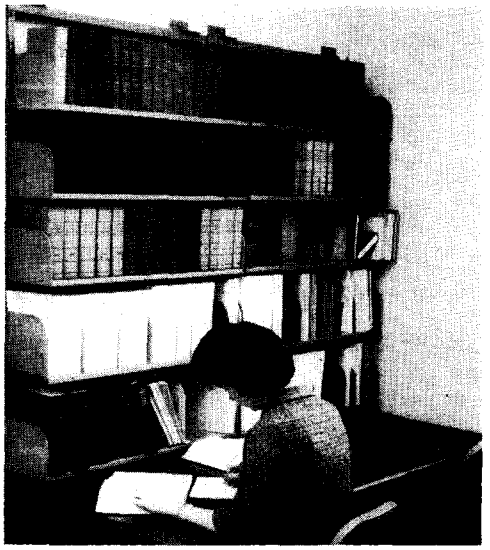
Cabot, Cabot & Forbes was selected as the architect for the building. A two-story building was decided upon, with engineering and support services on the first floor and research, management, and sales on the second floor. Since the Research Department used the library more frequently than the Engineering Department, the library was placed on the second floor, and it was allotted the requested floor space. However, the final plans were for a much longer, narrower room than might be considered ideal.

I have long been in favor of one-door libraries because of experienced forgetfulness or reluctance of scientists to bother to sign out materials. For safety considerations, however, the architect recommended a second exit. He suggested locking this door from the outside so that it would be accepted as an emergency exit only. The door at the narrow end was selected as the entrance since it was only a few feet away from the Research Department and also only a few feet away from the elevator, which connected with the Engineering Department. Having the entrance at the narrow end added to the layout problems present in such an elongated room, but it was felt that accessibility to its users was of prime importance. It was in solving these design problems that the architect's advice was of particular help.

User Area

To the right of the entrance is the exhibit case containing the early instruments and notebooks of the company's late founder, Greenleaf Whittier Pickard, who was a pioneer in early radio. Dr. Pickard's books and journals form the nucleus of the present library collection.

User and staff convenience were the basic guidelines followed. In keeping with this, the reference section, dictionary, and map stand were placed near the entrance and handy to both the service desk and work area. The book catalog and IBM reports index cabinet are within "rolling distance" of the chair at the service desk but are also convenient to either the ordering or cataloging desks in the work room. The service desk now accommodates the IBM charge cards, but if need be, they can be moved to the IBM cabinet and still be within easy reach. The service desk lies between the stacks and



Abstracts and indexes are placed on shelves over an abstract bar made from an old library table.

the door so that one must pass this desk before leaving the library.

The lounge and browse area is opposite the book, unclassified report, and periodical stacks and adjacent to the display stacks for current periodicals. This location, somewhat removed from the heavier traffic near the door and from the noise of the work room, is afforded a reasonable amount of quiet. A table was also put here so that there would be a place to write near the stacks.

Since a large number of the bookshelves on hand were of the single-faced wall type, we tried to use these bookshelves as dividers or partitions. The reference shelves separate the front of the work room from the front of the library. We also wished to use these single-faced shelves to separate the study area from the rest of the library. After discovering that all of these shelves would need floor to ceiling beams to support them, we decided to erect an eight-foot high plywood panel behind these shelves. This not only produced a much quieter study area, but also improved the appearance from the front of the library. The cost was less than the standard metal backs for these shelves.

Since it was felt that a quiet area is desirable for literature searching, the abstracts and indexes were placed in the study area. A makeshift abstract bar was devised by combining our old six-foot table with two of the available single-faced shelf units. The study table from the old library was placed here to provide one spot in the library where one could come, spread out materials, and settle down for quiet, serious study, unseen and hopefully undisturbed. There was no attempt to make the study area decorative or especially attractive, or to match the furnishings in the rest of the library. In talking this over with various library users, the conclusion was that the plainer the area, the more conducive it would be to serious study.

Work Area

Beyond the reference shelves, the work-room is separated from the rest of the library by a partial glass partition. This helps contain much of the noise while also keeping most of the library in view.

While we progressed from plan to plan, opinions and reactions were sought from the Library Committee and other frequent library users. In the first plan, there was no service desk outside the glass partition. It was interesting to note that different library users had the same reaction to this. They did not like their librarians "under glass" but felt that if a person was placed out in the library, the users would consider them much more approachable. In keeping with this suggestion, a service desk was placed outside.

The library was planned to start with a staff of two. Upon examination of both the professional and nonprofessional duties, it was found that the duties could easily be scheduled so that each one would spend one-half day at the service desk, the other half at either the ordering or cataloging desk. This allows each one to have both contact with users and some time for undisturbed work. The Kardex unit for checking in journals was placed to the right of the delivery port in the work room and adjacent to the sink and Verifax machine, used for copying journal table of contents. The result of this counter-cupboard arrangement is that all the mail can be received and checked in one spot.

At the desk in front of the counter, the

ordering and other typing is done. This spot is also handy to the order-receiving records and the ordering tools, which are shelved above the work counter. Behind the other desk, where the cataloging is done, are shelves to hold the various cataloging tools and the materials awaiting cataloging. The map cases also were placed in the work area to limit direct user access and thereby help preserve order in the drawers.

Vault

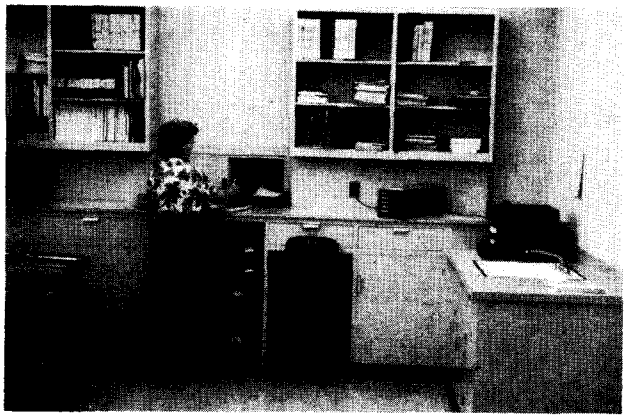
Having experienced the many advantages of using a vault to store classified material, I was most pleased when the request for one was granted. However, in my reading, I found surprisingly little information on vaults beyond the statement of their desirability. I was, therefore, at a loss when asked for the specifications for this vault. Knowing that the nearby Massachusetts Institute of Technology Lincoln Laboratory used a vault, I contacted its librarian. He arranged an appointment for me with his security officer, who informed me that there are no written specifications as such, since requirements are dependent on, and vary with, the security provisions (such as guards, alarms, etc.) of the facility as a whole. His advice was to contact our cognizant military office, inform them of our facility's security provisions, and ask them for the specifications of a vault in such a facility. This is good advice and can save the expense of costly construction changes.

A desk was placed in the vault so that the classified material could be processed here and so that the area could be used as a classified reading room. A pegboard was hung for display of classified brochures from the Army, Navy, and Air Force describing the areas where research is wanted. The vault is easily supervised from either the work area or the service desk.

Furniture

The library is not completely refurnished. All shelving, furniture, and equipment on hand was used. The lounge area furnishings and other new furniture were selected by the Peabody Office Furniture Company, which did the interior decorating in the rest of the building. The reference table, service desk, cataloging desk, round reference table, lounge tables, and chairs are all in Danish modern walnut. All desks and tables except the low lounge tables have Formica tops. The lounge chairs are upholstered in gold and brown Anton-Maix fabric. For additional color, gold and sienna seats were selected for the other chairs. The walls are antique white; the windows are draped in a beige fiberglass material. The beige and brown floor is in keeping with the autumn colors used throughout the library.

All the shelving is Remington Rand: divider type is used for the reports and unbound periodicals; regular for the books and bound volumes. To maintain the same color scheme and to improve the appearance, the old files and map cases will be sprayed to match the surf green shelving.



Librarian accepts delivery from corridor through a wall port, eliminating added library traffic in work room. Library supplies are on shelves above. Filing cabinets hold order records and pending files.

In Retrospect

We have now been in our new building about a year. The advantage of procrastination in writing such a paper as this is that we have had the time to consider the changes we would make if we were starting anew.

