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Special Libraries, March 1963

Special Libraries Association

SPECIAL LIBRARIES

MARCH 1963, VOL. 54, NO. 3

Organizing a Bank Library in Nigeria

Book Catalogs Produced by Machines

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CONTENTS

INDEXED IN *Business Periodicals Index, Public Affairs Information Service, Library Literature, Business Methods Index* and *Library Science Abstracts.*

For Services Rendered . . .

IN OUR OWN LIBRARIES we all know in what ways good service is rewarded: with thanks and requests for more service. Then because service is our professional code, we extend ourselves not only to comply but to find new ways to be of assistance. The cost will be met, the bill will be paid somehow.

We have been singularly fortunate over the years to have on our Association Headquarters staff a group of people who not only are individually capable but who hold the professional goal of service as high as any of us. Over the years we members have become well-satisfied users of the services of Headquarters. And we have accepted the service received from that staff in much the same manner that our own library service is received by our users. We give thanks, and we make more requests. But here, too, the bill must be paid somehow.

In recent times the confidence we have gained that anything done at Association Headquarters will be done well, and the willingness of our Executive Secretary to absorb increased demands we make on him has caused an accelerated flow of proposals for new work to be performed by his staff. A reading of the annual reports from the Executive Secretary points up the increasing requirements for new supporting services to projects.

As SLA's activities grow, the work of communicating with all of us grows; new Chapters, new Divisions, new Groups, new Committees, all automatically increase the work of mailings. In addition, we are increasingly mobile and to change our addresses is costly. Our publications program expands, and, inevitably, the editing can no longer be handled by volunteers; new editing time must be bought. We now have an archives, and for you to be able to trace the history of your Chapter or compare your new bylaws with others, staff time must be bought to process the archives collection.

When your Chapter or Division deliberates the means for accomplishing a project, it is a safe bet that some part of the plan calls for help from Association Headquarters. Multiply this by all the other projects underway, and the total is quite an item on the bill.

The trend is not to be resisted or we stand still. Figuratively, to take the Giant Stride we need a bigger shoe. In our own libraries, when the limitation of staff or collections restrict us in the increase of service, we request a bigger budget from our management. In our professional association we are our own management, and our urgent request for a bigger budget must be to ourselves. If we have convinced ourselves that service from our Association is essential, then we must grant ourselves the necessary budget in the only way possible, increased dues. We must be ready to pay this bill—for services rendered. . . .

MRS. JEANNE B. NORTH, Secretary

Establishing a Library at the Central Bank of Nigeria

JANET BOGARDUS, Chief Librarian
Federal Reserve Bank of New York, New York City

I WENT TO LAGOS, Nigeria in the spring of 1961 as a Consultant with the Ford Foundation and at the request of the Central Bank of Nigeria, to establish a Research Library in the Bank and to train a Nigerian librarian. My own bank granted me a nine-month leave. I enjoyed my mission very much—the opportunity to create a library, to work in a foreign central bank, and most of all, just to live in Nigeria.

Preparing for Project

Since I had no trouble at all in deciding to go, the first problem was how best to prepare for such a project. I had no idea what was available in the way of library materials in Lagos—such as bibliographic aids, equipment, and supplies—and no very clear idea of the library needs of the Nigerian Central Bank. Fortunately the Research Adviser to the Central Bank was a former Vice-President of the Federal Reserve Bank of Dallas, and with his advice on the situation there, I put together on cards a basic library of about 1,500 items. I made my choices with the nature of the Nigerian economy in mind—that it was largely agricultural and a primary-commodity exporting nation but with a developing economy and a vital interest in industrialization. I also kept in mind that Nigeria was a member of the Commonwealth and its business and financial structure had developed along British lines. Since it was to be a central bank library, I assumed subjects covered should include general economics, central banking, monetary policy, foreign exchange, commercial banking, public finance, economic development, international trade and balance of payments, and domestic, foreign, and international economic conditions.

I began by photographing about 1,000 titles on cards from our own bank library card catalog, with all ordering information added. This included a small collection of general reference books, encyclopedias, dictionaries, texts, all of the foreign central banks' annual reports and economic bulletins, some commercial bank and business letters (mainly British), all of the pertinent publications of the International Monetary Fund, the International Bank for Reconstruction and Development, and the Bank for International Settlements, a fairly large collection of UN documents and those of other international economic or financial organizations, and a highly selective list of United States, British, and Commonwealth documents. Once this was done I made a cross-check by subject. I then picked up additional titles by checking other bibliographical sources for two years back, particularly PAIS, but also the new additions lists of the libraries of the IMF, the Bank of England, the Bank for International Settlements, and the Business Library of Columbia University. Then I checked my final sources against *Books in Print* and British book lists to obtain prices and weed out the out-of-prints.

I also photographed the directory of publishers and the list of periodicals indexed in the front of PAIS and gathered other similar lists, which I thought would be helpful as ordering guides.

So, armed with two boxes of catalog cards, a collection of library supply catalogs, Dewey, a Cutter table, and a number of books on library methods for the to-be-trained librarian, I flew to London.

Incidentally, when the man at the Ford Foundation first called me to arrange for my

Paper presented before the Business and Finance and Social Science Divisions, May 30, 1962, at the 53rd Annual Special Libraries Association Convention in Washington, D. C.

trip, he said something about flying to Nigeria. I said: "Oh, I don't like to fly. I'd rather go by . . . (and I meant to say train, but somehow I said bus). I heard a patient but exasperated voice over the phone say, "Miss Bogardus, there is no bus to Nigeria."

In London I spent two weeks working at the Bank of England library to obtain a British orientation to the subject of banking and finance. With the help of the librarian, I revised and amplified my sample library. In addition I made contacts with British book dealers and library supply houses, and I visited Aslib and the Library Association to learn what services they offered overseas librarians. This orientation was invaluable.

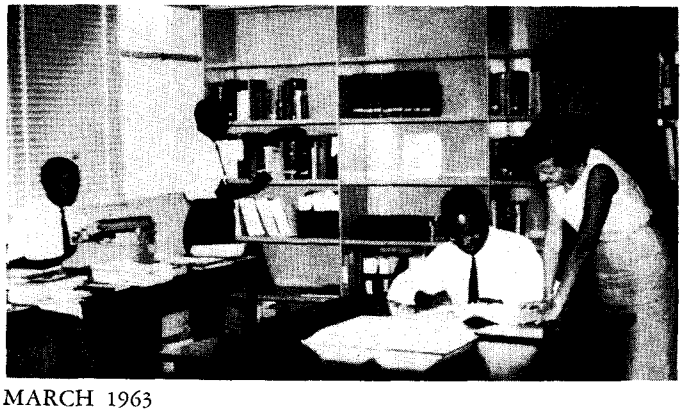
So, armed with three boxes of catalog cards, more library supply catalogs, some British book lists, and a lot of good advice, I went on to Lagos.

First Impressions

Lagos is about a 14-hour flight from London, almost directly south over the Mediterranean, North Africa, the Sahara Desert, and then down at Kano, just south of the Sahara, and the international airport in northern Nigeria. From Kano it takes almost three hours to fly the length of Nigeria, from the desert in the north, over the savannah country, a high plateau of open plains and low hills, then on over the lush rain forest, and at last to Lagos, off the coast and only six degrees above the equator.

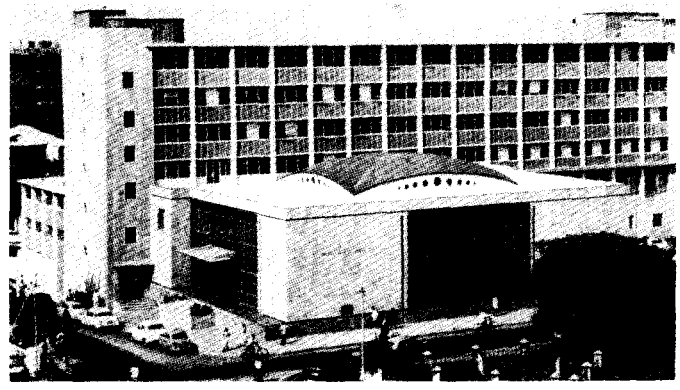
My first impression of Lagos was colored by a very fortuitous circumstance. I happened to arrive on Easter Monday, which is a big Muslim holiday (although I didn't know it then) on which it is traditional for all Nigerian families to go to the beach for a day of festivity. As we drove into town from the airport that first morning, it seemed to me the road and the whole roadside for at least 100 feet on either side was filled with streams of Nigerians, all in their striking, wonderfully bright-colored national dress—flowing robes with hues of blues, yellows, and greens predominating—all making their way, by car or bicycle, but mostly on foot, sometimes singing or dancing and drumming as they went. Even the tiniest children were dressed in little bright caps and long robes. This only happens once a year, but I didn't know that then, and it provided me with a most vivid first impression.

However, Lagos is also a boom town, situated on an island and with no way to expand except into the sea. Everywhere there is activity, crowds, confusion, and contrast between the old and the new. Modern ten and 12-story office buildings are going up right alongside the ramshackle market stalls, which are still doing a thriving business. Elegant, glass-fronted, balcony-terraced apartment houses seem to appear overnight, but most of the Nigerians still live in deplorable slums, without even rudimentary amenities—cooking on the ground, drawing water from a faucet blocks away, using gasoline flares for lights, and open drains for sewers. The streets are narrow and crooked and clogged with traffic—huge trucks, cars, thousands of bicycles, African bearers on foot with their huge burdens on their head, and just people and more people dodging in and out.



Slowly but surely the bank acquires a working library. Miss Bogardus assists one staff member as two others catalog and arrange materials.

The modern Central Bank of Nigeria is situated at a crossroads in bustling Tinubu Square in Lagos.



In the center of Lagos in Tinubu Square and the Central Bank. There are nearly 200 employees in the Bank, all but about 12 of whom are Nigerians. The Governor of the Bank was proud of this high degree of Nigerianization, and I understand there is optimism that the Nigerians will be able to take over completely as scheduled when the remaining expatriates leave at the end of their present tours—and all are scheduled to leave within the next few years.

English, of course, was spoken throughout the Bank, often a more correct English than we are accustomed to hearing in the United States, although usually with a very pronounced Nigerian accent. As far as Nigeria as a whole is concerned, English is the official language, but I doubt its use goes very deep. I suspect that even the Westernized Nigerians rarely speak English in the home. On the streets of Lagos, Yoruba is more often heard. As for the bush villages, I doubt English is ever spoken, unless there is a mission school nearby.

Speaking of English, one day on the way home after I had been over to see some American friends, my driver asked me if "my too much lovely friends" weren't American? I said, yes, they were. Well then, he wanted to know, when you are together by yourselves like that, why don't you speak your own language?

The Nigerians long for a national language of their own—but what? There are some 250 tribal languages, the three representing the most populous tribes being Yoruba, Hausa, and Ibo. Yet even these three can not "hear" each other as they say. Tribal loyalties and antagonisms are such that it is unlikely that any one of the tribal languages would be accepted nationally.

This tribal loyalty and antagonism is still one of the strongest influences operating in the national and political life of the country. Political parties are along tribal, and therefore geographic lines, not class, or economic, or ideological lines. The individual thinks of himself first of all as a Hausa, an Ibo, or whatever, than as a Nigerian, and lastly as an African. There seemed to be little interest in Pan Africanism.

This strong tribal and family feeling extends into the economic and social life of the individual as well. To the Nigerian, the family includes not only the immediate family but all the relatives, near and remote—perhaps 20 or 30 people—or even a whole village. The Nigerian unquestioningly accepts responsibility toward them all. As a result the educated young man, who has won a wage-earning clerical position, is often under severe economic strains. Now that he has it made, he is not only expected to live better than he can afford, but he is also expected to take his whole family connections up with him. He is counted on to hand out constantly, and he does, often to his own financial ruin. I heard commercial bankers say that the Nigerians are poor credit risks, not because they lack business acumen, in fact far from it, and not because their new business does not have a good chance of success, but because every penny they make is sucked out of them and out of the business.

In the social life of Lagos there was no color bar as such. Nigerians and Europeans

can and do mix with ease at social functions, clubs, and parties. But this does not extend to the close family level. Both Europeans and Nigerians swing in and out of each other's orbit, but they can't seem to stay there comfortably. I do not believe this has much to do with race prejudice. It may have something to do with the Nigerians' sensitivity about their lower standard of living, but not much. Different ideas about what constitute pleasure and recreation are a factor as are different tastes in food. The Nigerian doesn't like English food, and the European dare not eat indiscriminately of local foods unless he takes no thought for the morrow. Much more important, I think, are the very, very different family folkways and traditions. But beyond all that, there was some sort of subtle reason I couldn't really pin down, but is best expressed perhaps by saying that the European feels he knows another European whom he just met better than he does the Nigerian with whom he has been good friends for years. The same is true for Nigerians.

Starting the Bank Library

Certainly Nigerians and Europeans seem to work together without strain in the Bank. The Nigerians are grateful for and not resentful of outside help. It is my impression that very high standards for employment, performance, and deportment were set in the Bank from the first, and these standards are still being tenaciously and constantly enforced. On the whole the employees are straining to rise to the demands made on them with a good measure of success. I think this point is important because I feel it is very typical of what is happening in business and government throughout Nigeria. My own experience will be illustrative in a very small way. I tried to set up a library with much the same standards for the quality of subject material, services, and staff performance that we try to maintain in the Federal Reserve Bank of New York library. The young man I was training as head librarian was certainly intelligent, eager to learn, and fortunately with aptitude and liking for library work. But he was going in as head of a library without ever having worked in a library in any capacity before. Not only that, he had probably never had the opportunity to use a good library or even to observe a good library in operation. The only way I could see that he could learn what good standards were was for me to impose them on him and hold him to them from the start. This was harsh and unfair, but it seemed the only thing to do with someone who would himself have to set and maintain standards in the future.

The development of the library fell naturally into the following steps: *1)* physical layout and procurement of equipment and supplies; *2)* selection and ordering of materials; *3)* establishment of library procedures, practices, and records; *4)* initiation of services; and *5)* training of staff.

Our biggest problem was the procurement of equipment and supplies. The Bank was most generous and gave me permission to buy on sight and charge to the Bank anything that I saw I wanted. I guess they knew, as I soon found out, that there were no library equipment or supplies to be had in Lagos. It took five months to obtain book stacks from London—or rather three months for them to be shipped there, one month to find them in the tangled mass of materials on the Lagos wharf, where they had thoroughly rusted, and almost another month to move them to the library and have them installed. We had all other equipment and supplies, except the card catalog, which we ordered from Library Bureau, made to order in Lagos. Here I found the pictures in the supply catalogs most useful in illustrating what I wanted. The Nigerians are good craftsmen, particularly as cabinet workers. Our book truck was made of solid African mahogany, beautifully executed and polished.

While we were waiting for supplies we set up shop on ten tables laid end to end, ordered our periodicals and books from Blackwell's of Oxford or the Economists Bookshop in London, classified and cataloged what we had as well as the new materials as they came in, set up our periodicals routing list, a newspaper clipping file, and vertical files, and so on. By the end of six months we were operating in pretty good order with a library of about 900 titles. We were receiving currently 140 periodicals and

releases and the reports of 243 financial, official, and other institutions. We had established the following services to Bank personnel: circulation of books, routing of periodicals and releases, a newspaper clipping service, issuance of a fortnightly annotated list of new additions to the library, including the selective indexing of periodical articles, and reference service.