Although we are pleased with the light Formica on top of the work counter, the practicality of having Formica as dark as walnut is questionable as fingermarks leave a stain that can only be removed by washing.

The delivery port, which has sliding doors, is too low. Even though there is no need to see in to leave material on the counter, most people seemingly would prefer to. Also, from the corridor, it resembles a food slide in a cafeteria. Up to the present, close to 100 orders for ham on rye have been smilingly received.

Since we did not initially install shelving to accommodate a year or two's expansion, it would have been better to have set up the shelves not at the wall but at the other end of the proposed stacks. This would have presented a better appearance during the "start up" period.

There has been another interesting observation. After the new furniture was installed, there was a decrease in the amount of reading of current journals in the lounge area. We observed this among some members of our research group who frequented our old library and who, for two weeks after our move, sat on boxes or leaned against map cases and read—seemingly happy and at home. Their reluctance to sit in this open area, in these lovely chairs, was thankfully short-lived, but it did take time for our people to become accustomed to the new surroundings and to use the new facilities.

As might also be expected, the Engineering Department is using the library much more than when it was housed in a separate building. In order to call attention to library materials, we put up a bulletin board just outside the cafeteria where both engineering and research people pass by daily. Posted here are photocopies of journal tables of contents, book jackets, and other notices.

Our much larger quarters have enabled us to set up various types of displays. Probably the most effective of these was a collection of library materials relating to a subject that is of particular interest to our company. We found that the use of a pegboard and the library book truck was much more effective than the distribution of a printed bibliography. This display was timed to coincide with the visit of a government group who was considering the company for a contract in this particular field.

As is usually the case, the library has become a display item in showing visitors our facility. To assist the people conducting these tours, a list was distributed, pointing out library features that might impress visitors with the company's technical capability. When desirable, one or two of these points may be chosen and added to the traditional, "This is the library!"

VITAL STATISTICS FOR PICKARD & BURNS, INC. LIBRARY

Total square foot area	2180
Staff	1½
Professional	1
Nonprofessional	½
Employees served at location	120
Services extended to other areas	Occasional service to parent company
Average number of users per day	20
Books and bound and unbound periodicals as of October 15, 1962	8600
Current periodical subscriptions	185
Vertical file drawers	12
Date of completion	December 15, 1961
Planned by librarian and architect	
Special facilities or equipment: Verifax Copier; use of Data Processing Department's IBM key punch.	

Workshop for Library Assistants

TO VIEW A TOTAL operation in perspective shows the relationship of the various parts and assures each worker in a field of the importance of his contribution to the whole effort. This awareness has, as by-products, greater teamwork, better quality performance, and greater enthusiasm for more efficient accomplishment.

The Education Committee of the San Francisco Bay Region Chapter of the Special Libraries Association has recently spurred such enthusiasm in 86 participants at a successful Workshop for Library Assistants representing 43 different libraries. This project was held at the University of San Francisco, September 13-14, and was planned to provide a background of fundamentals to lead to a clearer understanding of basic library operations and to explain the role of the library assistant in his environment.

The emphasis was placed on *what* the operations are and *why* they exist, rather than on *how* they are performed. To increase their understanding and appreciation of the true content of librarianship, the aim was to explain what lies behind the activities clerical workers perform in their daily routines.

The project was under the chairmanship of Mrs. Margaret Uridge, the members of the Education Committee, and the coordinator of the workshop, Mrs. Dorothy Williams. Speakers were Mrs. Margaret Rocq, retired librarian, Standard Oil Company; Marjorie Griffin, Librarian, IBM Advanced Systems Development; Robert S. Meyer, Head Librarian, UC Lawrence Radiation Laboratory; Mrs. Uridge, Head, Interlibrary Service, University of California.

Meetings were held during July, August, and September to discuss the contents of each presentation and to avoid duplication in the detailed arrangements for a smooth-flowing workshop. Further preparations, under the responsibility of the coordinator, included organization of publicity, arrangements at the University of San Francisco, and details of enrollment. She also introduced the speakers, kept them to a time schedule, arranged for audio-visual equipment needed by lecturers, and had the Workshop tape recorded. Invitations were mailed to the managers of special libraries in the area, to hospital libraries, and members of the American Documentation Institute; and notices were mailed to companies with research departments listed with the San Francisco Chamber of Commerce. One mailing was made in July and the second at the end of August. The fee was $20 to include four lectures, lunches, and coffee breaks.

Business firms, publishers and library suppliers made contributions of hand-out materials—dividends that provided practical information and added a touch of pleasure at coffee breaks and lunch. Contributors were: Remington Rand, Gaylord Bros., Demco Library Supplies, Bro-Dart Industries, all encyclopedia companies, H. W. Wilson Company, Library of Congress, Bank of America, Stacey's Scientific Book Center, Pacific Telephone & Telegraph, San Francisco Convention and Visitor's Bureau, Leslie-Spice Islands Sales Co., Dow-Corning Corp., and many publishers.

The sessions were divided into four parts, each one-half day. Although the speaker could organize as he wished, there was a tentative plan for the first hour to be a lecture and after the coffee break, a laboratory period. An outline with an extensive bibliography was distributed at the beginning of each lecture.

PART I. *The History of the Library* covered the variety of libraries, with emphasis on the special library, its place and purpose in parent organization, administrative relationships, personnel needs, and the materials a library handles and their definitions. At this opening laboratory period the participants were shown two movies, *Help Yourself* and *Greatest Treasure,* the latter an excellent film on the scope of the collections and operations of the Library of Congress.

PART II. *Acquisition of Library Materials* covered the selection of materials, book dealers, ordering special types of publications, non-book materials, dissertations, translations, technical reports, government documents,

maps, and pamphlets, records necessary in ordering, receipt of orders, claiming overdue orders, payments, gifts, periodicals, and the types of material handled in interlibrary loan, as well as varying policies.

PART III. *Processing of Library Material* was divided into four parts: books, serials, reports, and miscellaneous materials. Classification and cataloging were illustrated with slides to show types of cards and their development. Also discussed were book labelling, the different methods of filing, arrangement of periodicals, binding problems, the reasons for handling non-book materials differently (for example, for identification and retrieval), patents, classified and unclassified reports, clippings, maps, government documents, pictures, and trade literature.

PART IV. *Library Services* included circulation, scanning literature for routing, abstracting, reference, stack supervision, and maintenance (involving inventory and shelving), and public relations. The laboratory period was a highlight with a "what should we do" question period and an entertaining and instructive movie, *A Manner of Speaking,* produced by the Pacific Telephone and Telegraph Company in San Francisco.

The two-day Workshop closed with a brief talk by Glenn Maynard, President of the SLA San Francisco Bay Region Chapter, discussing the activities of the Chapter and requirements for membership. A summary of the intent of the Workshop focused attention on the basic ideas of library practice, the similarity of the problems in different types of libraries, and the importance of the library assistants who constitute two-thirds of the library staffs.

Each participant was presented with a Certificate of Completion signed by the coordinator. Also, each participant was urged to complete a "helpful hints" form, with suggestions for improvements since this was a "first" and an experiment.

Constructive comments from participants to help in planning future workshops included suggestions to split the group in sections on the basis of experience; to have more audience participation with planned methods for stimulating questions and discussion; to suggest that each lecturer have some visual presentation; to allot more time to the handling and processing of reports; to include more about book mending; to plan a visit to a model library or one with unusual facilities; and (this was stressed by several), to show more up-to-date films on libraries. It was suggested that a movie of a special library on the East Coast and one on the West Coast be made available through the Special Libraries Association. The lecturers, too, felt that this could have been valuable.

Managers of libraries responded, after discussions with their representatives, that the participants had enjoyed the meeting and found it most informative. Assistants had been motivated to restudy their work as they gained a better perspective of the entire library operation and their place in it.

An atmosphere of genial hospitality was created by introducing every member of the audience and then arranging for special introductions for assistants from similar libraries or with similar workloads to exchange ideas. The coffee breaks and lunch periods provided time for sharing experiences and the chance to make valuable contacts.

Tangible benefits to SLA came through learning that some of the attendees were preparing for future library school training, that several were eligible for membership and expressed their desire to join, and that new companies in the area were interested in establishing libraries. (Their names were forwarded to the Employment Chairman.)