Training the Staff

Now that we had a library to operate, the last three months were spent in intensive staff training. The library staff consisted of a librarian, two library assistants, and a typist. The position of Librarian was assigned the same rank and salary as a Senior Research Assistant. The educational requirement for employment in the Bank at this level is the General Certificate of Education, which represents 12 years of schooling—six primary and six secondary. This is all you can possibly ask in Nigeria now. Most children leave school (those who are fortunate enough to be able to go at all) after the fifth year of primary school. Only the brightest are able to meet the competition for entrance in the too few grammar schools and colleges, which are secondary schools.

These graduates of the grammar schools and colleges and, even more so, those fortunate enough to have university training overseas are the educational elite in Nigeria and are pushed into responsible jobs in government and business without the seasoning that comes from having worked their way up or the sobering and deflating experience of meeting competition on the job. However, although I heard many complaints about the Nigerians' lack of background and training, I seldom heard anyone at all well informed or thoughtful, among either English or Americans, who doubted their native intelligence or potential ability.

In addition to his on-the-job training, the librarian joined the British Library Association and registered for the year-long overseas correspondence course leading to the First Professional Examination, for which he could sit in December 1962. The British Council Library representative in Nigeria was giving a coaching course for Nigerians in government who wanted to qualify for library school in London. This was a full-time six-month course, which our librarian could not attend, but I did arrange for him to use the British Council Library and to have guidance from the librarian. With his FPE and further experience on the job, I think there is good hope that the Bank will send him to the new library school at the University in Ibadan or overseas.

The Nigerians have a great respect for education and libraries and are eager to learn. However, most of them who go into library work in Lagos without previous experience labor under the handicap of not having a core of good libraries upon which to model their standards. There are few libraries in Nigeria and fewer trained librarians. There is an unofficial Library Advisory Council to the government, but it is only advisory, with no real authority. The West African Library Association, whose members come from all the English-speaking West African countries, is aware of the problem but without the leadership or the official status to make its weight felt. So much is happening in library development so fast, and sometimes so haphazardly, that there is a crying need for a central agency to act as a pivot to control and coordinate the unrelated work now being done by various agencies and groups, and above all to set standards and raise the level of librarianship to what it must be to avoid any resulting disillusion with libraries in general.

Dr. Carl White, Library Adviser of the Ford Foundation, is now in Nigeria laying the groundwork for the establishment of a national library, and when it comes into being, it should do much to control the present confusion and to set standards for all libraries in Nigeria. With help in this formative period, and with time to learn, I think the Nigerians will be well able on their own to do a very creditable job of managing their own libraries. They are certainly going to try. Not only in the development of libraries, but everywhere in Nigeria there is optimism and hope, progress *is* being made, and the Nigerians are convinced that they and their country are going places and that they will be able to take care of themselves.

A Machine-Produced Book Catalog: Why, How and What Next?

W. A. WILKINSON, Information Center
Monsanto Chemical Company, St. Louis, Missouri

ABOUT TWO YEARS ago Monsanto Chemical Company began to experiment with simple IBM equipment for cataloging books and pamphlets. Preliminary cost figures showed that the cost of preparing one card catalog by conventional methods would be about equal or slightly greater than the cost of a machine-produced printed catalog in multiple copies. We were already preparing duplicate catalog cards for one branch library, and there was an almost certain need for future duplicate catalogs, so it seemed appropriate to proceed with an experimental printed book catalog.

A primary concern was to provide a catalog that would be as readable for users as the card catalog with which they were already familiar. Also, we wanted to provide just as much bibliographic information as we had formerly.

Figure 1 shows the catalog that was developed during the first few months. The format of the entries is much like that of a catalog card and is certainly just as readable. Cataloging was as detailed as had been provided in the card catalog. All card punching and duplicating as well as the final printout were accomplished on an IBM Document Writer. (This is an 026 Card Punch coupled through a small program board to an automatic typewriter.)

At this time the new Information Center was formed, which created an immediate need for a union catalog in multiple copies to serve a new central library and three branches. It was decided to go ahead with a new printed book catalog to fill the needs of this new situation.

Several changes in format and procedure were made. Where perhaps 500 books had been cataloged in a six-month period using machine methods, it became necessary to catalog about 5,000 titles at once. In the original format all punched cards were hand filed. Changes were made so that most of the sorting and filing could be done by machines. Ultimately the format shown in figure 2 was evolved.

The step-by-step procedure followed is diagramed in figure 3. A sample, edited L.C. card and the corresponding master IBM cards are shown in figure 4. Reading across IBM card 1 (see the no. 1 in upper left corner), the punching includes the classification number (612.015), author code (AB),

BUTTREY, D. N.

668.41 B6P 2 PLASTICIZERS. D. N. BUTTREY. FRANLIN 1960. 213P. LIBRARY ALSO HAS 1ST ED.

CAMPBELL, TOD W.

547.84 S 6 PREPARATIVE METHODS OF POLYMER CHEMISTRY. WAYNE R. SORENSON AND TOD W. CAMPBELL. INTERSCIENCE, 1961

CHARLOT, G.

545.3 C4S SELECTED CONSTANTS - OXIDATION-REDUCTION POTENTIALS. G. CHARLOT. PERGAMON, 1958. /TABLES OF CONSTANTS AND NUMERICAL DATA, IUPAC, V.8/

Figure 1: First Format of the Printed Catalog

			541	PHYSICAL & THEORETICAL CHEMISTRY
541.396	CO	COULSON CA		VALENCE 2 ED OXFORD U 1961 /ALSO 1 ED 1952/ C
			546	INORGANIC CHEMISTRY
546.	DA	DAY MC & SELBIN J		THEORETICAL INORGANIC CHEMISTRY REINHOLD 1962 C O
546.4	KL	KLEBER EV		RARE EARTH RESEARCH SEMINAR LAKE ARROWHEAD 1960 MACMILLAN 1961 C
546.723	PR	PRYOR WA		MECHANISMS OF SULFUR REACTIONS MCGRAW HILL 1962 O
			547	ORGANIC CHEMISTRY
547.16	EL	ELIEL EL		STEREOCHEMISTRY OF CARBON COMPOUNDS MCGRAW HILL 1962 C
547.23	ED	EDWARDS JO		PEROXIDE REACTION MECHANISMS INTERSCIENCE 1962 C O

Figure 2: Format of the Book Catalog

the author's name (Abraham, E. P.) part of the title (*Biochemistry of some peptide and steroid . . .*) and subject code number (004697). The call number (classification number plus author code) is repeated on card 2, then the title is completed (. . . antibiotics), followed by publisher, date and location code ("c" indicates book is held in the Central Library). The % sign given on card 2 instructs the machine to skip when printing, to save printing time, and does not appear in the print-out. No decimal point is punched into the classification number; it is programmed to print automatically.

Our system might be called semi-automated in that it contains both manual and automatic steps. After the master cards are punched, sets are duplicated from them for authors, titles, and all subjects. For the subject cards, all information is duplicated up to the subject code field, which is punched manually before the card is rejected. Main subject, author, and title cards are made on the IBM 514 Card Reproducer.

System for Sorting Cards

Alphabetic sorting is very slow on punched card sorting equipment. For this reason we decided to do some hand sorting in the author and title files. Since the subject catalog would be larger than the combined author and title catalogs, it seemed that machine sorting should be used there, if possible. To do this a numeric subject code was developed so subject cards could be sorted on a six digit numeric field, which would place the cards into alphabetical order by subject headings.

A rather simple device was used to accomplish this. We chose the Library of Congress *List of Subject Headings* as our authority. When a heading is used from the list, it is underlined (in the list), and a code derived from its location as follows. The first four digits of the code show the page number on which the heading was found. A template was made that divides each page into ten sections, and each section may be subdivided into ten parts. Thus, according to the position of the heading on a page in the *List of Subject Headings,* we are able to code it with a six digit number, unique to each heading, placing it numerically into alphabetic order with the other headings. When a heading that is not included in the *List* is used, we write it in alphabetical order and assign the numeric code as above.

The first time a heading is used, a header card is punched with the heading spelled out near the center of the card and the subject code punched in the usual field near the right end of the card. When header cards and detail cards are sorted together, they are placed in alphabetical order with the headings ahead of all the detail cards that fall under them (see sample page from subject catalog in figure 2). In the print-out, subject codes are suppressed and therefore not seen.

Although author and title cards are hand filed, they are presorted by machine, which greatly simplifies the filing operation. Author cards are sorted on the author code, which

puts them into approximate order; merging by hand into the file is quite easy. Title cards are sorted on a limited number of columns and then hand filed into the title deck.

Both author and title cards could be completely sorted and merged by machine. However, calculations showed that at our normal monthly acquisition rate, hand filing is more practical. The card format was designed so that complete machine sorting could be used when the volume of monthly additions becomes unwieldy.

Alternate Methods for Print-out

Although the Document Writer system is adequate for printing monthly listings of new books or bimonthly supplements to the printed catalog, its speed is too slow for printing the complete catalog. As a result we use high-speed equipment for printing the complete catalog and the slower Document Writer for supplements.

Our 813-page, three-part printed catalog (authors, titles, subjects) was printed in one hour on the IBM 1403 high-speed printer in the corporate Accounting Department. A complete revision of the catalog will be made yearly in this manner. Cumulative, bimonthly supplements to the main catalog will be printed on the Document Writer. At any time during the year the up-to-date catalog will consist of the main catalog plus one cumulative supplement.

By-Products of the Printed Catalog

One of the most important advantages of punched-card systems is an ability to provide various reports and listings as by-products.

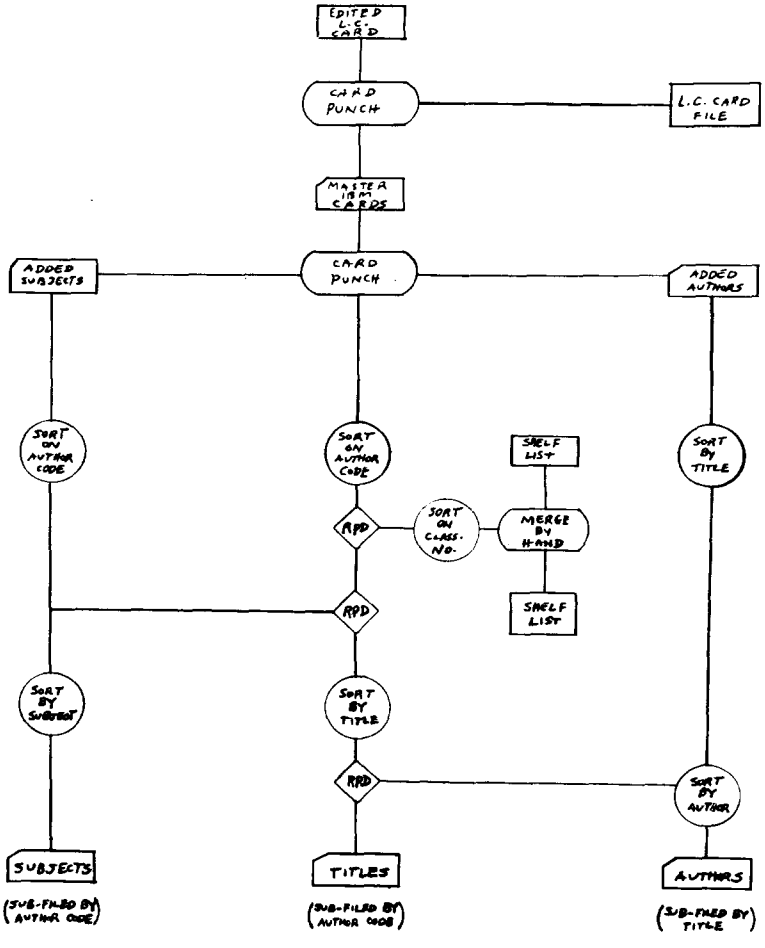


Figure 3: Flow Chart for Preparing Book Catalog

In machine accounting and billing systems, for instance, a great variety of sales reports can be made from cards that are made primarily to handle the billing and accounting function. By-products of the printed catalog include: *1)* book labels for spines and pockets, *2)* check-out cards, *3)* monthly library bulletin, *4)* overdue notices, and *5)* special bibliographies.

Check-out cards are duplicated from the master set (see figure 5). We use a two-card system, filing one card by borrower's name and the other by call number. A system of colored signals enables us to withdraw overdue cards from the borrowers' file each week. These cards are fed to the Document Writer, which types notices as shown in figure 5. Only an abbreviated title is necessary on the check-out card (and notices) since the book can be identified readily from the call number and author's name.

A special program board permits us to print labels from the check-out cards. After a number of check-out cards have been made, they are read into the Document Writer, which picks up the call number and types it in two lines (as shown) on the label. We use pressure-sensitive labels supplied on continuous, pin-feed strips. Two labels are made for each book—one for the spine, the other for the book pocket.

At the end of each month, one set of cards for each book received that month is used to print the library bulletin (see figure 6). The cards are sorted into Dewey Decimal order, and header cards are pulled from a prepunched file and inserted where needed. Header and detail cards are fed to the Document Writer, which prints the bulletin. Multiple copies are printed by the offset process and distributed according to a set of Addressograph plates.

It is also possible to pull selected groups of IBM cards from the files to print special lists. To print special subject bibliographies, pertinent subject headings are selected and removed from the file along with the detail cards that follow them. Using these cards the Document Writer can then print the bibliography.

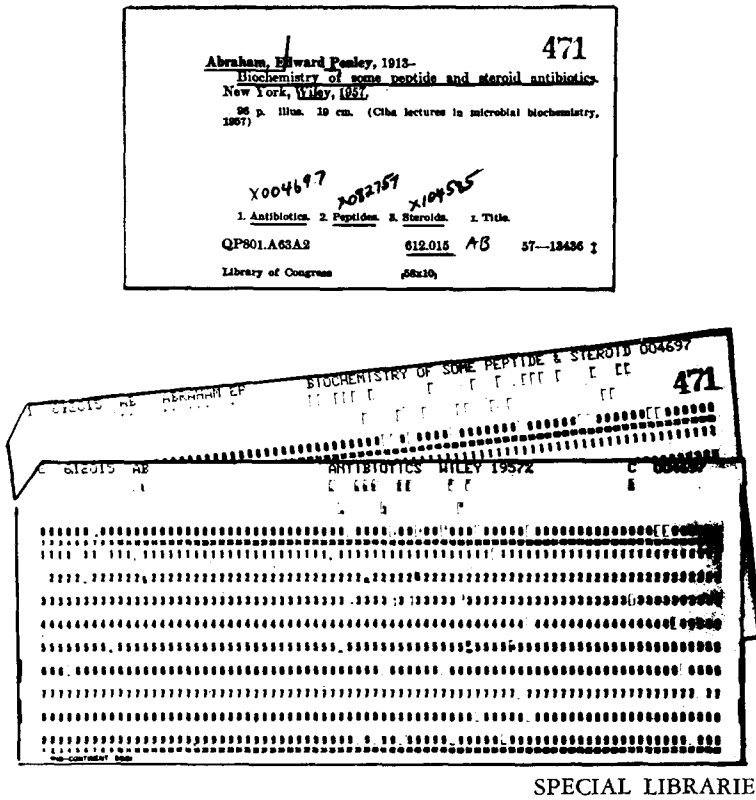
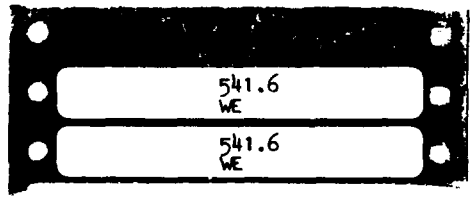
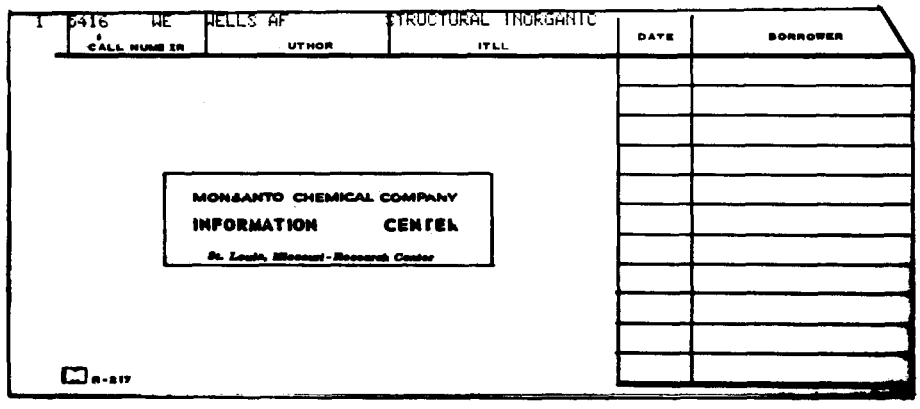
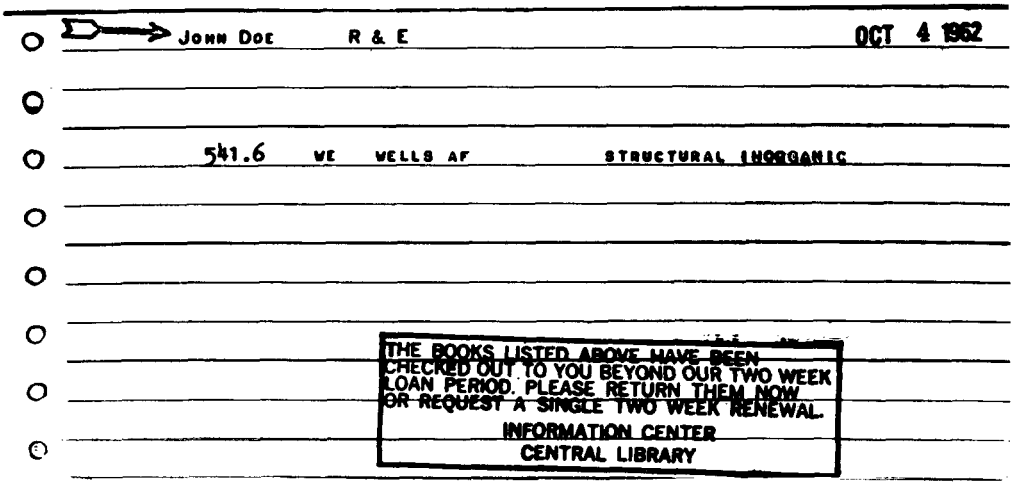


Figure 4: Library of Congress and Master IBM Cards

Figure 5: Book Labels, Check-out Card, and Overdue Notice Produced as By-Products







Distribution of the Catalog

Although the biggest incentive for the printed catalog was to provide copies for the Central Library and branches, it was also felt that copies should be available for additional distribution. Copies have been provided to more than a dozen other Monsanto libraries and many individuals who want them for office or laboratory use. Users at a remote location are able to select books they need and request that the books be sent by mail or messenger. Or, they can come to the library, knowing that the book is in the library's collection. Fruitless trips to the library are prevented.

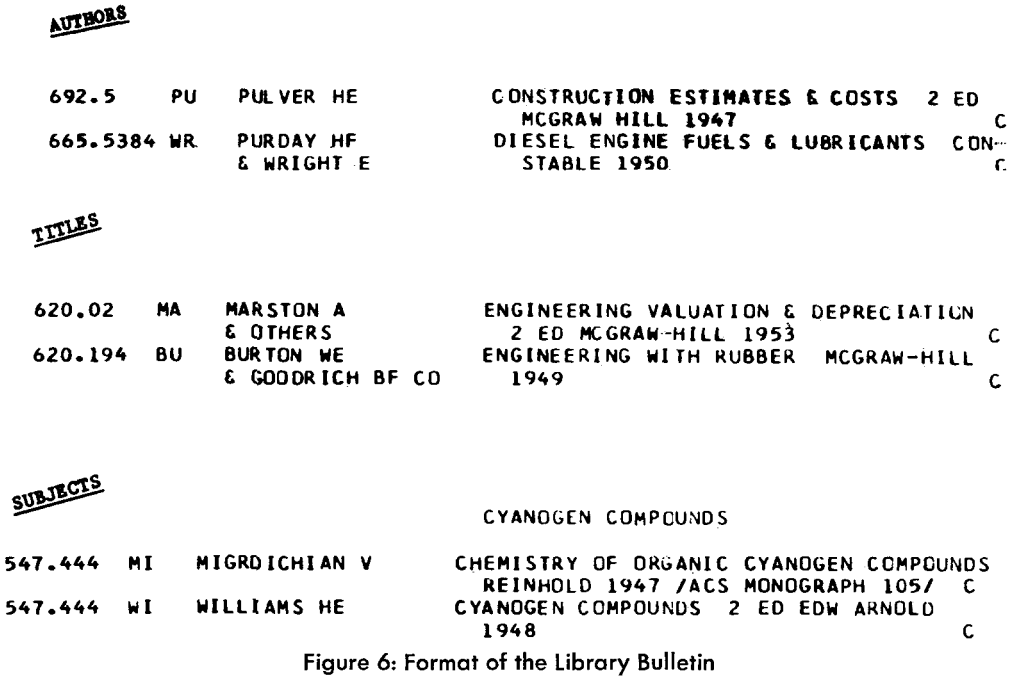
Costs

We have made estimations that compare the cost of the printed catalog with a card catalog. Costs for labor, materials, equipment, and floor space are included.

ORDERING, CATALOGING, AND PROCESSING COST PER BOOK
(Includes: salaries, materials, building expense)

Operation	Cost			
	CONVENTIONAL CARD CATALOG			IBM—PRODUCED BOOK CATALOG
	1 Catalog	*4 Catalogs*	*6 Catalogs*	*(6 Copies)*
1. Ordering	$ .66	$ .66	$ .66	$ .66
2. Cataloging	.83	.83	.83	.83
3. Cost of L.C. cards	.46	1.84	2.76	.11
4. Type L.C. card headings	.12	.48	.72	
5. Keypunching				.29
6. Filing cards	.10	.40	.60	.10
7. Type check-out cards and pockets	.10	.10	.10	
8. Print-out, make labels, and check-out cards				.10
9. Processing	.20	.20	.20	.13
10. Building expense for operations 1-9	.33	.33	.33	.33
	$2.80	$4.84	$6.20	$2.55

As can be seen in the figures above, the printed catalog compares favorably even on a single catalog basis. Of course, as the number of catalogs required increases, the cost per printed catalog becomes very small when compared with the cost of duplicate card catalogs. Our catalog is printed directly on offset masters by the IBM 1403 Printer, so multiple copies can be provided for the cost of offset printing. The present catalog includes about 5,000 titles and costs about $4.00 per copy to print all three parts.



AUTHORS

692.5 PU PULVER HE — CONSTRUCTION ESTIMATES & COSTS 2 ED MCGRAW HILL 1947 C

665.5384 WR PURDAY HF & WRIGHT E — DIESEL ENGINE FUELS & LUBRICANTS CONSTABLE 1950 C

TITLES

620.02 MA MARSTON A & OTHERS — ENGINEERING VALUATION & DEPRECIATION 2 ED MCGRAW-HILL 1953 C

620.194 BU BURTON WE & GOODRICH BF CO — ENGINEERING WITH RUBBER MCGRAW-HILL 1949 C

SUBJECTS

CYANOGEN COMPOUNDS

547.444 MI MIGRDICHIAN V — CHEMISTRY OF ORGANIC CYANOGEN COMPOUNDS REINHOLD 1947 /ACS MONOGRAPH 105/ C

547.444 WI WILLIAMS HE — CYANOGEN COMPOUNDS 2 ED EDW ARNOLD 1948 C

Figure 6: Format of the Library Bulletin

What Next?

Librarians who have read the recent book *Advanced Data Processing in the University Library* (Louis A. Schultheiss et al. New York: Scarecrow Press, 1962, 388 p.) will note some similarities between our system and the proposed cataloging system for the University of Illinois Congress Circle Library. The authors of the University of Illinois study advise against a semi-automated scheme (such as ours?). Certainly a completely automated method has advantages, especially where a large throughput is necessary. However, there are advantages to semi-automation also. By using a combination of manual and machine methods and designing our system so it can use either the simple, accessible (but slower) Document Writer or high-speed computers, a great deal of flexibility is provided. Small volume daily, weekly, or monthly needs can be filled in the library by the Document Writer, whereas large volume processing (the yearly up-dating of the catalog, for example) can be turned over to computer equipment for maximum efficiency.

We expect a further increase in use of data processing methods. Improvements can be made in the methods described above, and some are already being investigated. Similar techniques have been applied to our other library records to produce a union list of serials in Monsanto libraries, subscription and check-in records, and various finding lists. Each new application seems to lead to another, the most difficult step being the initial one.

Mechanical Reproduction of Library Cards in a Special Library

H. RUPERT THEOBALD, Coordinator of Reference and Research
Wisconsin Legislative Reference Library, Madison, Wisconsin

THE WISCONSIN Legislative Reference Library recently adopted a system for the mechanical reproduction of library cards. A number of considerations preceded the adoption of the system: the process selected had to match hand-typing for neat appearance, card durability, and permanence of the ink used, had to produce *black* print, and had to reproduce well on both white and salmon-colored 3 x 5-inch library cards. Finally, the system had to materially reduce the time needed for library card reproduction, thus lowering the over-all operating costs of the library.

Detailed Subject-Matter Catalog

As a legislative service agency, the Wisconsin Legislative Reference Library maintains a highly specialized library "for the use and information of the legislature, the several state departments, and such other citizens as may desire to consult the same, . . . as complete as may be, of the several public documents of this and other states . . . and standard works of use and reference."

To make the materials in its collections readily accessible, the Wisconsin Legislative Reference Library has developed a detailed author-subject catalog, with about 3,500 different subject headings, all in the governmental field. Every attempt is made to make the author-subject catalog as detailed as possible because a large share of the agency's work consists—particularly during legislative sessions—of spot reference information.

With almost no exception, the publications cataloged by the Wisconsin Legislative Reference Library are entered at least three ways (shelflist, author, and subject), but for the great majority of the publications cataloged, additional subject entries are made. Each item cataloged averages five subject entries.

During a recent month the library cataloged 170 publications, in addition to ac-

cessioning an equal number of continuations. Of the 170 publications cataloged, only 34 were of the "shelf-card, author card, one subject card" variety; the rest required additional subject entries. For the 170 publications, a total of 1,284 cards had to be prepared (this averages at 7.55 entries per item!), including shelflist and author cards.

Subject Cards in Addition to Shelflist, Author Card	Number of Publications	Including Number of Multi-page Subject Cards
1	34	—
2	31	—
3	20	2-page: 1
4	16	—
5	9	2-page: 2
6	6	—
7	10	—
8	7	—
9	3	—
10	6	2-page: 1
11	6	—
12	4	—
13	5	2-page: 1 4-page: 1
14	1	—
15	6	2-page: 2
16	2	—
18	1	—
19	1	—
20	1	—
22	1	—

Summary of Cards Needed for Cataloging 170 Publications

During the fiscal year ending June 30, 1962, the Wisconsin Legislative Reference Library cataloged 2,047 new publications for which upwards of 15,000 cards were individually hand-typed. Mechanical reproduction could have reduced this to about 5,000 typings.

Subject and author cards prepared by this library frequently contain explanatory notes. Sometimes these notes become so lengthy that the individual entry consists of two or three cards tied together.

Shelflist, author, and subject cards are made on 3 x 5-inch cards of white stock with a single red "typewriter rule" on the left side. Subject cards for materials containing multi-jurisdictional comparisons are made on salmon-colored, single ruled catalog cards.

Several Duplicating Devices Tried

A number of duplicating devices were tried out to determine their usefulness for library card reproduction at our level of operation. The devices tested ranged from a small, hand-operated object using 3 x 5-inch wax stencils, priced at less than $50, to an automated offset duplicator costing over $1,200.

It was found that cards of even imprint could be produced on high-grade card stock by several *low-priced devices* ($45 to $55), similar in application and appearance to a rocker-type hand blotter, using the 3 x 5-inch wax stencils. Difficulties arose, however, in the cost of operation. In one instance, the unit cost for the little stencil was 7.3¢. Thus, reproduction of the catalog cards for the 2,047 publications cataloged in the 1961-62 budget year would have cost $150 for the stencils alone. Volume buying could reduce the unit cost of the stencil to 5.35¢.

An operational difficulty was also encountered: no mechanical duplication of library cards can eliminate all typing. At the minimum, it will still be necessary to type the stencil or master; the number of masters can be somewhat reduced if unit cards, or a modified unit card system, are substituted for a cataloging system using a variety of different card layouts. Subject headings will have to be typed on in any case. In addition, a wax stencil is usually damaged in the attempt to reproduce on one card only part of the text on the stencil, i.e., where notes are entered on author and subject cards but not on the shelf card, it becomes necessary to hand-type the shelf card even though the others are mechanically reproduced.

In the *offset duplicating* process, the initial capital outlay is quite high (about $1,200 for the duplicator); operating costs are low under high-volume operation. In large library systems producing a high volume of identical cards as the result of centralized cataloging, the offset duplicating process has

proven useful. This process did not seem applicable to an operation of the size of the Wisconsin Legislative Reference Library.

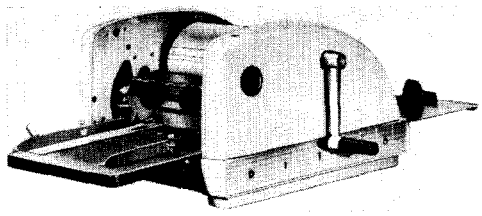
In offset duplicating, copy for a number of cards is typed onto a single master. The copy has to be pre-sorted so that only items needing equal numbers of catalog entries are combined. If different colored cards are used for the various catalog entries, the pre-sorting process is further complicated. Rather than finished cards, offset duplicating produces sheets of card stock, which then have to be cut, sorted to combine all the cards for a single item, and punched.

For our level of operation and intensive subject-matter cataloging, *spirit duplicators* offered the best possibilities. The capital outlay is moderate ($250 was paid for the machine finally selected, which was manufactured by Ditto Incorporated of Chicago), and operating costs are only 1.2¢ per master set. Spirit duplicators have decided advantages. Because no ink is used, the operator stays clean. If only part of the text on the master is to be reproduced, the rest can be covered without damage to the master. Two former disadvantages (royal purple print and fading after lengthy light exposure) have recently been overcome. Spirit masters are now available producing almost black, "charcoal grey" impressions, and a new "permanent" duplicating fluid has reduced fading to such a degree that it is no longer significant.

Operating costs are considerably below the cost for wax stencil duplicating. Spirit master sets producing black imprints, precut to 3 x 5-inch size, and assembled can be bought in lots of 3,000 for $35.60. Thus, for the 2,047 items processed by the Reference Library in fiscal 1961-62, the total cost for the masters would have been $24.35 compared to $150 had wax stencils been used. A can of permanent fluid is about $4 and lasts, at this level of operation, about one year.