Although the Workshop was developed primarily for the special library's non-professional, there were representatives from public, state, and university libraries, some of whom came not to learn, but to see how to conduct and plan a workshop.

The success of the Workshop is reflected in the continuing requests for information on future workshops and for copies of the bibliographies. To retain some of the enthusiasm generated by this experiment in enlightenment, the San Francisco Bay Region Chapter proposes to accept and act upon the recommendations to *1)* repeat the workshop biennially, and *2)* to edit a manual on *How to Organize a Library Workshop.*

EDUCATION COMMITTEE
San Francisco Bay Region Chapter

They Came to Listen

THE RECRUITMENT and Training Committee of the New York Chapter recently presented a recruitment program for an audience we did not want to recruit! Nevertheless, our *Workshop for Special Library Career Counseling* was a resounding success.

Our primary object was to make the SLA recruitment folders in the files of college placement offices and library schools come alive. To accomplish this, we wanted to introduce ourselves and our profession on a personal and lively basis. In turn, we hoped to learn from the 40 college placement counsellors and directors who attended just what young people seek (or avoid) in the selection of a career and how best we might direct our recruitment efforts to reach this potential.

During the first half of the meeting our guests had an opportunity to see the recruitment literature we had available and examine the displays picturing many different kinds of special libraries in action. The informality of this part of the program, during which we served coffee and had an opportunity to meet our guests personally, did much to establish the rapport that developed during the later talks and discussion period.

A panel of speakers, highly representative of the special library profession, presented concise, stimulating, and very much to the point facts about special library careers. Elizabeth Ferguson, "What's Special About a Special Librarian," Janet Bogardus, "Educational Qualifications and Training Needed for a Special Librarian," and Robert W. Gibson, Jr., "Job Opportunities in Special Libraries," offered information to assist the audience in selling our profession to their students.

The lively discussion period was as interesting to the Committee as it obviously was to our guests. A report of the highlights and some of the questions raised are, we feel, important to pass along to the entire Association.

SALARY: It would be helpful if we could develop data relating education, subject specialty, and geography to starting salary and expected salary in succeeding years.

STUDENT WORK: Part-time or summer work in special libraries is generally unavailable to students. Because of this lack of opportunity, they rarely know the difference between such a library and the school or public libraries they have observed. The possibility of cooperation with college placement offices for part-time or summer jobs for recruitment candidates is worth reconsidering.

SOCIAL AND GEOGRAPHICAL ENVIRONMENT: Young people today are most concerned with the social and geographical environment in which they work. They are seeking new friends and a touch of excitement (such as advertising or publishing is thought to offer) in their lives and hope to find it through their choice of a career. SLA can offer both, but we must seek ways to emphasize this.

THE OLDER WORKER: Women college graduates in increasing numbers are planning to return to work when their children reach school age or older. Many of them have turned to their alumnae placement services for help and guidance. They, in turn, asked us what, if any, were the opportunities for these workers on a full- or part-time basis, what would be required in terms of skills and training, and what future could we offer them.

RECRUITMENT PROGRAM: Within less than a week after the meeting, three colleges invited SLA speakers to talk to their students regarding careers in special libraries. In addition, we have received numerous requests for additional copies of the recruitment literature we distributed.

The Recruitment and Training Committee of the New York Chapter feel that this is only the beginning of an active recruitment program in our area. Our guests came to listen, stayed to talk, and then went home to ponder.

MARY ELLEN PADIN
MARY MARGARET REGAN

Recruitment and Training Committee
New York Chapter

CURRENT CONCENTRATES Of The Library World

Special Librarians Need Their Own Research

SPECIAL LIBRARIES, by their nature, must have information on current research and development in their appropriate fields of interest; that is why they exist. But in order to continue to improve their services (and enhance their prestige) they must also know something about, and be involved in, current research and development in their own operations, systems, and information retrieval problems; and too many are not. "Special libraries" (as a subject area) accounted for only 4 per cent of all areas covered by statistical library surveys made by nonacademic institutions during the past four years (the same . . . as reported for the area of library education). Of all the sponsors of such surveys "individual academic and public libraries and private companies" (all lumped together) accounted for just 9 per cent. (Federal and state agencies and national associations accounted for the rest.) The subject areas of nonstatistical research projects could not readily be identified with specific kinds of libraries, but it is of some interest to note that only two per cent of the total number were devoted to methods of research and evaluation, 6 per cent to readers services, and 7 per cent to personnel and training. No sponsors of these projects were identified particularly with special libraries, but some 26 per cent of them were identified as private research companies or others not librarians. . . . A quick check of the May 1961 *Current Research in Scientific Documentation* (National Science Foundation) indicates that at least 78 per cent of the 95 projects reported were sponsored or worked on by private research companies, universities, agencies, and others not librarians.

All by way of saying that not very much solid information is available either about or from special libraries, evaluative, comparative, cooperative, economic, experimental (manual vs. machine data handling, e.g.). . . . To be sure there are many good descriptive articles on library plans, practices, personnel, and need for performance standards. . . . And there are many more or less theoretical papers on all sorts of esoteric terms, machines, concepts, and processes. All of these no doubt serve their special purposes. But solid special-library break-through studies are indeed rare.

No wonder management is not always certain where, or even whether, a library belongs in an industrial or research organization or a business firm. If special librarians are not vitally concerned about their own information systems, operations, and services, and about improving and expanding them, who should be? But where are special librarians going to get the necessary inspiration, motivation, instruction, and experience in methods of research and evaluation that they must have in order to make the profound studies? Only 12 library schools, it is reported, are doing even any kind of research in library science, and only eight of these are doing very much. Maybe there is a need for graduate schools of science information or of special librarianship. . . .

Cooperation among libraries (especially in acquisitions, in technical processing, and in reference work), with attendant service fees if need be, is one of the great untapped sources of growth and strength for all libraries of whatever type; and the sooner special libraries find this out the more efficient and the more effective their operations and services will become. . . . Cooperation extends . . . to all levels of information work. . . .

Extracted from "Implications for the Special Library" by George S. Bonn in *Journal of Education for Librarianship*, vol. 2, no. 4, Spring 1962.

NATIONAL LIBRARY WEEK

How Many Times Is Enough?

The fifth freedom...enjoy it!

Yes, it's that time again—and what are you going to do about it? As long as there is a need to tell our employers, our clients, and our business and community contacts about special librarianship, there is a need for National Library Week. This is the golden opportunity for each library to look beyond its own functions and open wide its doors to others. This is the golden opportunity when all librarians have their sights set in the same direction, and we are backed by nation-wide publicity geared solely to the idea of books, reading, and librarianship.

How many times is enough? When librarians no longer have a story to tell; when librarians no longer look to bigger and better libraries; when libraries no longer have to be promoted to management, employees, etc.—then we shall say, "Enough."

In the meantime, there is a lot you can do about National Library Week, which will be celebrated April 21-27, 1963. Displays, open houses, joint programs with public or other libraries, publications, radio, TV and/or newspaper publicity—these and many more channels of communication afford great opportunities. If you like, colorful and attractive display aids may be purchased from National Library Week Headquarters. Order forms may be obtained by writing Promotional Aids, National Library Week, P.O. Box 700, Great Neck, Long Island, New York, or SLA Headquarters.

Your program may win a prize for your Chapter. Procter & Gamble has generously agreed to donate $100 for the most effective Library Week project carried by a special library in the membership of SLA in the United States and Canada. Details of the competition will be published in a later issue of *Special Libraries*.

The 1963 National Library Week's theme is: Read—the fifth freedom—enjoy it! Enjoyment in reading; enjoyment in new horizons; enjoyment in new achievements. Take advantage of National Library Week—take advantage of its opportunities.

MRS. ELIZABETH M. HUTCHINS
SLA Representative to the National Book Committee

Developments in Photoreproduction

LORETTA J. KIERSKY, Librarian
Air Reduction Company, Inc., Murray Hill, New Jersey
Chairman, Committee on Photographic Reproduction

SEVERAL NEWLY designed high-speed microfilm search systems have incorporated a novel feature, the film magazine, or film cartridge as it is often called in commercial systems. It is a light-tight container holding microfilm that can quickly and easily be inserted into a microfilm reader. When it is inserted into a microfilm reader-printer, the combined feature of print-out permits an enlargement to be obtained in seconds. All that is required of the user is to select the appropriate cartridge from a bank of coded cartridges and insert it into the chamber of the machine.

In these systems the wanted image is found by means of an automatic or a semi-automatic image-finding device that is coupled to the machine. The use of the magazine facilitates handling of the microfilm by eliminating the possibility of finger marks and scratches as well as the problem of attaching the film to a spool. The image-finding device saves time by locating a particular image in seconds.

The Recordak Lodestar reader-printer used with the ARIES (Authentic Representation of an Independent Earth Satellite) space library accepts magazines containing at present about four million pages of microfilmed information. Commercial systems can be purchased that index catalog-type information. The VSMF (Vendors Specifications Microfilm File) and CSMC (Chemical Specifications Microfilm Catalog) file are two such systems that make use of the film magazine file to obtain information on specifications, manufacturers, and suppliers in the electronics, aircraft, missiles, and chemical industries. Such film files are up-dated on a regular basis. This new aid in microfilm systems has great potential. It may have applications for indexing the publications of scientific and technical societies and associations.

A new special type camera called the "Filmsort 1000" Processor-Camera has been demonstrated at two equipment shows this year by 3M Microfilm Products Division, Minnesota Mining and Manufacturing Company, St. Paul, Minnesota. It combines the functions of camera and processor in one unit to convert an original record to a fully processed aperture card. This can be done in less than a minute.

A cartridge containing 500 Filmsort Camera Cards is loaded into the left side of the table-top size camera. Each of the cards has a "C" size aperture frame of unexposed 35mm microfilm. As the originals are to be copied they are placed upon a copyboard at the front of the camera. Each time a button is pressed a Camera Card is exposed and developed. The finished 35mm microfilm aperture card is obtained from the right hand side of the machine. The entire process takes place in a fully lighted room.

The camera has a fixed reduction of 16 diameters. The machine accepts originals up to 18 x 18 inches in size. It also has the capability to microfilm both front and back of an 8½ x 11 inch original in one "C" size aperture card. The approximate cost per card is five cents. The price of the machine is $1995.

A portable, high-speed, rotary (flow) type camera designed for microfilming documents up to 12⅜ inches wide and of unlimited length is available from Federal Manufacturing Corporation, Garden City, New York. The camera has a reduction ratio of 24 on 100 foot rolls of 16mm microfilm. Data or other type information can be easily inserted for recording along the edge of the microfilm. Documents are copied as quickly as they are fed into the machine. The copied originals are returned to the front of the camera in correct sequence. The microfilm is loaded in daylight, no dark room is required. An audible warning system is activated when there is less than four feet of microfilm left. A footage indicator also shows the amount

of unexposed microfilm remaining. A locking device prevents accidental film exposure. The removal of exposed film is possible at anytime. The camera model MF 16A is 26 inches long, 15¼ inches wide, and 7½ inches high, and weighs 21 pounds. The price is $795.

Copytron Model 2000, an electrostatic copier, has just been introduced by Charles Bruning, Inc., Mount Prospect, Illinois. This machine copies any document that measures up to 11 x 17 inches, or 11 inches x any reasonable length. Copies can be made from one or two-sided originals, carbon copies, or photostats, including those with colors, halftone illustrations, solid areas, and ball-point pen images.

The first copy is delivered in about 17 seconds, after which additional copies may be obtained at the rate of four seconds each. In the process taking place in the machine a uniform electrostatic charge is placed directly onto the paper. Next the optical system scans the original and projects the image from the original to the paper. A dry black powder, called toner, is automatically brushed over the surface of the paper and adheres to the image area. The toner is then fused (or "melted") into the paper to form a permanent black image. Demonstration copies made by this machine appear to be very sharp and clean without background shadow.

A choice of two papers is available. Standard Copytron paper used for reference copies costs about .025 cents for an 8½ x 11 inch size copy. Premium Copytron paper costs about .035 cents for the same size copy but this copy can be used as an offset master. The copies are stacked sequentially as they come off the machine, no collating is required.

Machine dimensions are 49 inches wide, with feedboard, 48 inches high, 44 inches deep, without feedboard. The weight is 480 lbs. It operates on 220 volts, single phase, 60 cycle alternating current. The machine is available on a 36-month lease-purchase plan or at the list price of $2995. The manufacturer hopes to offer a book copier accessory within the next six months.

The National Aeronautics and Space Administration (NASA) has selected the 5 x 8 inch flat film transparency as its microfilm medium. Each transparency is capable of holding 70 microfilmed document pages of scientific and technical information. The flat film transparency is similar in concept to the microfiche used in Germany and the Netherlands. It is easily handled and filed, has good image quality and can be used in reader-printers to obtain hard copy. The system was designed by Documentation, Inc., Washington, D. C. A commercial system called Docuform is being marketed. One application of the system would be to chemical patents in the United States.

Metals Division 13th Annual Fall Meeting

The 13th Annual Fall Meeting of the Metals Division of the Special Libraries Association was held in conjunction with the 44th National Metal Congress and 1962 World Metal Show in New York City from October 31 to November 2, 1962, with headquarters at the Barbizon-Plaza Hotel.

The Metals Show was housed on three floors of the Coliseum with more than 300 exhibitors participating. The SLA booth attracted many visitors, who were able to view a typical collection of books and periodicals for the metal industry, a Lectrofile, a Thermofax Reader Printer and a microcard reader. Bibliographies especially prepared for the exhibit were distributed. Those members attending the Fall Meeting had an opportunity Thursday morning to visit the exhibits at the Metals Show.

On Wednesday morning, October 31, Metals Division members and their guests toured the United Nations Library. The new building covers six levels; two of the three levels below ground house the stacks. Their collection comprises from 400,000 to 500,000 volumes on the social sciences, law, economics, and their related subjects. This library, we found, is not a collector of old books, and therefore, constant weeding is necessary to keep the collection current. In

the afternoon, we were greeted at the Engineering Societies Library, 345 East 47th Street, by Dr. Ralph Phelps. Here, we toured the reading room, the stacks, cataloging room, and the photocopying room, and saw the preliminary steps that go into the publishing of the Engineering Index, Inc. We were informed that the reading room of the Library is open to the public, and their services of searching, photocopying and translating are available to both members and nonmembers.

After a luncheon for the speakers, the Thursday afternoon session was opened with a few welcoming words from James Dodd, Chairman of Metals Division. George Aguirre, Librarian of Esso Standard Eastern, Inc., presided, while Dr. Luther H. Evans, Director of International and Legal Collections of Columbia University, was moderator of the symposium on "The Diffusion of Technological Change." Dr. Edwin Mansfield, Director, Carnegie Research Project on Technical Change and Economic Growth, spoke on "The Process of Technical Change." Some of the determinants of the productivity of research and development, the characteristics of innovating firms, rewards for innovation, effects of innovation, and the determinants of the rate of acceptance of innovations were discussed. R. Ned Landon, Manager of Research Information, Research Application Department, General Electric Co. Research Laboratory, gave a lively talk on "Innovation and Inertia in Industry," describing a case history of how one industrial research laboratory is seeking ways of speeding the application of new ideas resulting from basic scientific research. Mrs. Virginia Seidel, Librarian, International Nickel Co., Inc., very ably discussed "The Role of the Librarian in the Diffusion of Technological Change" and enumerated the roles both management and the librarian play in the diffusion of technological change. The last speaker, Alvin Knoerr, Editor, *Mining and Engineering Journal,* stated that the editorial offices of a publication can be a vital stimulus to progress in a particular field by rejecting that which is irrelevant, useless or repetitive; and by gleaning and emphasizing the forward looking ideas and techniques that are being generated constantly. A lively discussion followed the completion of the papers.

Thursday evening, the Metals Division joined the New York Chapter, Science-Technology Division members for a dinner at the Barbizon-Plaza Hotel. Lee Traven, Socony Mobil Oil Co., Inc., was toastmaster for the affair, and Louis Vaczek, scientist, author and teacher, was guest speaker. His topic was "The Relationship Between the Individual Scientist and the Individual Layman."