Operating a Spirit Duplicator on Card Stock

Spirit duplicators come in varying degrees of complexity, from hand-operated, low-budget models to fully automatic electric equipment. Our tests showed that the electrically operated models were less satisfactory for card reproduction than the top hand-operated models. Because of the stiffness of the card-stock used for catalog cards, electric models, or hand-operated models using an automatic feed would sometimes fail to pick up a card. This left an imprint on the cylinder that subsequently faded off onto the next cards run.



The hand-operated, spirit duplicator used to produce multiple copies of catalog cards.

The best hand-operated model provided sufficient printing pressure to produce imprints of satisfactory evenness and intensity. Hand-feeding the cards eliminated the possibility of skips and permitted the insertion, alternately, of cards of different colors as needed.

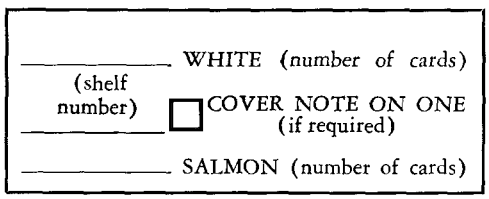
A number of different types of card-stock were tried out, both for durability of the finish and for neatness of printing. It appears that the traditional 100 per cent rag stock does not have the necessary absorbency for spirit duplicator fluid. Consequently the printed image is either too light (not enough fluid) but sharp, or black and fuzzy since the fluid tends to run out before it can dry. For salmon-colored cards we have used "practice card" stock for some time; on these, imprints were more satisfactory. A lower rag content provides better imprints in spirit duplication.

The card found most acceptable was a newly developed all-cellulose card identified by the library supply house as a PERMEC card. This card has a hard finish for longer wear, produces a sharp image, and will absorb a sufficient amount of spirit duplicator fluid to give black letters without any fuzziness. This card also stands up well under an electric eraser.

Production of Cards

As the system has been worked out, the cataloger types the master-set just as she would normally type a catalog card. But one

cannot enter subject headings on the back of the master-set as is done on the back of the master card in hand-typing (leaving an immediate record for the typist who makes up the additional entries). Because of this, we designed a worksheet on which the cataloger *1)* enters the number of copies needed, of both white and salmon-colored cards; *2)* records the subject headings to be entered later on the duplicated cards; *3)* notes the call number so that the worksheet can be readily re-united with the corresponding master-set should the two become separated; and *4)* indicates by a simple check mark that the preparation of the shelf card requires the omission of a note.



Sample Worksheet

We designed the worksheets 8½ x 3⅔-inches (three are printed on one 8½ x 11-inch sheet, then cut). In this size they can be folded in half to fit around, and protect, the master set and still provide sufficient room to keep the finished cards with the master until all subject headings have been inserted. If it is found at that stage that additional cards are needed, the master is still available.

Evaluation

In the sense that the 3 x 5-inch master sets used were especially made up for us, they are still experimental and contain some flaws not found in the standard 8½ x 11-inch master sets now commercially stocked. We trust the manufacturer will correct this in future shipments. The main difficulty consists of unwanted carbon on the backs of some masters, the result of insufficient sizing of the edges. When this was noticed prior to duplicating, the smudges were easily covered with correction fluid.

For the cataloging of publications requiring three cards or less this process has nothing to offer. Any time more than three cards are needed, the savings in time and effort are impressive. Mechanical reproduction of library cards not only eliminates monotonous retyping but also reduces the need for proofreading (instead of a large number of individual cards only one master is proofed) and generally shortens the time required for the cataloging process.

Mechanical reproduction of library cards has not reduced our staff. Rather, the staff member who had formerly spent two to four days each month typing up duplicate cards has now been freed for more essential tasks.

LIBRARY COURSES AND WORKSHOPS

The Library Public Relations Council will hold a WORKSHOP ON PUBLIC RELATIONS for practicing librarians at Columbia University's School of Library Service, June 10-14. A maximum number of 60 librarians will participate in group discussions and hear lectures on the theory of public relations as well as case histories. A $60 fee for attendance at the Workshop can be paid at the time of registration or else when a reservation is sent to Dean Jack Dalton, School of Library Service. Registration does not include meals or room.

The FIFTH COMMUNICATION LIBRARIANS' WORKSHOP, cosponsored by Syracuse University's Schools of Journalism and Library Science, will be held August 12-16 with Evelyn E. Smith, Head Librarian, School of Journalism, as Director. Library management, the clipping, filing, indexing, and organization of clippings, negatives, and photographs, and the necessary basic books and pamphlets will be discussed. The underlying purpose of the Workshop is to give assistance in the establishment and reorganization of newspaper libraries. Workshop instructor is Agnes Henebry, Librarian, *Herald and Review,* Decatur, Illinois, and guest lecturers are Mathew Redding and Rex Schaeffer, Librarians for the *World Telegram and Sun,* New York, and *Times-Union,* Rochester, respectively.

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Chairman, SLA Committee on Photographic Reproduction

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Wilson Library Bulletin

SLA Sustaining Members

The following organizations are supporting the activities and objectives of the Special Libraries Association by becoming Sustaining Members for 1963. These are additions to the Sustaining Members listed in earlier issues and include all applications processed through February 20, 1963.

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BETHLEHEM STEEL COMPANY
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UNIVERSITY OF OKLAHOMA LIBRARY
UNIVERSITY OF WASHINGTON LIBRARY
WAYNE STATE UNIVERSITY
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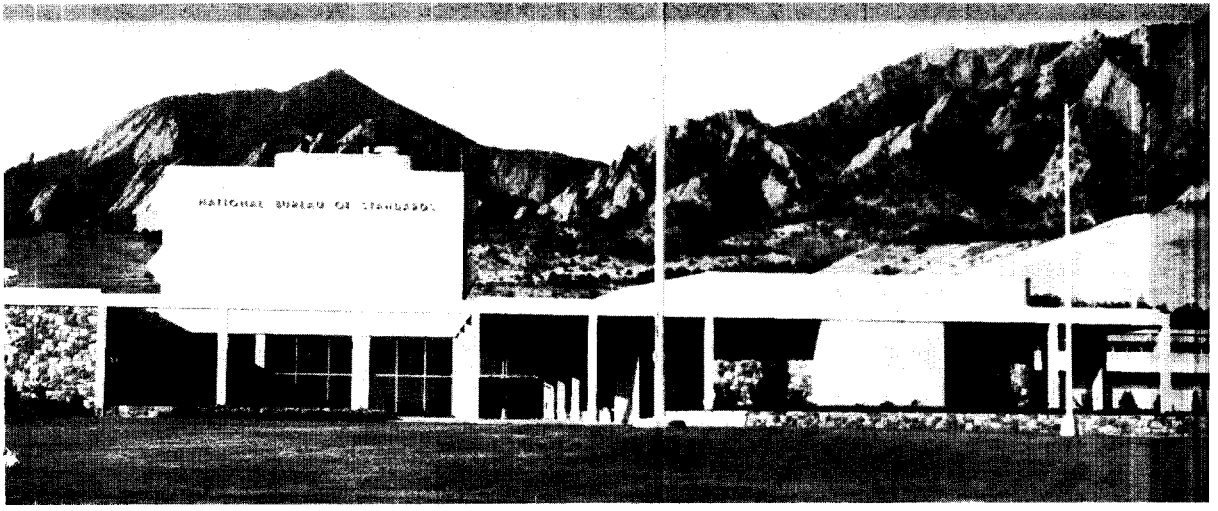


Near Boulder, with the Rockies as a backdrop, The National Bureau of Standards Library serves three laboratories.

COLORADO In 1963

MRS. ELEANOR REPASS, Librarian, Advanced Technology Library
The Martin Company, Denver, Colorado

DENVER, the Mile High City at the foot of the Rocky Mountains, is an oasis at the end of the 500-mile trail across the Great Plains. It is the only city of any great size between Chicago and the West Coast. Its most important product is its welcome to all visitors and its special brand of hospitality.

Denver is a city of contrasts. From early beginnings as a supply center for mining activities in the nearby mountains, Denver became the nerve center for a vast area—the trading, financial, and transportation hub of the Rockies. An infant, she grew old prematurely. She was conservative, complacent, and relatively prosperous—and stayed that way until servicemen discovered her, the mountains, and the Colorado climate during World War II. They came back to live, bringing with them the beginnings of the great boom, which has quadrupled Denver's business since 1946 and set the stage for the industrial and economic expansion of the past decade. Denver is indeed growing up—she now boasts a real skyline with the magnificent panoramic backdrop of the mountain range, which goes on from the foothills to the high glaciers.

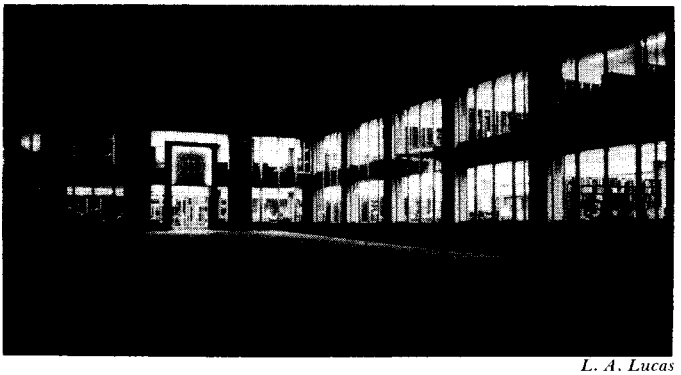
This mixing of the old with the new is a part of everyday living in Denver, and few will deny that this blending is part of her charm.

Attractions of Denver

A tour of Denver must begin at the corner of Colfax Avenue and Broadway, where Denver's reverence for the past and its devotion to modernity are strikingly apparent. On one hand is Colorado's Capitol Building, topped by its gold leaf coated dome, a tribute to past mining glories, and where one step is exactly one mile above sea level. On the other hand is the gleaming white tower of the 28-story First National Bank Building, representing a combination of conservative Denver banking money with the investment millions of Texas.

From the same corner, beyond a spacious Civic Center with lawns and flowers and walks, are seen the graceful classic columns of Denver's City and County Building, where an earlier generation of city fathers stopped at four stories so that the beloved view of the front range of the Rockies would never be blocked. The same glance discloses the new 22-story Hilton Hotel—majestic symbol of postwar Denver's emergence as a major convention and commercial city—the headquarters of the Special Libraries Association Convention. Strangely, it is necessary to go down about five stories to find bedrock in Denver and the aggregate from this excavation for the Hilton Hotel-May D and F De-

Night view of the Denver Public Library, built in 1955, and the location for a Wednesday evening reception during SLA Convention week.



L. A. Lucas

partment Store complex was used in the cement that became the Hilton Hotel. Gold was even found in these sands.

On the opposite side of the vast Civic Center, the visitor finds the Denver Art Museum, ranked as one of the nation's ten best, and a new 800,000 volume Public Library. This will be the location of a reception on Wednesday evening of Convention week.

A block from the Civic Center is the United States Mint, which stores more gold bullion than any United States depository outside of Fort Knox. It may be visited by appointment.

Denver worships its mountains, so much so that its people have developed a unique mountain parks system, covering 20,000 acres in the foothills. Chief of these mountain attractions is the Theater of the Red Rocks where an amphitheater, seating more than 10,000 persons, has been carved from towering red cliffs. Here, outstanding musical and entertainment events are held throughout the summer. A beautiful view of the sparkling lights of the city ten miles away can be enjoyed while waiting for the performance.

Within the city limits there is a 1,684-acre park system, which is unusual for a city of this size. Chief among the in-town parks is City Park with an excellent zoo and a highly rated Museum of Natural History. There are about 50 other parks, a dozen public swimming pools, and six municipal golf courses to round out Denver's municipal recreational facilities.

Not the least of Denver's attractions are its beautiful residential areas. More than 76 per cent of all Denverites own their own homes, and each takes vast pride in keeping his place a show place. In the arid West, where nature provides only 14 inches of rainfall a year, man must supplement her work. Thus Denver is busy digging huge tunnels through the mountains, tapping the melting snowpacks of the high Rockies to obtain the water from the glaciers, and all Denverites must water their lawns constantly to keep them green. Every tree in Denver has been planted by the homeowner or the city parks system. A tour of the city by a glass-topped sight-seeing bus is well worth while.

Denver's list of miscellaneous attractions are many and varied. From the Sky Deck on top of the First National Bank Building, visitors get a magnificent 150-mile view of mountains and plains. On the second floor of the new Denver Club Building is a unique little chapel, dedicated to former President Eisenhower and open every day to those in search of meditation and prayer.

Near the Union Stockyards is the giant City Coliseum, home of the annual National Western Stock Show and Rodeo, circuses, ice skating spectacles, and other public events.

During the winter, Denver's symphony orchestra offers weekly concerts. Its Bonfils Memorial Theater is the home of the Civic Theater Association. Several major entrepreneurs keep the City Auditorium alive with a variety of fresh presentations from Broadway and the world of music. Since it is the only major city for miles around, it is the stopping place of an unusual number of excellent productions.

In summer, Elitch's Gardens, patterned after the Tivoli Gardens in Copenhagen, is the scene of the nation's oldest summer stock theater. Central City, an interesting old mining town 40 miles away in the mountains, is world famous for its summer offerings of opera, staged by the Metropolitan Opera of New York City, and drama direct from Broadway. The city's two big daily newspapers, *The Denver Post* and the *Rocky Mountain News,* entertain with summer opera in the city parks under the stars.

In addition to enjoying the arts, Denverites have broken all minor league attendance records to see their Denver Bears, champions of the Triple A American Association in 1960, and they now have a professional American Football League team, the Broncos. Greyhound and thoroughbred horse racing are regular summer attractions at Mile High and Centennial Race Tracks.

Climate, which is dry, high, and cool, general attractiveness, and recreational facilities inevitably head the list of reasons given by newcomers for their move to Denver. They have more than doubled the metropolitan area's population to about a million since 1946. They have brought with them the ingredients that have changed Denver to a teeming giant of 20th century sciences, industry, defense, and big government. Great growth has brought great problems. Exploding population has been costly, but Denver has met the educational problems.

More than 15,000 adults attend the unique Emily Griffith Opportunity School with its vocational-type curriculum. The private University of Denver has two major campuses. The University of Colorado operates an extension center and a medical center in Denver. Colorado Woman's College, Regis College for men, and Loretto Heights College for women, although comparatively small, add to the educational opportunities.

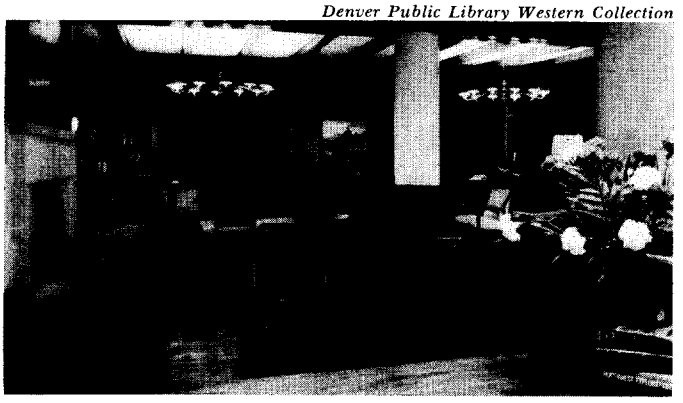
Denver Special Libraries

Thousands of the nation's most potent brains in the complicated field of science-defense-missilery-electronics-aviation now work in Denver for the Martin Company, which makes the Titans, in Dow Chemical Company's super-secret Rocky Flats Atomic Energy Plant, in the National Bureau of Standards Laboratories at nearby Boulder, or for other firms of varying size, which make automatic ejection seats for jet planes, complicated electronics systems for bombers, or automatic computer systems for missiles.

Denver for many years has been a headquarters for so many government agencies that it has been called "Little Washington." Exclusive of uniformed military personnel, more than 30,000 federal employees work in Denver.

The western petroleum industry's headquarters are in Denver. Much of Western America's mining activity is directed from this city. A quarter billion dollars worth of livestock moves through its stockyards each year. Its factories turn out a variety of products from tires and fan belts to souvenirs. Its municipal airport, Stapleton Field, ranks among the nation's busiest.

Denver Public Library Western Collection



Reading room of the Western History Department in the Denver Public Library reflects the era of its early Americana collection.

Denver University in Denver has three libraries and the Graduate School of Librarianship. Its Mary Reed Library is located on the main campus at University Park, the Business Administration Library is at the Civic Center Campus, and the Law Library is there in the special law building.

Other college and university libraries in the state include those of Colorado State University in Fort Collins; Colorado Woman's College, Iliff School of Theology, Loretto Heights College, and St. Thomas Seminary—all in Denver—and Colorado School of Mines Arthur Lakes Library in Golden.

In addition to the Colorado State Library, state departmental libraries, all in Denver, include the Colorado State Highway Department Technical Library, the Colorado State Historical Society Library, the Fort Logan Mental Health Center Library, and the Colorado State Welfare Department Library.

The Colorado Division of State Archives, located in the State Capitol Building, has 12 million items, including photographs, papers, documents, recordings, official papers, and every kind of source material. There is a specialized report and technical section covering government at all levels. The papers of all the governors since territorial times are included. The collection is constantly used by researchers, writers, and people in government. The Division serves as a clearing agency for the primary source material of valuable private collections on an interlibrary loan basis. Reproductions are freely made as needed.

Federal collections in and near Denver are the United States Air Force Accounting and Finance Center Library, the United States Bureau of Reclamation Office of Engineering Reference Library, the United States Geological Survey Library, Denver Branch, and most recent of all the government libraries—the United States Air Force Academy Library.

In the medical field, in addition to the University of Colorado Medical Center Library, the Denver Medical Society maintains a fine collection in an attractive building. This library is not too large, numbering about 50,000 volumes, but it is functional and serves the clinical physicians in the surrounding area. It has a very special collection of medical classics, the Herbert M. Evans Collection, and many interesting museum items of medicine from an earlier day.

Other medical libraries are the Fitzsimons General Hospital Technical Library, Mercy Hospital School of Nursing and Medical Library, and the Presbyterian Hospital Doctors and School of Nursing Library.

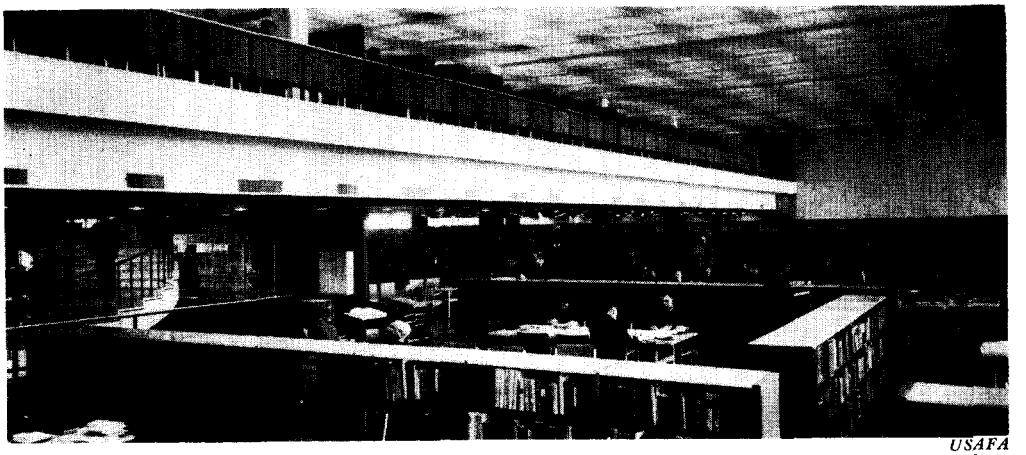
The Gates Rubber Company and the Public Service Company in Denver maintain libraries for their staffs. The Library of the Marathon Oil Company in Littleton (formerly Ohio Oil Company) was described in the January 1961 issue of *Special Libraries.*

The Martin Company, Denver Division, designs and builds the Titan ICBM series. Professional library service is provided at the Cambridge Plant and at the Waterton Plant. Centralized technical processing is performed at the Waterton Plant for both libraries. An IBM print-out catalog, which indexes reports by subject and by source, is issued monthly with quarterly and annual cumulations.

The Denver Public Library has a fine plant and a fine collection. The Western History Department is of special note. It is recognized as one of the four most significant collections of Western Americana in the country. Established in 1934 through the efforts of Dr. Malcolm Wyer, now Librarian Emeritus, the collection grew out of demands from writers and scholars who sought complete research materials on the last pioneer region of the nation—the Rocky Mountain West. The library is also particularly proud of its Ross Barrett Aeronautical Collection and its recently established Conservation Center Collection.

The Bibliographical Center for Research, Rocky Mountain Region, is the invaluable tool of all of the research libraries in the whole area. It has a catalog of the holdings of libraries all over the region to help the interlibrary loan activity.

The headquarters of Shepherd's Citations, Incorporated is in Colorado Springs. In Denver, a new Information Handling Service called VSMF (Vendor Specifications Micro File) has cross-indexed special technical drawings, specifications, and parts from vendor's catalogs and put related material on



USAFA

Main floor of the Air Force Academy Library houses part of the reference area, which extends over three floors. Half of the stacks on the mezzanine, reached by the spiral stairway on the left, contain bound periodicals and technical report literature. The 160,000 volume collection is rapidly expanding.

microfilm cartridges to eliminate random searching.

Colorado Springs, Boulder, and Environs

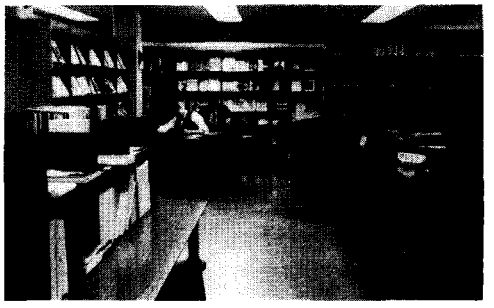
Not far away, near Colorado Springs, is the fabulous Air Force Academy nestled close to the foothills and covering a vast acreage. This is well worth a visit.

The Air Force Academy Library is an unusual one. Its specialized collections are chiefly in aeronautics, military history, falconry, and technical report literature. The map collection consists of more than 10,000 maps and atlases. Microfilm holdings number over 4,500 items, including many of the leading military newspapers and journals from World War I to the present time. There are over 175,000 documents and records and an extensive collection of report literature.

The Academy Library, with its branches and field libraries, is in reality a centralized, integrated library system, unique in the Air Force. With its nearly 10,000 registered borrowers, this system meets the reading and listening needs of pre-schoolers and yet is extensive and comprehensive enough to satisfy the requirements of Ph.D. faculty members. Included in the system is the Community Library, those for the USAF Preparatory School, the three public schools on the site, the Medical Library, and the Law Library. The collection is made available to other users through an interlibrary loan system.

In Colorado Springs itself is the important North American Air Defense Command, whose headquarters is now being built under Cheyenne mountain for security reasons. Here, too, is the beautiful Broadmoor Hotel with its magnificent view of Pike's Peak. This hotel and its setting alone are worth a trip to Colorado Springs. The city has a Fine Arts Center, which is a famous small museum with an excellent collection of art. Among the best known points of interest is the Garden of the Gods, where unusual formations of upright slabs of red stone, once beneath the surface of the earth in the age of the dinosaurs, have, through the centuries, been heaved high into the air in a variety of strange shapes.

Denver's other nearby towns have very fine libraries in many fields. Beginning with Boulder, there is the National Bureau of Standards Library, which serves the Cryogenic Engineering Laboratory, the Central Radio Propagation Laboratory, and the Radio Standards Laboratory. The collection includes some 10,000 books, 10,000 bound periodicals, 600 current periodical titles, and 30,000 government research reports, including foreign translations. It serves 1,100 employees and anyone interested in these fields.



The author's bailiwick in the Advanced Technology Library at the Martin Company in Denver. The Denver Division designs and builds the Titan ICBM series.

The library prepares a monthly list of new additions, a list of translators, bibliographies, and other publications as needed.

In Boulder, too, the National Center for Atmospheric Research is in the beginning stages, and its library is being assembled to be ready when the buildings are finished. The largest university in the state is in Boulder—the University of Colorado, which has a fine library and a collection of over 730,000 volumes.

A number of libraries serving industry are worthy of note. The Kaman Aircraft Corporation Nuclear Division Library in Colorado Springs serves the research and development activities of this company in the areas of nuclear instrumentation, weapons systems analysis, missile and space technology, and meteorology.

The Climax Molybdenum Company Technical Library in Climax specializes in material that deals with metals and parts. There are 60,000 original drawings, and the list of parts is in the process of being classified. A labor relations and management file and a collection of literature on mining are maintained. The Metals Division of SLA is making plans to visit this library. The trip is a beautiful one into the high mountains.

The Dow Chemical Company Library at Rocky Flats, between Golden and Boulder, has a great deal of top secret material and is not open to visitors. It is primarily a library of Atomic Energy Commission reports. The stress is on current materials, and the periodicals are chosen for their contribution to current awareness. Interlibrary loans or photocopies can be obtained on some items.

A detailed program for the 1963 Convention will appear in the April issue, but meantime, we hope you will look forward to the Banquet on Tuesday night with entertainment by Max Morath, a reception at the Denver Public Library on Wednesday, and the completely informal affair on Thursday—a rodeo and chuck wagon supper after a visit to the Air Force Academy in Colorado Springs. Fun as well as information is in store for you.

SUGGESTED READING

Here are some books for those who might enjoy some background reading:

ATHEARN, Robert G. *High Country Empire.* New York: McGraw-Hill, 1960. 358 p.

BISHOP, Isabella L. B. *A Lady's Life in the Rocky Mountains.* Norman: University of Oklahoma Press, 1960. 225 p.

CARVER, Jack, et al. *Colorado, Land of Legend.* Denver: Caravan Press, 1959. 200 p.

COLORADO MOUNTAIN CLUB. *Guide to the Colorado Mountains,* 3d ed. rev. Denver: Sage Books, 1961. 256 p.

EBERHART, Perry. *Guide to the Colorado Ghost Towns and Mining Camps,* 2d rev. ed. Denver: Sage Books, 1959. 479 p.

HUNT, Inez, and DRAPER, Wanetta W. *To Colorado's Restless Ghosts.* Denver: Sage Books, 1960. 330 p.

PERKIN, Robert L. *The First Hundred Years.* Garden City, N. Y.: Doubleday, 1959. 624 p.

SPRAGUE, Marshall. *Newport in the Rockies.* Denver: Sage Books, 1961. 370 p.

UBBELOHDE, Carl, ed. *A Colorado Reader.* Boulder, Colorado: Pruett Press, 1962. 332 p.

WOLLE, Muriel V. S. *Stampede to Timberline: the Ghost Towns and Mining Camps of Colorado.* Boulder, Colorado: University of Colorado, 1949. 544 p.

Automatic Bookcharger

The Regiscope Corporation of America is marketing the Regiscope-Rapidex, a photographic bookcharger designed for libraries and developed with the cooperation of library specialists. By printing out its own transaction information on white paper for insertion in the book pocket, the machine eliminates the handling of separate transaction cards and time spent predating and sorting.

AMA's Information Retrieval Seminar

"IF THE COST estimate for a research effort is less than $100,000, you cannot afford to search the literature, but must perform all the lab work from scratch; 35 per cent of all research effort is a duplication of work already performed because inadequate methods of information retrieval make it impossible to find out what has been done."

Facts like these, familiar to all librarians, formed the *raison d'être* for a seminar entitled "Information Retrieval Systems for Scientific and Engineering Applications" held January 23-25 in New York City by the American Management Association. The AMA chose as discussion leaders a group of people prominent in the field of information retrieval: Robert Hayne of Smith, Kline & French; Robert Shiff of NAREMCO; Franc A. Landee of Dow Chemical Company; Earl Fossum of Remington Rand Univac; and Claire K. Schultz, past president of the American Documentation Institute and presently with the Institute for the Advancement of Medical Communication.

The seminar's purpose was to allow the registrants to discuss information retrieval problems in their own companies, to expose them to principles of information retrieval (IR), and to suggest methods of IR, both manual and mechanized, that might help in the solution of these problems. AMA seminars are not intended to be problem-solving sessions but to give the participants an opportunity to air their special difficulties and discuss them with others in the field.

Some of the ideas discussed included: *1)* the place of information retrieval in the existing data processing structure; *2)* principles of IR; *3)* manual methods of IR, such as Uniterm, edge-notched cards, Termatrex cards, and Peek-a-Boo; *4)* the mechanization of IR systems; *5)* coding methods for punched cards, paper tape, and magnetic tape; *6)* searching principles and methods; *7)* the inverted file; *8)* control, storage, and retrieval of data, as distinguished from information using IR methods; and *9)* important areas of new research, including optical character recognition devices for computers and language structure.

Among the important points made are:

1. A careful analysis of the information retrieval needs of an organization must be made before commencing any retrieval system; many systems have been abandoned after a brave start because they did not satisfy the need for which they were planned.
2. The many aspects of information retrieval—indexing, searching mechanization, input and output, abstracting, updating, compatibility with existing data processing schemes—are mutually interdependent. Indexing methods determine search strategy; the type of output desired governs the type of input needed; the capabilities of the machines used govern the flexibility of indexing and searching; thus, one aspect of IR cannot be separated from the others.
3. The size of a collection is a factor in the type of indexing to be used—links and roles, for example, are of little value in a collection of less than 5,000 documents.

Readers of *Special Libraries* and *American Documentation* are uncomfortably aware that most of the papers on information retrieval are written by nonlibrarians. The reluctance of librarians to enter this field is reflected by the registrants' backgrounds: of the 16 persons attending, only one was a librarian. Several participants criticized the obsolete methods still used by librarians in their own organizations, and in most of the organizations represented the library no longer had an independent existence but had become a kind of storehouse in a larger technical information center complex. As control of technical information passes out of the hands of librarians into that of chemical engineers, biologists, and computer specialists, the place of the librarian in science and industry becomes more narrowly limited. The lesson is clear—librarians must learn to use the mechanized systems of information retrieval now available if they want to hold the place they have won.

ROBERT BALAY, Senior Librarian
Technical Information Center
General Precision, Inc., Aerospace Group
Little Falls, New Jersey

This Works For Us . . .

Staff Organization

Included in our staff roster of 11 were two file clerk positions. These had always proven difficult because the people hired for them were either too intelligent to be contented as file clerks or not intelligent enough to handle any of the more complex operations.

We had a series of young girls who were married shortly after they came and were more preoccupied with their husbands and homes than interested in the news library. Their absentee record was extraordinarily high. In addition we had to help them out during peak load periods. They were not to blame exclusively; we were partially to blame for hiring at this level.

The break came early last year when two girls left at almost the same time. This required some reassignment of duties and spreading of the filing among other staff members. Three or four people, as they had time, worked the clips into the files.