Friday morning's technical session covering "The Old Nonferrous Metals in the New Age" was presided over by Elsie Ray, Librarian of the Anaconda Company. Dr. Charles H. Moore, Director of International Copper Research Association, Inc., in his paper on "Planning Copper's Future" discussed the ten major programs being carried out in various laboratories to further the use of copper in industrial and consumer products. Ernest W. Horvick, Director of Technical Services, American Zinc Institute, in his talk "Zinc in Modern Living," concentrated his remarks on the applications of zinc with particular reference to the new uses. "What We Are Doing to Meet Today's Demands for Brass Mill Products" was presented by Gilbert C. Strubell, Administrative Director, Research and Metallurgy, Anaconda Brass Company. Mr. Strubell spoke of the basic research being carried on to develop new alloys with better properties. The last speaker, Stanley B. Roboff, President, General Astrometals Corporation, discussed the particular problems which must be met by metals in the space effort. The nonferrous metals which appear promising to meet the requirements are beryllium, the refractory metals and the refractory intermetallics.

Our thanks go to all the members of the Metal Division and the New York Chapter, Science-Technology Division who so generously gave of their time and effort to make the Fall Meeting and the SLA booth successful.

AUDREY A. HUNTER
Public Relations Chairman
Metals Division, SLA

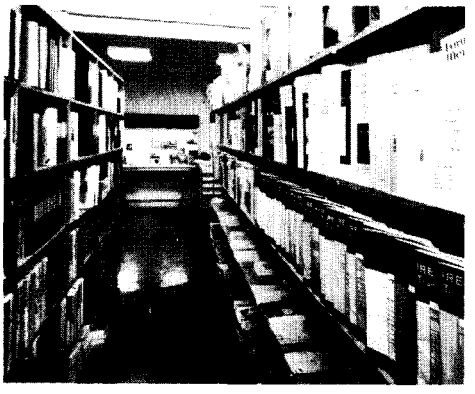
This Works For Us . . .

Displaying Periodicals

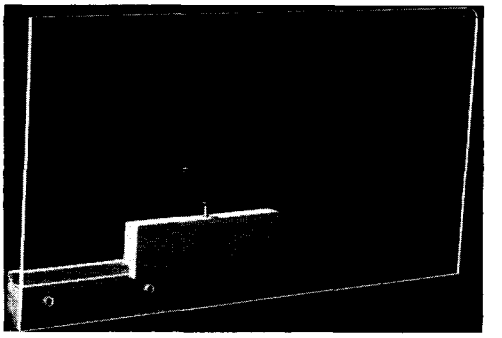
To attract the interest of scientists and research workers scientific publications have discovered the importance of good, attractive layouts on their front covers. This incitement for browsing or reading new periodicals is often difficult to maintain in a library that receives about 100 different periodicals a week. Therefore the periodicals have to be displayed in such a way that the front cover is still legible, which might be difficult if one is short of space.

In our library we expose the periodicals behind a device made of Plexiglass, in such a way that the cover is almost fully displayed. To prevent the periodicals taking up too much space, a slight overlapping is maintained. By adjusting the device according to the pertinent interest, we can display from five up to 12 periodicals on each meter of a shelf. We have found that about ten periodicals per meter gives a good display.

The device consists of a piece of Plexiglass with a piece of wood on each side, fixed in such a way that they interlock with overlapping pieces on each side. A screw in the upper wood piece fixes the piece to the lower one, and the display can be continued as many meters as one wants. To fix the device to the shelves, you need only a screw through the shelf from below about each meter.



Unique periodical display and shelving arrangement used in a Swedish technical library. New journals are exhibited on shelves at end of aisle, near entrance to library.



A detail of the Plexiglass display holder

With this device we are displaying the latest issue of about 800 periodicals in alphabetical order. Those we have entered during the latest week are displayed on a shelf just near the entrance to the library. Our scientists have appreciated this way of exposing new periodicals.

Periodicals File on Living Cards

In Europe various firms manufacture card files called "living cards." In each card two plates of black sheet iron are inserted. In the file box two magnetic rods are located along the sides. The magnetic field maintained by the magnets causes a repulsion between the cards. Thus, the card file is easy to scan, and if a card is taken out for notation, a gap will be held open, which makes it easy to return the card in its proper place.

We use this type of file for periodicals, and we have found that the favourable magnetic properties have increased during the years we have used the cards in the file.

BJÖRN TELL, Librarian
Aktiebolaget Atomenergi
Stockholm, Sweden

Have You Heard . . .

ALA Special Conference

Program planning for a "Conference within a Conference" has recently been initiated by the American Library Association's Chicago Conference Program Committee, under the chairmanship of ALA President James E. Bryan, through the appointment of Phyllis Maggeroli, Adult Education Consultant for the Illinois State Library, as Special Program Director. The program theme, "An Inquiry into the Needs of Libraries and Students," will explore, according to Mr. Bryan, "the trends of society, their effect on the educational process, and implications of these for students in libraries," at the 1963 Annual Conference.

Library Scholarships & Fellowships

Library school graduates under 45 who are interested in rare book librarianship may apply for two INDIANA UNIVERSITY LILLY LIBRARY Fellowships for 1963-64. Fellows will receive $5,000 for the year and must reside in Bloomington. The study program will consist of bibliographical methods, the antiquarian book trade, and the organization and management of rare book and special collection departments or libraries. For further information write to Cecil K. Byrd, Associate Director, Indiana University Libraries, before March 15, 1963.

Several graduate assistantships for a master's or doctoral degree in a subject field other than library science will be offered by the UNIVERSITY OF FLORIDA LIBRARIES, Gainesville, during 1963-64. A $2,250 stipend will require 15 hours of library duty a week, and a $3,000 stipend, 20 hours. Applications may be obtained from the Director of Libraries. The return deadline is March 15, 1963.

Three $1,000 scholarships for M.A. candidates in library science are available for the 1963-64 academic term at the UNIVERSITY OF MINNESOTA LIBRARY SCHOOL, Minneapolis. Applications should be returned to Wesley Simonton, Acting Director, before February 1, 1963.

Scientific Management Conferences

Scientific management as a necessary discipline for the technological progress of underdeveloped nations was discussed at an October 10-13 meeting of the European Council of the International Committee of Scientific Management in Rome. Similar regional conferences were held in Buenos Aires, November 5-10, and Manila, November 18-24, all in preparation for the 13th International Management Congress to be held in New York City September 1963.

Information Sciences Center at Lehigh

A Center for the Information Sciences has been organized at Lehigh University as a division of the library. R. S. Taylor, Associate Librarian, along with an Advisory Committee of faculty members, directs the various operations of the Center. These include research in information sciences, the establishment of additional information centers, and a graduate program of instruction, which, during the 1963-64 term, will cover the use and flow of scientific information, sources, linguistic and information analysis, and the design and evaluation of systems. During the 1962-63 term, 12 seminars are being conducted for faculty and students as well as other interested persons.

Seek American Library Experience

The International Relations Office of the American Library Association is conducting a survey of libraries in the United States that are interested in employing foreign librarians, either on a permanent or temporary basis. From the list already compiled, foreign librarians are urged to contact the library of their choice directly. Libraries wishing to receive applications from the foreign librarians can be placed on the list by indicating the type and nationality of personnel they can use and the minimum term of employment. Information should be sent to IRO, ALA, at 50 East Huron Street, Chicago 11.

Two Medical Librarianship Courses

Students with at least 15 quarter hours of library science may attend two medical librarianship courses at the Graduate School of Library Science, DREXEL INSTITUTE OF TECHNOLOGY. Completion of the courses, "Medical Bibliography" and "Medical Librarianship," given during the winter and spring quarters of 1963, will lead to certification as a medical librarian by Drexel and as a Medical Librarian Grade I by the Medical Library Association. Tuition for each two-credit course is $55. Applications may be obtained from the Office of Admissions.

New Transparent Binder

The Marador Corporation is marketing the Aladdin no. 140, a transparent vinyl binder with a slip-in vinyl pocket for magazine covers and a metal holding bar. The binder is bonded electronically and contains no stitching or adhesives. It comes in 14 sizes, and its prices range from $1 to $1.90. Order from the above company, 1722 Glendale Boulevard, Los Angeles 26.

Members in the News

LEE ASH, for five years the Editor and Research Analyst for Yale University's Library Selection Book Retirement Program and former Editor of the *Library Journal,* will join the faculty of the Graduate School of Library Science at Drexel Institute of Technology as an assistant professor of library science. He continues as editor and publisher of *American Notes & Queries* and maintains his home in New Haven.