The results were amazing. The clips were being filed much more rapidly than when there were two additional staff members. The work was done more accurately because the people doing the filing were better trained and realized that they would have to search clips in the very envelopes in which they were filing. For the same reasons the files were undergoing constant revision. Staffers finding overstuffed or poorly labeled envelopes put them aside to be reworked later.

I became convinced that this was a much better system than the one we had employed for years. After discussing it with my staff individually and as a group, they agreed with me. I then discussed the proposed change with my managing editor and the personnel man. It was agreed that we would do away with the file clerk designations and upgrade the positions and the salaries to a point where we could hire people with intelligence and experience.

Here's how our system works. In the morning, two people sort the clips while the rest of the staff cleans up routine. Then everyone, except the two indexers and one person serving the information desk, moves into the files. This means there may be as many as five or six persons working different sections of the file at the same time. There are no exceptions, including the librarian and his secretary, who hadn't handled a clip since she came to the library 15 years ago and who now ends up helping sort and file.

If success is to be measured by results, I think my enthusiasm is justified.

The clips are usually in the file by 11:00 A.M.; new folders, by 2:00 P.M. The files are in better condition than they have ever been. The newsroom men are most happy, and their compliments have been numerous. When they come into the library at noon looking for a story they think was in the paper yesterday, we pull it out of the files.

The library staff is even more satisfied than the newsroom. No one files more than one hour or one hour and one-half a day. The files are easier to use than they were, and staff members are able to spend time on other than routine work.

One word of warning, if you intend to try this system. You must have the complete cooperation of your staff or it won't work.

However, if anyone balks, have them write to my library. I'll be glad to put them in contact with a member of my own staff who, I am sure, will convince them this is the way to do it.

ELLIOTT ANDREWS, Librarian*
Journal and Evening Bulletin
Providence, Rhode Island

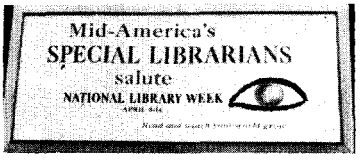
Abstracted from a paper presented before the Newspaper Division, May 28, 1962, at the 53rd Special Libraries Association Convention in Washington, D. C.

* Mr. Andrews has been Rhode Island State Librarian since August 20, 1962.

The Staying Power of NLW Throughout the Year

The fifth freedom...enjoy it!
April 21-27, 1963

BESIDES THE INDIVIDUAL efforts of Chapter members in their own libraries, the Greater St. Louis Chapter undertook two Chapter-wide National Library Week projects for 1962. The results were quite gratifying and confirmed the theory that you can usually obtain maximum cooperation if the cause is worthwhile.



The first project was the production of an original 12 x 24 foot billboard poster (see photo). With the cooperation and active assistance of a professional advertising artist, a three-color poster from a variety of designs was selected. The final art work was transformed into billboard size by a local printing specialist. Ten posters were displayed on billboards throughout the St. Louis metropolitan area through the courtesy of a local outdoor advertising company. Nine additional posters were displayed through similar means in the St. Joseph and Kansas City areas with the help of the Heart-of-America Chapter. The Association cooperated to the extent of defraying the printing cost. All other expenses were donated by the cooperating companies.

The other project was the production of TV spot announcements, including slides of pictures to accompany the audio message. Using amateur photography and paste pots, suitable pictures were prepared by Chapter members, and the slides were made by a local photocopying company. Actually, two spot announcements were produced, one for eight seconds and one for 20 seconds. Sets of each announcement were sent to all five St. Louis TV stations after contacting each one for assurance of use as a public service at no charge. Subsequent reports from the stations indicated repeated use of these spots throughout National Library Week. It should be noted that the employers of the local Chapter members absorbed the expense of producing the TV slides. The Chapter was gratified that this particular project was singled out in the *Fifth Annual Report* for National Library Week. The complete storyboard was reproduced therein.

EFREN W. GONZALEZ, Director, Technical Communications
Grove Laboratories, Inc., St. Louis, Missouri

U.S. Army

The Fort Irwin Library invited off-post groups to celebrate NLW at an Open House. Cutting the special cake is the Post's NLW Committee Chairman flanked by "Miss Barstow" on the left and the Special Services Officer, Mrs. Hooper, and a Girl Scout on the right.

NATIONAL LIBRARY WEEK WAS A MAJOR PROJECT at Fort Irwin, an Army tank-training post, 37 miles across the desert from Barstow, the nearest town. The one library stocks technical manuals to support the training mission and also serves the community for information, education, reference, and recreation.

The Commanding Officer appointed a senior troop commander Chairman of the National Library Week Committee. Members were the Public Information Officer, Special Services Officer, Education Advisor, the school principal, and troop unit representatives.

At the open house on Sunday morning, the Post Commander cut a cake, and "Miss Barstow" provided troop interest. Boy Scouts and Girl Scouts served approximately 250 men who attended. Fifty ladies came to a coffee hour, when a minister from Barstow reviewed *Overseas Americans.* The librarian addressed three troop training classes on library use; grades 3-8 from the school came for library lessons during the week. High school students, who commute to Barstow, had a social hour after school, and their high school librarian came out with them for the event.

Off-post activities included the librarian's serving on a committee for the county-wide observance of NLW and appearing on a radio program with Barstow librarians. The USO helped with a window display, and invitations to the open house were sent to librarians and other interested persons in the area.

Newspaper promotion included ten items in the post paper, four items in the *Official Bulletin,* and a picture in the *San Bernardino Sun* story on county-wide library service. The 50 posters distributed included those issued by the Department of Defense and NLW, plus special ones for the open house and book review. Counter cards were furnished to stores, and bookmarks were distributed with the official bulletin and in troop dining rooms. Door prizes were awarded at special events, and pocket calendars and booklists were made available. Displays were arranged in the library and the on-post Service Club.

Results can be measured in circulation of library materials: a total of 718 items during NLW compared with 460 during March 8-14. Contacts on and off the post were valuable to the newly assigned librarian, and the continued support of the NLW Committee members is anticipated. Continued promotion will be used to inform the community of library service, but there will probably be a carry-over from this major project. For final, valuable results, the Chairman of the National Library Week Committee has offered more personnel for the library staff, and the grant of $1,000 for books, already in process, just happened to be awarded during NLW.

MRS. M. L. HOOPER, Post Librarian, Fort Irwin, California

THE ENGELHARD DISPLAY was located in the front entrance to the laboratories, where all personnel and visitors must enter and leave. The display was in a four-shelf glass display case backed by a mirror and represented a flow chart of information from the library. Red threads ran down the front of the case, simulating the lines of a flow chart to show that the *library* feeds information directly to each company activity—and in turn the *laboratory* feeds the *pilot plant* and the pilot plant feeds the *product* (factory).

The furniture was made from manila folders, and the nine chemists and two librarians were made of pipe cleaners. The glass apparatus, including beakers and vessels, was specially blown. Everything on the first three shelves was made to the scale of one inch to the foot. The product was represented by bound volumes of Engelhard patents and some jars of catalysts.

The display was very popular with every one from the Vice-President to the janitors. It remained up long after National Library Week. They wouldn't let me take it down.

MRS. MARJORIE O. BAKER, Librarian
Engelhard Industries, Inc., Newark, New Jersey

IN THE TECHNICAL LIBRARY at the U.S. Naval Civil Engineering Laboratory, Port Hueneme, California, we have observed National Library Week in some way each year, although not always on a large scale. We wanted to have something different from the usual academic display, and we wanted to personalize our observance in some way. "Maybe people in the Laboratory wonder what those 'gals' in the Library are really like," we thought. So we came up with the idea of having exhibits depicting the hobbies and leisure time activities of staff members, along with an open house. We had recently installed metal shelving (replacing file cabinets) for our reports collection. This gave us a chance to do some rearranging and house cleaning and an excuse for an open house.

For our invitations we used the table tents we had ordered along with other publicity material for NLW. We issued an invitation to each division in the laboratory, to other librarians at the Construction Battalion Center, to librarians at two nearby military installations, and to public librarians in the nearby cities of Oxnard and Ventura. We also announced our open house in the NCEL Plan of the Week for laboratory personnel and in the CBC Plan of the Day. On bulletin boards and in other strategic locations throughout the Laboratory we placed NLW posters and streamers.

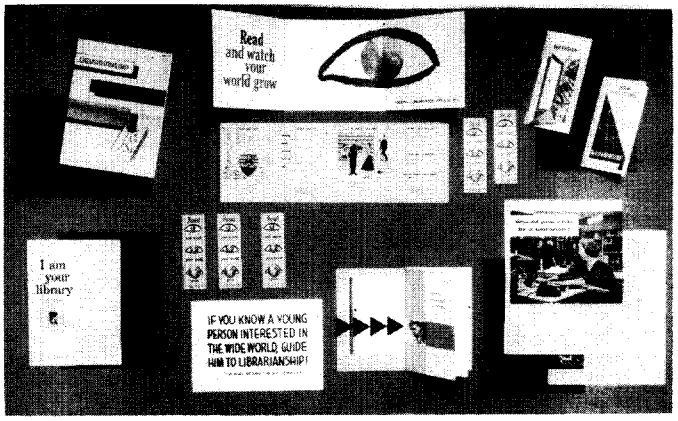
The five members of the library staff made up displays of their leisure time activities. On display were knitted articles, embroidery and sewing, flower arrangements, stamp and coin collections, and books from a church library operated by one of the staff members. There were pictures and posters illustrating activities such as bird watching and opera. Each staffer also had samples of her culinary art along with the other items in her exhibit. Coffee and tea were served to visiting librarians, and the cookie plates were kept filled.

We recorded 133 visitors during the Week; this total included 94 laboratory personnel and 39 visitors from other libraries and activities (one librarian from as far away as Seal Beach, California). When our own people came in we had a chance to call to their attention the new arrangement of reports and other changes, which they might not have noticed. Other visitors were interested in the types of material in our collection and in items of equipment we were using. Some of them gathered information as to how they could acquire various items.

Visiting librarians commented on the personnel exhibits but chiefly on our library facilities, as they were not familiar with our operations, and there were, of course, various comments on the food. It was a rather hectic week—but we felt that we achieved a closer working relationship with laboratory personnel.

MRS. HOPE SMALLEY SMITH, Librarian
U.S. Naval Engineering Laboratory, Port Hueneme, California

Bell & Howell's NLW display encouraged "Careers in Librarianship." This prompted inquiries for more information, and appointments were made with teenagers and parents to discuss qualifications and training.



IN THE SOBERING ROLE of company oracle in which many industrial librarians are cast, we are sought out frequently by parents, from Mahogany Row to Assembly Line, for career information and advice for teenagers. When struck by a last-minute urge to participate in National Library Week this year, it seemed worthwhile, therefore, to base an exhibit on "Careers in Librarianship" for our captive audience.

We announced the special bulletin board in our library bulletin, and the display was used for several weeks so that employees from all plant locations might have a chance to see it. In addition, we used NLW kit materials (purchased from a neighboring public library with an over-supply) throughout our library. NLW bookmarks were sent out with all loans during the week. These reminders also were sent to all top management personnel with a note that "the library exists to serve your scientific, technical, and administrative personnel."

Reviewing results, our first participation in NLW stimulated so much interest and good will among our customers that we have resolved to organize our thoughts and plans far in advance next year.

ELIZABETH M. WALKEY, Manager, Library Services
Bell & Howell Research Center, Pasadena, California

THE PET MILK RESEARCH CENTER LIBRARY feels strongly that it should support activities that promote the use of libraries, especially since its location is in a town of less than 5,000 people, 50 miles from St. Louis. Since the Research Center was established in Greenville a little over two years ago, the Library has participated in National Library Week by holding open house for staff members, local civic leaders, members of the high school and Greenville College science faculties, and the librarians from the city, college, and high school libraries.

This year we wanted to broaden our scope of activity. We procured posters, streamers, pennants, bookmarks, and pocket calendars from National Library Week. We placed the posters, streamers and pennants in the windows and interiors of both local banks, the local finance company, and eight local stores and, of course, in the lobby and library of the Center. The story of National Library Week was carried by one of the papers and one bank saluted National Library Week in its newspaper advertising.

The Optimist Club asked the Pet Milk Research Center Librarian to speak at its meeting that week in observance of NLW. We inserted an original skit in the talk, which was literally a howling success and still "the talk of the town." The President later told me that the suggestion of the local Optimist Club to set up a "Library Committee for the Boy" to work with local and school libraries to see that the boy has a real reading program to make his world grow had been accepted. Both local papers carried stories of the meeting and one sent a photographer for the skit. A suggested Reading List, furnished

by the Greater St. Louis National Library Week Committee, bookmarks, and calendars were at each place setting. Banners, streamers, and posters were hung on the walls of the meeting room.

The results were beyond our expectations. The local participating merchants were pleased. One store owner who had a promotion on books said the posters helped his sales. The two outstanding results were: *1)* from the publicity, a better understanding by the people of Greenville and surrounding area of the functions of a special library and a special librarian and; *2)* from the speech, a new added direction by the local Optimists in their worthwhile program of "Everything For The Boy," by forming a Library Committee.

ALMA GIRAND, Librarian
Pet Milk Research Center, Greenville, Illinois

NATIONAL LIBRARY WEEK affords librarians a wonderful opportunity to show the diversity of work that can be done in the community by librarians. This was the object of the National Library Week Program carried out at the Linde Company, Tonawanda, New York.

The program started in November 1961 with my appointment as member of the New York State Committee for National Library Week and member of the Steering Committee. The first task was to review for the Executive Director the membership list of the SLA Western New York Chapter to determine which members were not being contacted in regard to National Library Week through university or public library channels. A memorandum was sent to these members informing them of the NLW plans and asking for reports on their NLW activities was also read at the Chapter's April 7 meeting.

During National Library Week posters and a NLW mobile were hung in the Linde Library, and NLW bookmarks were placed in all interlibrary loans sent and received that week. Bookmarks were also distributed to the scientists and engineers for home use. One scientist stated that as a result of seeing one of these bookmarks, his wife decided to go to the public library and take out a library card.

During National Library Week the Civil War Round Table of Buffalo, New York, held its monthly meeting. At the meeting as Program Chairman, I distributed a Suggested Reading List for 1961-1962 to supplement the programs presented during the last year.

Later in the week, in my capacity as Chairman of the Committee for Co-operation with Foreign Universities of the Western New York Section of the American Chemical Society, I took the occasion of National Library Week to ship a collection of technical journals to India (see photo). Photographs and news releases were sent to the local newspapers, the *Technical Societies News,* a publication of the Technical Societies Council of the Niagara Frontier, and *Buffalo Business Magazine.*

As a follow up, reports collected from WNYSLA members in response were collected for a report to the Executive Director of National Library Week for the State of New York. Thus the objectives of reaching many diversified groups to show the many diversified things librarians can do was met. From special librarians to research scientists, from Civil War buffs to chemists, from the home community to distant India, all can benefit from National Library Week.

R. J. HAVLIK, Technical Librarian
Linde Company, Tonawanda, New York

CURRENT CONCENTRATES Of The Library World

What Is Documentation?

THE OTHER CHALLENGE which throws a spotlight on our tendency to hide from the future is the relentless pressure of materials which multiply like rabbits in an information saturated world. . . . How many of us know what documentation is? We conjure up pictures of intricate machines and dehumanized services, we associate with a cloudy mental image of something called information retrieval. And abstractly, we worry about it all, but not too much. We still have our catalogs. But let's ask ourselves again: what is documentation? And does it concern us?

Jesse Shera, at the ALA conference in Cleveland, said: ". . . Documentation is not . . . a synonym for the mechanization of library or bibliographic operations. Documentation, if it is anything other than a semantic differentiation, may be regarded as a theory of librarianship that is dedicated to the exploration of new ways for improving the utility of recorded knowledge, *for whatever purpose and at whatever level of use,* by developing new means for the analysis, organization and retrieval of graphic records . . . *a children's librarian* can be as much of a documentalist as the most highly trained literature scientist serving the most esoteric requirements of a theoretical physicist. Documentation, then, is not a matter of degree, or even of intensity of effort, it is a credo—a professional philosophy. If the line between the documentalist and librarian is difficult to draw, it is so because it is not a very important line except as it has been used as a whip to urge librarians into new areas of investigation and innovation."

It was, added Shera, "in the attempt to escape from the dilemma of poverty in the midst of intellectual abundance that the much maligned discipline of librarianship known as 'documentation' was devised."

Does documentation, as outlined by Shera, sound like anything other than really basic librarianship, in a slightly higher gear perhaps to deal with a faster world? Should a whip be necessary to urge librarians into new areas of investigation and innovation? And if it is necessary, is it not so because we have for too long had our ostrich heads buried in the shifting sands of irrelevancies and trivialities, worrying more about overdues than about the progress which is desperately overdue?

Do we ask ourselves why special librarians in America and in Britain have broken away from the mainstream and formed their own powerful tributaries—SLA here, ASLIB in England? Do we worry when we hear men like Dr. Urquhart in England declaring, in effect, that librarians are unnecessary in the National Lending Library for Science and Technology? Or when we see whole new professions of documentalists, information officers and the like growing up all around the self-imposed boundaries of librarianship? Do we ask what these "specialists" are doing that we are not?

Most of the time we do not ask because the answer is humiliating. They are *thinking,* and they are trying to find ways to cope with this new ocean of readers and materials and with a demand for *library service* that should be a joy to us, but which most of us have not yet begun to believe conceivable.

The moral then, if there be one, is that the real—or ideal—library is not anything we now have. It is what we must create, or perish as an important and effective instrument of society and as a profession.

Extracted from "A Jungle Tale" by Eric Moon in *Library Journal,* vol. 88, no. 2, January 15, 1963.

The USAF Historical Division Archives

AILEEN V. ELLIS, Archives Branch, U.S. Air Force Historical Division
Aerospace Studies Institute, Maxwell Air Force Base, Alabama

THE USAF Historical Division and its Archives are located at Maxwell Air Force Base, Montgomery, Alabama, as a part of the Air University's Aerospace Studies Institute, formerly called the Research Studies Institute. The Division was established in September 1942 in Washington, D. C., where it remained until September 1949, when it was moved to Maxwell. The Archives' collection of over one million documents is housed in 2,200 4- or 5-drawer filing cabinets, which occupy four bays of a fireproof building. Five rooms in one of the bays provide office space for the staff, which consists of nine professionals and three nonprofessionals.

Collections

The Archives holdings, which are being increased at the rate of more than 15,000 documents a year, span the life of the United States Air Force and its predecessors from Civil War balloons to manned space flight. This vast store of primary materials, now readily available to the teacher, student, professional writer, and researcher in American military aviation, constitutes the nation's most extensive and most valuable source of USAF history, contemporary and past.

The collection contains two types of materials: *1)* monthly, quarterly, and semiannual histories and supporting documents of Air Force units; and *2)* special collections of studies, office files, personal papers, interviews, and other items acquired from Air Force agencies and individuals.

The Archives is the official repository for the histories and supporting documents of USAF organizations, as required by Air Force Regulation 210-3. Each major air command and numbered air force (or comparable organization) must prepare a semiannual history, two copies of which are forwarded to the Archives. Other histories, monographs, studies, and related data of a historical nature, covering the activities of units below numbered-air-force level, are prepared in accordance with procedures prescribed by each major air commander and forwarded to the Archives.

Histories of squadrons, groups, wings, air forces, and commands, written since 1942, make up the major portion of the holdings. Each of these unit histories usually includes an over-all narrative supplemented by enclosures such as personnel rosters, orders, correspondence, mission reports, plans, studies, and photographs. Those for the World War II period are filled with detailed information on personnel, training, logistics, operations, and housekeeping; they abound with human interest stories and combat data. Post-World War II histories include key documents relating to the Korean conflict and accounts of Air Force activities in the Pacific and Far East areas, the Middle East, Europe, and the Caribbean; Zone of Interior unit histories afford comprehensive coverage of training, logistics, research and development, air transport, communications, air defense, and other areas.

Special collections provide data on military aviation developments since 1861, records of certain AAF staff offices, biographies, PRO releases, air-sea rescue and escape and evasion reports, interviews and interrogations, information on early Air Force schools, studies prepared by the Air Corps Board, Air Materiel Command, U.S. Army, and USAF Historical Division, and other historical documents.

Classification Systems

The Archives uses two classification systems. All material of Division level and below is classified under the Mood system (named for its originator, Dr. Fulmer Mood,

formerly Chief of the Archives). The Mood system is based on the sound archival principle of place of origin. For purposes of arrangement, each document is labeled with a symbol representing the unit by which the document was submitted. This symbol is an abbreviation representing the type of unit (such as WG for wing, GP for group, SQ for squadron, and DET for detachment), followed by the numerical designation of the unit. If the unit is of such a type that several may bear the same number (as is the case with squadrons, for example), an additional differentiating abbreviation is used. Thus the symbol for the 74th Fighter Squadron is SQ-FI-74.

Documents above Division level are classified under a decimal system similar to the Dewey Decimal classification. The categories in this classification system are 100—Air Force headquarters and other government agencies in Washington and elsewhere; 200—Zone of Interior commands and organizations of the United States Air Force and its predecessors; 300—major global services of the USAF; 400—Western Hemisphere Theater of Operations combat or combat training commands; 500—European Theater of Operations (including, besides air components, European Theater of Operations United States Army and Supreme Headquarters Allied Expeditionary Forces); 600—Mediterranean Theater of Operations (including besides United States air components, Mediterranean Allied Air Forces, Mediterranean Allied Strategic Air Forces, Mediterranean Allied Tactical Air Forces, and Mediterranean Allied Coastal Air Forces); 700—Pacific Theater (including, besides air components, Southwest Pacific Area, United States Army-Pacific); and 800—Asiatic Theater of Operations (including, besides air components, Southeast Asia Command and India-Burma-China and China Theaters). The 900's have been left open for future use.

The fact that two classification schemes have been applied to different types of documents in our custody may seem illogical and is certainly unorthodox. The important question, however, is, "Does it work?" It does work—Archives personnel can locate any document within a few minutes.

Reference Services

Reference services of the Archives are numerous. In the past year Archives personnel answered more than 1,300 requests for material and served nearly 900 visitors. Research was done on information requested by students in military and civilian colleges for theses and dissertations, by writers of books and magazine articles, by U.S. Army agencies interested in early aviation developments, and by individuals preparing television scripts, medical studies, speeches, and

Miss Ellis points out a new collection in the Archives to an assistant.

programs for anniversary and dedication ceremonies. Topics ranged from jungle warfare to German aeromedicine and from the Indo-China airlift to space operations.

Some of the professional writers who have done research in the Archives are Martin Caidin for his book, *Black Thursday,* Major Gene Gurney for *Five Down and Glory* and *Journey of the Giants,* and John Hersey for *The War Lover.* Noble Frankland came from England to do research for the four-volume work *History of the Second World War* which he wrote in collaboration with Sir Charles Webster. The Archives furnished material for the CBS Armstrong Circle Theater presentation on the "Lady Be Good," the B-24 lost in Libya in 1943 and discovered in 1960.

Last year 20 graduate students used the Archives for research on theses and dissertations. They represented universities from Washington to Florida and from Pennsylvania to California. Subjects included: the critical phase of Spanish neutrality in World War II, significance of aircraft in United States-Soviet diplomacy during World War II, use of observation balloons in the Civil War, early aviation relations between the United States and Latin America, and a study of aerial observation conducted by U.S. Air Service in World War I. The Archives is constantly used by the students and faculty of the various Air University schools in preparing for lectures and seminars.

Although much of the material is unclassified, certain World War II and more recent material is classified. This classified material can be used by persons with a security clearance and "need to know." Others desiring access to the collection may make application to the Chief, USAF Book Program, SAFOI, Washington, D. C.

Have You Heard . . .

CLR Report and Grants

According to the sixth annual report of the Council on Library Resources, Inc. for the period ending June 30, 1962, almost $1 million was spent for 40 grants, contracts, and other allocations. Most of the allocations were for studying or developing automation applications to techniques of library operation. Research also included the development of devices for reading printed text; converting oral to graphic systems of communications and vice versa for indexing, abstracting, and interlingual translation; spatial compression of records; and improved methods of classification and indexing.

A 1963 CLR grant has been given to the University of California Library, San Diego, La Jolla. The library will receive $12,650 to continue its investigation of computer programming of serial records. The main purpose of the study is to provide users with ready access to information in serial holdings. Results of the present phase are expected in about a year and will eventually be published.

A three-point program to preserve printed and manuscript materials from disintegration is being furthered by a $11,500 grant to the Association of Research Libraries' Committee on Research Library Materials. A preliminary survey has indicated that there are about 7.7 million books and an unestimated number of magazines, newspapers, and other materials that require special preservation methods. The Committee will set up programs for the coordination of all the present preservation activities being done by libraries; bibliographic control of master copies, preferably loanable secondary copies; and the development of a system of storing master copies for the longest possible life.

The American Library Association has plans to initiate or implement four projects. Within the year ALA expects to publish, with a $10,500 grant, the third edition of *American Library Laws,* a compilation of state and federal laws pertaining to libraries. The second edition, published by ALA in 1943, is now out of print as well as out of date. The book will be printed by offset and contain approximately 1,247 pages. Alex Ladenson of the Chicago Public Library, will compile the new edition, which will be under

the administrative supervision of Richard B. Sealock, a member of the ALA Committee on Legislation. Over $31,000 will aid ALA in continuing its program of providing a background of library knowledge to community librarians and trustees who have not had professional training but are working in small community libraries. This is being accomplished through the distribution of a series of 16 pamphlets, with supplementary guides. The project is being coordinated with state library extension agencies. In addition to a $20,000 grant, funds from the Asia Foundation and Forest Press, Inc., a subsidiary of the Lake Placid Club Education Foundation, will provide the means for a survey of the use of the Dewey Decimal Classification abroad. A steering committee, representing ALA, Forest Press, the Library of Congress, and the Decimal Classification Editorial Policy Committee, will begin the survey in the Far East. Brazil, Greece, Israel, Nigeria, South Africa, Russia, Turkey, and Yugoslavia are tentatively scheduled for the future. ALA has also received $7,038 for its affiliated Library Technology Project to undertake a survey of the present uses of sheet microfilm in the United States. Microfiches, micro-opaques in card form, have gained in popularity but are issued in various sizes. The survey will attempt to provide uniform practices and standards after investigation of the available equipment, materials, and current practice.

The National Book Committee, with a $5,000 grant, will cooperate with the Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University in sponsoring a conference that will present aspects of library services and books that are helpful to city planners and administrators. The conference is scheduled for May 27-29 at Endicott House, near Cambridge.

National Plan for Library Education

The American Library Association's Library Education Division will direct a program for the development of a National Plan for Library Education. A 35-member Commission, under the chairmanship of Richard H. Logsdon, Director of Libraries, Columbia University, has been formed to draft a proposal for the Plan, which was first recommended by the Institute on the Future of Library Education in April 1962. The first two years of the work will be supported by a $15,000 grant from the H. W. Wilson Foundation, Inc. The objectives of the Plan are: *1)* the reflection of the philosophy, knowledge, and attitudes of the ablest representatives of the profession; *2)* the recognition by the entire profession of the significance of the role of library education; *3)* the great participation of library leadership in the program; *4)* the existence of programs at all levels of library education; *5)* the extension of the existing knowledge through research and publication; and *6)* the identification, clarification, and publicizing of the objectives of library education as a dynamic profession.

New Jersey Information Centers

The intended establishment of research and scientific information centers available to New Jersey industry is the result of a study made by a special committee of the New Jersey Council for Research and Development. The major participating libraries assisting in the formation of these centers are the Princeton and Rutgers Universities Libraries and the State Library. The library coordination setup would provide supplemental reference, bibliographic, lending, and copying services at selected university and other libraries with staff salaries paid by participating companies. Jay K. Lucker, SLA member and Assistant Librarian at the Princeton University Library, is a member of the Council committee.

Coming Events

ESTABLISHING AND MANAGING THE COMPANY LIBRARY, a AMA-sponsored workshop seminar, number 6813-02, will be held March 20-22, 1963, at the Hotel Astor in New York City. Katharine L. Kinder, Chief Librarian, Johns-Manville Research and Engineering Center, and Mrs. Marie S. Goff, Librarian, Technical Library, E. I. duPont de Nemours & Co., Inc., will be the discussion leaders. The seminar, which is limited to 15 participants, will explore the objectives,

organization, facilities, services, and service standards of a company library as well as discuss problems of seminar members. Registration may be made up to the time of the seminar. Fees are $150 for AMA members and $175 for nonmembers. Write AMA, 1515 Broadway, New York City 38.

The automation of library operations will be the topic of the University of Illinois Graduate School of Library Science and Division of University Extension's CLINIC ON LIBRARY APPLICATIONS OF DATA PROCESSING, which will be held April 28-May 1 at the Urbana campus. The Clinic is expressly for libraries with automation or those contemplating a change toward it. Attendance is limited to 90 people.

The SOCIETY OF TECHNICAL WRITERS AND PUBLISHERS will hold its Tenth Annual Convention, May 16-18, at the Statler-Hilton Hotel in Boston. A contest and exhibit of international technical art will be featured on the program, whose theme is "The Revolution in Technical Communication."

MLA and Medical Congress Program

A preliminary program has been arranged for the Second International Congress on Medical Librarianship and the 62nd Annual Meeting of the Medical Library Association on June 16-22, 1963, at the Shoreham Hotel, Washington, D. C. The opening session will be held on Sunday with Dr. Frank B. Rogers, MLA President, and Director, National Library of Medicine, presiding. After the welcoming address by Dr. Luther B. Terry, Honorary President of the Congress and Surgeon General of the U. S. Public Health Service, there will be a reception. The Monday morning discussion, "Education and Training for Medical Librarianship," will be presided over by Dr. André Hahn, Bibliothecaire-en-Chef, Faculté de Médecine, Paris. The afternoon program, "Utilization of Machines for Bibliographic Purposes," will be chaired by Dr. Tomio Ogata, Director Emeritus, Tokyo University Medical Library. "Progress Report on the MEDLARS Project," scheduled for Tuesday morning, is under the chairmanship of Louise Darling, Vice-President, MLA. Business sessions begin again Thursday with "Problems of Library Organization," chaired by Mrs. Olinda E. Hempel de Camago, Librarian, Institut Adolfo Lutz, Sao Paulo. In the afternoon, Mrs. Julie Krivinková, Superintendent of Medical Libraries, Institute for Medical Documentation, Prague, will chair the discussion, "Some Aspects of Library Management." The evening banquet speaker will be Dr. Abraham Horwitz, Director, Pan American Health Organization. Friday morning, before a MLA business meeting and special tours for overseas guests, the discussion, "Interlibrary Cooperation," will be presided over by S. O. Falayi, Librarian, Central Medical Library, Nigeria. The final program for Saturday morning is "Special Problems of Historical Libraries," chaired by William R. LeFanu, Librarian, Royal College of Surgeons, London.