ALVAN W. CLARK, Librarian at Fort Belvoir, Virginia, retired recently after 30 years of service. He received a plaque and gifts from the U.S. Army Mobility Command's Engineer Research and Development Laboratories.

MRS. DOROTHY M. CROSLAND, Director of Libraries at Georgia Institute of Technology, was honored October 18 with a presentation of her portrait, painted by A. Henry Nordhausen, American artist. The painting, a gift from the Georgia Tech Library staff, alumni, and friends, will hang in the Price Gilbert Memorial Library.

Off the Press . . .

Book Review

PROCEEDINGS OF THE CONFERENCES ON TRAINING SCIENCE INFORMATION SPECIALISTS, October 12-13, 1961, April 12-13, 1962. Atlanta: Georgia Institute of Technology, 1962. 139 p. Apply.

The Conferences reported in these *Proceedings* were supported by a National Science Foundation grant to the Georgia Institute of Technology to study the feasibility of training programs for science information specialists. The title of this volume is a slight misnomer: whereas the Proceedings of the second Conference are reported verbatim, the first Conference is only summarized (Appendix II, p. 116-23).

Like the prior study, *Science Information Personnel,* by Leonard Cohan and Kenneth Craven (New York: Science Information, 1961), this volume contains definitions that make the proceedings more meaningful to all readers. These definitions include distinctions between the science librarian (a librarian who has an acquaintance with science and a knowledge of the literature of science), a technical literature analyst (one trained in a substantive technical field and who has a thorough knowledge of technical literature), and an information scientist (one who studies and develops the science of information storage and retrieval . . .). The three are subsumed under the general heading of science information specialists.

The first Conference, organized as discussion groups, considered both short-range and long-range programs for the training of science information specialists. The results of these discussions were reviewed and studied later by committees at Georgia Tech, and the reports of these committees were presented at the second Conference in April of 1962.

At the second Conference the reports of the Georgia Tech committees referred to above were supplemented by university and industry representatives' short papers describing existing course offerings or proposed training programs for science information specialists. The volume also contains, as Appendix III, the report of a committee trip to survey and evaluate European training programs for documentalists.

There is much here worth reading for special librarians, library school administrators, and others. In contrast to the Cohan and Craven study, these *Proceedings* rely less on survey results than on the opinion of experts. Recruitment of personnel for this new field remains a major problem, and foundation support, recommended by several

participants, does not appear to this reviewer to be a satisfactory long-term solution. Although evidence is presented to convince the reader of the need for training more science information specialists, problems of initial support, of the curricula, of remuneration and of placement were not resolved at the Conferences.

The publication lacks the conventional imprint information one usually finds on a title page. The organization of the material is a bit awkward, and an index would have facilitated this reviewer's use of the volume.

Full agreement among participants on concepts, curricula, and methods for training science information specialists is not to be expected in a field that is still in its formative stage. But the fact that these conferences and proceedings have focused increased attention on this problem represents a contribution for which we should all be grateful.

DR. L. A. LINDER, Manager
Technical Information Service
Aeronutronic Division, Ford Motor Company
Newport Beach, California

Russian Reference Bibliography Published

Guide to Russian Reference and Language Aids: SLA Bibliography no. 4 has been issued by the Association for $4.25. Compiled by Rosemary Neiswender, Assistant Librarian, RAND Corporation, the body of the text is devoted to selected, annotated listings of more than 225 current textbooks and readers, records, dictionaries, glossaries, encyclopedias, encyclopedic dictionaries, geographical reference works, bibliographies, indexes, and other reference sources. Four appendices cover Russian transliteration systems, retail sources for Russian publications, abbreviations of Soviet publishing houses, and a glossary of Russian bibliographic and book-trade terminology, and an author-title-subject index is also included.

Petroleum Forum Papers in Print

Papers presented at the *Forum on the Abstracting and Indexing of Petroleum Exploration and Production Literature* in Dallas, Texas, February 19, 1960, are available at $1 from the Petroleum Section at SLA Headquarters. The five papers include Dr. Burton W. Adkinson's *Information: Organized or Lost?;* Rhodes W. Fairbridges's *Information: The Geologist's Search;* Paul P. Reichertz' *Information in Applied Petroleum Research;* J. J. Roark's *A Comparison of Commercial Abstracting Services;* and Maryann Duggan's *A Survey of Industrial Abstracting Services.*

Technical Translations Cumulative Indexes

The Office of Technical Services has recently contracted for the preparation of the cumulative indexes to *Technical Translations* on a more current basis than before. The contract, by which the indexes will be prepared mechanically, will become effective with the January 1963 *Technical Translations.* The indexes now available from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D. C. are: *vol. 1,* January-June 1959, $1.50; *vol. 2,* July-December 1959, $3; *vol. 3,* January-June and *vol. 4,* July-December 1960, both $1. Indexes scheduled for completion in 1963 are: *vol. 5,* January-June 1961, January 15; *vol. 6,* July-December 1961, February 15; *vol. 7,* January-June 1962, March 15; and *vol. 8,* July-December 1962, April 15.

Michigan Chapter Directory

The Michigan Chapter has recently published its *Membership Directory 1962-1963,* which is available to non-Chapter members for $1. Copies may be obtained from Mrs. Mildred K. Hulme, Dearborn Public Library, 22100 Michigan Avenue, Dearborn, Michigan.

New Serials

AUTOMATICA is a quarterly devoted to the field of electronics and automated data processing. Annual subscriptions are available from Pergamon Press, Inc. at $30 for libraries and institutions and $10 to individuals.

INTERNATIONAL JOURNAL OF ENGINEERING SCIENCE, a quarterly published for physicists, chemists, mathematicians, and engineers, attempts to foster original research in the application of the natural and mathematical sciences to engineering. Available to libraries and institutions for $30 a year and to individuals for $10. Published by Pergamon Press, Inc.

JOURNAL OF NEUROPHARMACOLOGY is an international quarterly published by Pergamon Press, Inc. at $40 yearly to libraries and institutions and $10 to individuals.

MEDICAL ELECTRONICS AND BIOLOGICAL ENGINEERING will publish papers on the applications of engineering philosophy and engineering techniques to biological and medical problems. The official organ of the International Federation of Medical Electronics, the quarterly's subscription rates are $20 yearly, with a rate of $6 to members and individuals. Also available from Pergamon Press, Inc.

PROBLEMS OF INFORMATION STORAGE AND RETRIEVAL, a quarterly publishing original papers on the theories and techniques of information storage and retrieval and electronic data processing, published by Pergamon Press, Inc. Annual subscription rate is $30 to libraries and institutions and $10 to individuals.

SPACE SCIENCE REVIEWS is a quarterly publishing review papers from every country with emphasis on the pure scientific aspects of research on rockets, rocket-propelled vehicles, and stratospheric balloons. It is published in Holland and distributed in the United States by Stechert-Hafner, Inc. at $42 a year.

SLA Authors

AXFORD, H. William. High School Students and the University Library. *Library Journal,* vol. 87, no. 18, October 15, 1962, p. 3611.

DOWNS, Robert B. *American Library Resources: A Bibliographical Guide Supplement 1950-1961.* Chicago: American Library Association, 1962.

FREISER, Leonard. Requiem for the Public Library, 1834-1973. *Library Journal,* vol. 87, no. 18, October 15, 1962, p. 3623.

HAYCRAFT, Howard. Books for the Blind. *ALA Bulletin,* vol. 56, no. 9, October 1962, p. 795.

HOWERTON, Paul W. The Technical Writer as a Communication Scientist. *STWP Review,* vol. 9, no. 4, October 1962, p. 12.

JACKSON, Eugene B. Portrait of a Special Library System. *Library Journal,* vol. 87, no. 19, November 1, 1962, p. 3962.

KENT, Allen. *Textbook on Mechanized Information Retrieval.* New York: Interscience Publishers, 1962, 268 p.

———. Their Own Devices. *Wilson Library Bulletin,* vol. 37, no. 3, November 1962, p. 276.

KINDER, Katharine L. What's Special About Special Librarianship? *Library Journal,* vol. 87, no. 19, November 1, 1962, p. 3957.

ORNE, Jerrold. *Language of the Foreign Book Trade: Abbreviations, Terms, Phrases,* 2d edition. Chicago: American Library Association, 1962.

PRICE, Elizabeth Y. Oklahoma Libraries on TV. *ALA Bulletin,* vol. 56, no. 9, October 1962, p. 829.

SCHULTZ, Claire K., co-author. A Generalized Computer Method for Index Production. *American Documentation Institute,* vol. 13, no. 4, October 1962, p. 420.

WHITE, Herbert S. Mechanized Information Processing and the Librarian. *Canadian Library,* vol. 19, no. 2, September 1962, p. 64.

RECENT REFERENCES

Librarianship

VISWANATHAN, C. G. *The High School Library, Its Organization and Administration,* 2nd ed. New York: Asia Publishing House, 1962. xvi, 170 p. $3.50. (Distr. by Taplinger Publishing Co., New York)

Covers the operation of the high school library.

WELLISCH, H. *The Special Library: Management and Organization* (Librarianship Series No. 13). Tel Aviv: The General Federation of Jewish Labour in Israel, Executive Committee, Cultural Centre, Library Section, 1962. iv, 205 p. illus. Apply.

In Hebrew. Hebrew-English and English-Hebrew glossaries.

Bibliographic Tools

Guide to Latin American Scientific and Technical Periodicals: an annotated list. Washington, D. C.: Pan American Union, 1962. xii, 187 p. pap. $4.

Includes publications that are entirely or primarily devoted to articles and reports in all branches of exact, earth, biological, medical, and agricultural sciences, engineering, and technology. Annotated list of Latin American bibliographies. Appendix provides a statistical analysis of journal.

PIMSLEUR, M. G., ed. *Checklists of Basic American Legal Publications* (AALL Publications Series No. 4). South Hackensack, N. J.: Fred B. Rothman & Co. (Published for American Association of Law Libraries), 1962. $25. (L.C. 62-18944)

Successor to the *Massachusetts Handlist* and the *MacDonald Checklists.* Contains state statutes, revisions, compilations; loose-leaf form.

PRAKKEN, Sarah L., ed. *Books in Print,* 15th ed. New York: R. R. Bowker Company, 1962. vi, 2289 p. $18.

Over 330,000 entries listed alphabetically by author and editor, and alphabetically by title and series. Includes Directory of Publishers.

———, ed. *Subject Guide to Books in Print,* 6th ed. New York: R. R. Bowker Company, 1962. vi, 1842 p. $17.50.

Over 120,000 books listed with 35,000 cross references. Follows official Library of Congress classification. Contains Directory of Publishers.

RAMBO, Marjorie, comp. *Aeronautics* (Pacaf Basic Bibliographies). San Francisco: Commander-in-Chief, Pacific Air Forces, ATTN: PFPPS-P, Command Librarian, APO 953, 1962. iv, 70 p. pap. Apply.

Supersedes PACAF Basic Bibliography, Aeronautics, dated 1 June 1961. Provides materials for research, reference, job information, self-education, collateral reading assistance in formal education and training courses, and for leisure-time. Annotated, list of periodicals, author-title index.

STECKLER, Phyllis B., ed. *American Scientific Books 1960-1962: A Basic Selection of Scientific, Technical and Medical Books as entered in the American Book Publishing Record.* New York: Bowker, 1962. 474 p. $10. (L.C. 62-18243)

First cumulation of titles from the monthly issues of the *American Book Publishing Record.* Arrangement by Dewey number; each entry is indexed by author and title.

TANGHE, Raymond, comp. *Bibliography of Canadian Bibliographies,* supplement 1960 & 1961. Toronto: Bibliographical Society of Canada, 1962. 24 p. pap. Apply.

General, collective, author, newspapers, reviews, social sciences, law, official publications, education, economics, linguistics, natural sciences, music, literature, geography.

TOASE, Mary, ed. *Guide to Current British Periodicals.* London: The Library Association, 1962. ix, 256 p. $10.50; members, $7.88.

Annotated list of titles currently published in the United Kingdom. Lists some 3,800 titles. Arranged by Dewey Decimal Classification and indexed by title, subject, and sponsoring body.

YESCOMBE, E. R., comp. *Plastics* (Special Subject List No. 38). London: The Library Association, 1962. 40 p. pap. $1.20; members, 90¢.

Guides to the literature, abstracts and indices, surveys and reviews, nomenclature, periodicals.

Dictionaries

COLLISON, Robert, comp. *Dictionary of Dates.* New York: Philosophical Library, Inc., 1962. viii, 428 p. $10.00.

Record of important people and world events. Part I has information arranged alphabetically; Part II consists of anniversaries and events for every day of the year.

DERUGUINE, Tanya, comp. *Russian-English Dictionary of Metallurgy and Allied Sciences.* New York: Frederick Ungar, 1962. 470 p. $15. (L.C. 61-13632)

Covers metalworking, refractories, welding, crystallography, machining, metal treatment by pressure, casting techniques, and others.

HANSON, H. C. *Dictionary of Ecology.* New York: Philosophical Library, 1962. 382 p. $10. (L.C. 60-15954)

Definitions in ecology and related fields such as range management, forestry, wildlife, conservation, agronomy, and limnology.

SPRINGER, Otto, ed. *Langenscheidt's New Muret-Sanders Encyclopedic Dictionary of the English and German Languages,* Part I, English-German, vol. I, A-M. New York: Barnes & Noble, 1962. 920 p. $17.50.

English-German dictionary, the first of four volumes.

Directories

American Men of Science, The Social & Behavioral Sciences, 10th ed. Tempe, Arizona: The Jacques Cattell Press, Inc., 1962. ix, 1220 p. $25. (L.C. 6-7326)

Volume five of the 10th edition of the *American Men of Science.* Includes biographies of those active in the fields of psychology, geography, anthropology, economics, sociology, political science, and statistics.

A Directory of Resources of Cooperating Libraries in Metropolitan New York, 2nd ed. New York: Council of Higher Educational Institutions in New York City, 41 East 65th St., 1962. pap. $1.

Information about 85 college, public and research libraries in the New York area: closing time, special collections, rules governing borrowing privileges, and the use of material by the public.

GILBERT, Dorothy B., ed. *Who's Who in American Art,* 1962 ed. New York: Bowker, 1962. x, 771 p. $22.50; $20 members AFA. (L.C. 36-27014)

American and Canadian biographies, geographical index, obituaries, and open exhibitions.

IRELAND, Norma O. *Index to Scientists of the World from Ancient to Modern Times: Biographies and Portraits* (Useful Reference Series No. 90). Boston: The F. W. Faxon Company, Inc., 1962. xliii, 662 p. $12. (L.C. 62-13662)

Index to biographies, portraits, and chief scientific contributions of scientists. Entries are alphabetical, give dates, nationality, and occupation.

KOYL, George S., ed. *American Architects Directory.* 2nd ed. New York: R. R. Bowker, 1962. 974 p. $25. (L.C. 55-12270)

Second edition of work published six years ago. New features are listings of the officers and conventions of the American Institute of Architects from founding and architectural firms.

National Directory of Employment Services. Detroit: Gale Research Company, Book Tower, 1962. 239 p. $25. (L.C. 62-15816)

Guide to specialized employment agencies, placement bureaus, and related services in associations and professional societies, colleges and universities, and commercial firms.

SCHULZ, Heinrich E. and TAYLOR, Stephen S., eds. *Who's Who in the USSR 1961/62.* Vienna: Intercontinental Book and Publishing Co., Ltd., 1962. 962 p. $21. (Distr. by Scarecrow Press, New York.)

Compiled by Institute for the Study of the USSR, Munich, Germany. Over 4,200 biographies of prominent Russians in all fields. Sixty-page listing of key personnel in Soviet Party, government, and other organizations.

TOWNEND, Peter, and SIMMONS, David, eds. *Who's Who in Music and Musicians' International Directory,* 4th ed. New York: Hafner Publishing Company, 1962. 389 p. $7.50.

Biographical sketches of composers, performers, conductors, soloists, teachers, administrators, and critics especially known in the English-speaking world. Second part contains directory to manufacturers, retailers, music societies, festivals, etc.

Who's Who in Data Processing. Detroit: American Data Processing, Inc. 1962. 340 p. $35.

Biographical data on more than 3,500 people actively engaged in business data processing.

Miscellaneous

CARLETON, R. Milton, comp. *Index to Common Names of Herbaceous Plants.* Hamden, Conn.: The Shoe String Press, 1962. 129 p. $10.

Provides botanical names for common names.

HALSTEAD, Maurice H. *Machine-Independent Computer Programming.* Washington, D. C.: Spartan Books, 1962. xiii, 267 p. $6.50. (L.C. 62-14005)

Designed to teach the student how to write to computers in the Neliac language.

LEVY, Michael E. *Cycles in Government Securities: I. Federal Debt and Its Ownership* (Studies in Business Economics No. 78). New York: National Industrial Conference Board, Inc., 1962. 179 p. charts, tables. $3, for Conference Board Associates, teachers, and educational institutions; others $15.

First volume of a two-part work. Shows that investments in government securities by commercial banks, nonfinancial corporations, and individuals have displayed distinct cycles during the postwar years. Dates fluctuations.

NATIONAL SCIENCE FOUNDATION. *Current Projects on Economic and Social Implications of Science and Technology 1961* (NSF-62-4). Washington, D. C.: 1962. vii, 116 p. pap. 40¢. (Sold by Government Printing Office)

Based on survey conducted by the Foundation in American colleges and universities. Third annual inventory of research projects. Contains summaries of 262 projects: annotation lists name of the investigator, address, and anticipated form of publication of results.

KENNEDY, John F. *Public Papers of the Presidents of the United States: John F. Kennedy: Containing the Public Messages, Speeches, and Statements of the President, January 20 to December 31, 1961.* Washington, D. C.: Office of the Federal Register, National Archives and Records Service, General Services Administration, 1962. 958 p. $6. (Sold by Government Printing Office)

Full and exact texts of speeches, messages, press conferences, and statements of the year 1961. Presented in chronological order with a subject index.

Research for Industry 1960: A Report on Work Done by Industrial Research Associations in the Government Scheme. London: Her Majesty's Stationery Office, 1961. iv, 148 p. pap. photos. $1.55. (Available from British Information Services, New York.)

SOBEL, Lester A., ed. *News Year 1960.* New York: Facts on File, 119 West 57th Street, New York 19, 1961. xiii, 828 p. photos, maps. $14.75.

Dated, summarized and indexed presentation of important news of the year. New editions will be published annually. Index.

WASSERMAN, Paul, et al., eds. *Statistics Sources.* Detroit: Gale Research Co., 2200 Book Tower, 1962. 288 p. $15. (L.C. 62-15817)

Statistics on thousands of subjects ranging from abrasives to zoology; sources listed under subject classifications. Other editors, Eleanor Allen, Anthony Kruzas, and Charlotte Georgi, are SLA members.

ZALL, Paul M. *Elements of Technical Report Writing.* New York: Harper, 1962. ix. 220 p. $3.25. (L.C. 62-8886)

Index. Recommended reading list.

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CHILDREN'S LIBRARIAN at Riley Hospital, Indianapolis, Indiana. Library school degree required. Starting salary $5400-$6300 depending on experience, T.I.A.A.-C.E.R.F. retirement, social security, hospital and life insurance, and one month's vacation. Responsible for book selection, all technical services, and distributing books to patients. Apply to Miss Mary Jane Laatz, Medical Librarian, Indiana University, School of Medicine Library, 1100 West Michigan Street, Indianapolis 7, Indiana.

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JUNIOR LIBRARIANS—DOCUMENTALISTS. Degree in L.S. or science preferred. Documentation experience desirable but not required. Salary commensurate with education and experience. Send resume to Science Information Exchange of the Smithsonian Institution, 1825 Connecticut Avenue, Washington 9, D. C.

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OHIO STATE UNIVERSITY LIBRARY is seeking candidates for: Librarian, Chemistry Library who administers library serving Departments of Chemistry and Chemical Engineering. Emphasis is on reference service. Cooperates with faculty in book selection. Maintains working relationships with Chemical Abstracts Library and Battelle Memorial Institute Library. Requirements: Graduate degree in library science, chemistry course work, acceptable library experience. Salary starts between $6,396 and $7,296; Librarian, Health Center Library who administers a library of 70,000 volumes serving university colleges of medicine and dentistry; schools of nursing and optometry; four hospitals and the Ohio Rehabilitation Center. Is responsible for the development of the several Health Center Library collections. Performs reference and bibliographic service for the campus community as well as the medical profession on a city-wide basis. Successful experience in the area of medical bibliography, ability to supervise library staff members, and graduate degree in library science. Salary starts between $8,268 and $10,068. Apply to: Mrs. Celianna Wilson, The Ohio State University Libraries, 1858 Neil Avenue, Columbus 10, Ohio.

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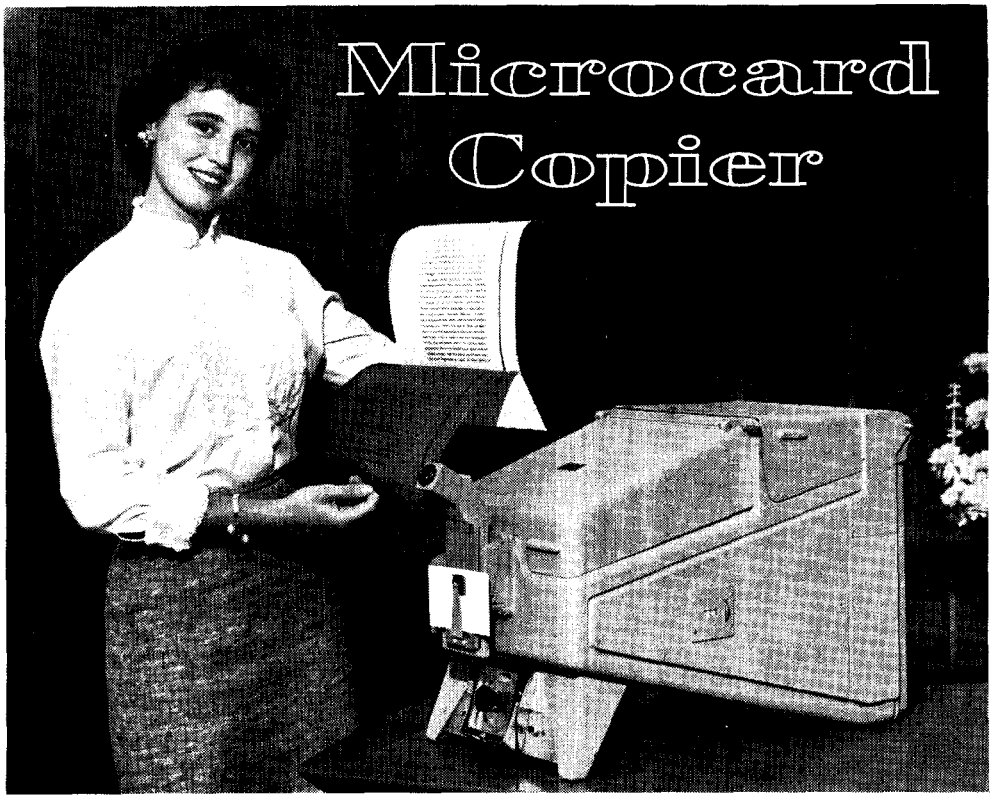

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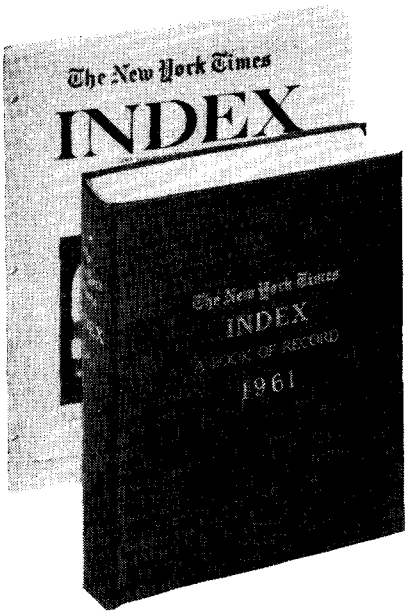

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