Members in the News

YVONNE X. GREEAR, formerly with El Paso Natural Gas Company, has recently become Reference Librarian at Fort Bliss Main Post Library, El Paso.

MRS. LUCILE L. KECK, SLA President during 1953-54, retired recently as Librarian of the Joint Reference Library in Chicago, a job she had held since 1932. She is succeeded by MARGARET K. POUDER, former Assistant Librarian under Mrs. Keck.

BERNARD B. LANE, formerly with the Hanford Library of General Electric Company in Washington State, has been transferred to the engineering staff of the new production reactor in Hanford.

RACHEL MACDONALD retired recently after 37 years as Librarian of the Ford Motor Company Engineering Library in Detroit.

WILLIAM H. RICHARDSON, former Reference Librarian at Sandia Corporation, Albuquerque, New Mexico, has recently become Librarian of the Engineering Research Library, Allison Division, General Motors Corporation, Indianapolis, Indiana.

In Memoriam

JULIAN A. SOHON, Head of the Bridgeport Public Library System since 1934, died recently. Mr. Sohon worked in the Engineering Societies Library before going to Bridgeport.

AALL Recruitment Publications

The American Association of Law Libraries is distributing a six-page recruitment brochure explaining the profession to high school and college students and also a 23-page *Annotated Recruitment Checklist* compiled by Kate Wallach for the AALL Recruitment Committee. The *Checklist,* helpful to placement counsellors and teachers, answers in detail questions about the profession, using several sources. Four appendices list the type and number of law libraries, a bibliography of AALL members' contributions to the field, professional activities of the members, and a list of accredited library schools. Copies of both publications may be obtained either from Mrs. Goldie Green Alperin, Chicago Bar Association, 29 South LaSalle Street, Chicago 3, or J. S. Ellenberger, 3518 U. S. Court House, Washington 1, D. C.

Textiles Library Grant

Burlington Industries Foundation has given another grant to the School of Textiles library at North Carolina State College in Raleigh. The $26,000 will be used for the expansion of the facilities and services of the library. The 7,000 cataloged and the over 10,000 uncataloged reference volumes, under the jurisdiction of Mrs. Oliver Orr, SLA member, comprise one of the most comprehensive textile collections in the United States and is used by industry as well as faculty and students.

Small Label Printer

A compact press has been manufactured by Gaylord Bros., Inc. to print several copies of a call number on small labels. The number is set in type and locked into position ready for printing. The hand-operated press comes complete with ink, oil, numbers, letters, and two extra ink pads. For information, write Gaylord at 155 Gifford Street, Syracuse, New York or 29 North Aurora Street, Stockton, California.

Letters to the Editor

NEW TITLE BY SLA PIONEER

One of SLA's pioneers and one of the most distinguished leaders in the library field, Joseph L. Wheeler, has, with Herbert Goldhor, recently made another of his invaluable contributions to the profession in the volume, *Practical Administration of Public Libraries,* published by Harper & Row. As the first Chairman of the Science-Technology Division back in the early days when it was called the Technology Libraries Committee, Mr. Wheeler fostered the development of what has become one of the predominating interests in SLA. At the same time, as initiator of the *Industrial Arts Index,* he continued to promote projects of major importance to the special library field, and his long service on the Publications Committee of Public Affairs Information Service offered another channel through which his profound interest in the growth of library tools tailored to special needs could find outlet.

This latest product of Mr. Wheeler's library genius is of major importance to special librarians also. His lasting interest in special library work is reflected in the detailed discussion of reference services and subject departments, while the sections on organization, staffing, and supervising are especially pertinent to the administration of such libraries.

In the extensive bibliographical notes concluding each chapter he has provided a key to an incredibly wide field of allied literature. Again, as throughout his long and distinguished career, Mr. Wheeler has come to the aid of the library world in all its ramifications. The Special Libraries Association may take especial pride in the inspiration he found in its early efforts. The results of that inspiration have been of major importance in the work of special libraries over the years.

MARIAN MANLEY WINSER
Summit, New Jersey

EDITOR'S NOTE: See the review of Mr. Wheeler's book in the "Off the Press" section of this issue.

CLARIFICATION OF JINNAH COLLEGE LIBRARY

The article, "Meet—Almuzaffar A. G. Khan," which appeared in *Special Libraries* for November, 1962, is not entirely accurate. Although the unfortunate inaccuracies for the most part concern Mr. Khan, there is one statement that is very misleading, and requires clarification: "When Mr. Khan went to Jinnah (in 1959) the library was considered a model one—a project of The Asia Foundation—and carefully protected. The books were arranged by accession, and browsing was seldom permitted."

The idea of a "model library" was evolved in late 1959 by Ernest Howell, then Assistant Representative of The Asia Foundation in Karachi, simply because most of the libraries in the area did answer the quoted description. Mr. Howell, a great library enthusiast, felt that modern library methods must be introduced into Pakistan and hoped that the libraries of selected institutions could be developed to serve as models for other libraries in the country. Jinnah College was one of the first to be so selected, largely because its prin-

cipal was Yale-educated and very forward-looking and progressive.

Under the terms of the agreements between The Asia Foundation and the selected institutions, the institutions were to supply a competent librarian, with faculty status and pay, and to give adequate support to him and the library. In return, the library was to have priority in the selection of books in the Foundation's book warehouse in Karachi, and in certain instances books in limited quantity might be purchased specifically for the needs of a particular library. At the time of their selection, none of these libraries was considered "model" in the sense of an example to be followed. The adjective is unfortunate: "embryonic model" would have been a better description. It was clear that these libraries could be considered "model libraries" only after a long-continued application of the kind of reforms initiated by Mr. Khan at Jinnah College. No one connected with the Foundation then or now ever had any other idea.

No organization has done more to develop libraries and library services, in the sub-continent at least, than The Asia Foundation. The interest of the Foundation in this field is genuine and extensive, and the foregoing is written to indicate that this interest is also intelligent and informed.

CARROLL C. MORELAND, *Visiting Professor*
Library Science
University of Dacca, East Pakistan

INFORMATION SCIENTIST DEFINED

I was interested to read Mrs. Crosland's article in your December 1962 issue on the study being undertaken by the Georgia Institute of Technology on the training of personnel for scientific and technical libraries. It is certainly desirable to arrive at agreed definitions in this field, and, if possible, to secure their adoption throughout the English-speaking world.

The proposals concerning use of the terms "information scientist" and "technical literature analyst," however, seem likely to create ambiguity. The term "information scientist" is in general use in the United Kingdom to describe a scientifically qualified person engaged in information work in science or technology—not someone concerned with the science of information. Our "information scientist," in fact, approximates to the proposed "technical literature analyst," though our definition of duties would be slightly wider.

As you may know, we have in the U.K. an Institute of Information Scientists which defines the work of the information scientist as follows:—

"The collection, collation, evaluation and organized dissemination of scientific and technical information, which includes such practices as:
1. abstracting, reviewing progress and other similar technical writing
2. translating scientific and technical writings
3. editing technical reports, abstracts, translations, etc.
4. indexing, subject classification and retrieval of scientific and technical information
5. searching scientific and technical literature, preparing bibliographies, reports, surveys, etc.
6. obtaining and providing scientific and technical information and tendering advice thereon
7. dissemination of information and liaison and field work for that purpose
8. research on problems in information work"

It would be unfortunate if the same term were to become established with quite different meanings in our two countries, and I earnestly hope that it is not too late to seek to establish agreed definitions together.

LESLIE WILSON, Director
Aslib, London, England

AUTOMATIC JOURNAL ROUTING

A few years ago our library set up a system for automatic journal routing using IBM punched cards similar to the system described by Stella-Margaret Riggle in *Special Libraries,* November 1962, pages 537-40. Our system was, however, designed to handle not only the automatic journal routing to predetermined lists of individuals, but also special-request routings originating from persons receiving only tables of contents instead of whole journals. The special-request routings are, of course, different for each issue of any given journal.

Once our journals leave the library, they do not ordinarily come back until everyone on the routing list has crossed off his name. In order that the library may locate journals for which there is an important request and to make it possible to trace missing journals, it is necessary for the library to have a record of the routing order for each issue. By the use of split wiring, an IBM 402 alphabetic accounting machine was programmed to produce, simultaneously, two parallel routing slips. The left-hand slip is attached to the journal for routing, and the right-hand slip is kept for the library records.

The system works as follows:
1. A journal received by the library is checked in, copies of the table of contents are made, and the journal is placed in the periodical rack for one week so that it may be examined by persons coming to the library.
2. The copies of the table of contents are distributed. Persons desiring to see the journal itself then notify the library.
3. After the week of display is ended, the routing list for the journal is made up of two parts: *a)* a punched IBM title card for the journal, followed by IBM cards for the individuals on the regular routing list, and *b)* an IBM card for each individual who has made a special request to see the journal. The parallel routing slips are then run off on the IBM 402.
4. The left-hand routing slip is attached to the

journal and the journal is circulated through the company mail. The right-hand routing slip becomes the library record.

5. While the journal is circulating, the IBM cards are sorted and returned to the files in which they are stored. One file contains the cards for the journals, followed in each case by the cards for the persons on the regular distribution list. The other file is simply an alphabetical file of the names of staff members.

6. When the journal returns to the library, it is checked off and shelved, and the routing slip is discarded.

This system is preferable to one that would involve making carbon copies on the IBM 402 because carbon forms are expensive and messy to separate.

ROBERT J. HAVLIK, Technical Librarian
Tonawanda Laboratories, Linde Company
Tonawanda, New York

Off the Press . . .

Book Reviews

INFORMATION HANDLING AND SCIENCE INFORMATION: A SELECTED BIBLIOGRAPHY, 1957-1961. *Paul C. Janaske,* ed. Prepared by The American Institute of Biological Sciences, Biological Sciences Communication Project, in cooperation with the American University Center of Technology and Administration, School of Government and Public Administration. Washington, D. C.: American Institute of Biological Sciences, 1962, unpaged. $2. (L.C. 62-19910)

How to deal effectively with the growing literature and what the newer techniques of handling information are should be the concern of every librarian, regardless of the field, size of library, or whether or not there is opportunity or feasibility to apply them.

As stated by the editor, reports on the handling of data, storage and retrieval of information, classification schemes, and administration of document collections are scattered in the literature. For this reason there is need for bibliographies on the subject, particularly one equipped with adequate annotations as this one is.

The 1,121 entries are arranged alphabetically by author or corporate body, and in the absence of both, by title. Selection of publications had been limited wisely to the years 1957 through 1961, including a few items published early in 1962 (M. Spangler's bibliography of 1,550 references on information storage and retrieval is among these). The major emphasis in selection had been: the handling of scientific information and the application of mechanical systems, the scientists' use of, and guides to, literature, mechanical translation (excluding studies of linguistics), training of information specialists, "reprography" (a word not yet included in Webster's dictionary, but we may all too well guess its meaning), subject classification and indexing, and application (except commercial) of equipment excluding the description of "hardware." Excluded also were conventional systems of classifying books and mechanization of library routines such as acquisition and circulation. The first of these may account for the omission of the *Guide to the SLA Loan Collection of Classification Schemes and Subject Heading Lists.*

The completeness of the references is admirable, as is the accuracy. This is not surprising in view of the active participation of Ruby W. Moats and Louise O. Bercaw in the work.

Permuted title word indexes are valuable in expediting current awareness of the literature dealing primarily with the subject of interest, as indicated in the title. It is somewhat disappointing that this technique should have been used for the subject index, particularly as it was done manually. Although some manipulation was admitted in that significant words were added and insignificant ones deleted, this has not been accomplished to a sufficient degree. Also, it is unfortunate that manipulation had not been extended to the insertion of "see" or "see also" entries to pull related material together. Only one instance need be given: There is one entry under "Calculator," referring in the title to the "701" (obviously IBM), that is not listed also under "Computer(s)" or "IBM," both of which have numerous entries. Nor are entries under the latter, referring to known computers, given also under "Computer," while the IBM 650, figuring prominently in an abstract (No. 246), is under neither of them because the title lacks this information.

In spite of this limitation, the bibliography should be considered as an essential reference work, particularly for every special librarian.

MRS. IRENE R. CAMPBELL, Head
Division of Bibliographic Research,
Kettering Laboratory, College of Medicine,
University of Cincinnati, Ohio

PRACTICAL ADMINISTRATION OF PUBLIC LIBRARIES. *Joseph L. Wheeler and Herbert Goldhor.* New York: Harper & Row, 1962. 571 p. $7.50.

The authors say they have written this book as a guide to management principles and their practical application in public libraries. As such it touches upon all phases of library administration and services and shows how principles of management for industry can be adapted to management in libraries. In five sections it presents: *1)*

Overhead Responsibility, including an excellent statement on objectives and functions of the public library, on library boards, and on the qualifications and duties of the librarian (or director) and the assistant librarian (or assistant director); *2)* Organization, Staffing, and Supervision; *3)* Administration of Public Departments or Services; *4)* Selection, Preparation, and Care of the Book Collection; and *5)* Administrative Aspects of the Business Office and of Building Problems.

This book will be of use to practicing administrators who need a review of their duties and responsibilities and to assistants and department heads for the same reason. In fact, anyone working in any type of library—public, school, college, or special—will find some chapters of special help in crystallizing their work concepts and their staff, community, and organization relationships. Much of the text seems platitudinous and wordy (one sentence has 84 words not counting articles), but if there are librarians who haven't learned or have forgotten some of the common sense rules of library administration, library service, and improvement of library staff, then this can serve as a sensible reminder. No doubt there are such!

For the library school student, this book would serve as a good survey of the field. Library board members, likewise would benefit from a thorough examination of it, to understand the place of the public library in the community, the kind of staff and collection needed to make it effective, and to see their own responsibilities as board members.

The authors quote profusely from existing literature and refer to numerous notes comprising impressive lists of references at the end of each chapter. Many of these are critically annotated, making them especially useful. Some are repeated frequently, which is to be expected, because individually, they apply to the coverage in several chapters. Organization charts, which may be scanned with profit, are given for libraries with 4, 10, 25, 50, 75, and 100 staff persons.

A number of controversial subjects are discussed briefly, such as the propaganda to entice more men into the profession on the assumption that they make better administrators than women. Incidentally, the authors feel there is slight justification in this belief. The matter of a compulsory retirement age at 65 in the light of increasing life expectancy points up the problem of burdensome support of the many, which could be lightened by and extended age limit for the still competent. Other problems of a controversial nature presented concern development of clerical workers and volunteers for library services; subject departments vs. subject specialists in a general library; and the place of audio-visual materials when book services are still inadequate.

"Blind worship" of the past receives its share of caution. At the same time, however, new librarians are warned against rushing into "decisions, policies, and programs without studying what their predecessors did and why," thus revealing themselves as inadequate.

Special librarians will find pertinent the suggestions for having ideas accepted: "Make them interesting and appealing on behalf of the whole (organization). Time the approach . . . so it will not conflict with some other major project under consideration. . . . Have the proposal completely thought out as to how it can be managed, by whom, and at what cost. . . . Avoid unfavorable decision by suggesting postponement for further study . . ." and so on. A number of statements are based on SLA publications.

One misleading reference appears on page 160 (item 26). The Chamber of Commerce of the United States's *Annual List of Special Days, Weeks, and Months* was taken over by *Chase's Calendar of Annual Events—Special Days, Weeks and Months* in 1959 and has been published annually since then by Chase. However, as Chase's compilation is also listed, readers have the source for this information.

One table must have missed a proofreader's eye. The Biennial Index of Value for circulation of juvenile, adult fiction, and nonfiction obviously was misplaced in the paragraph on adult education (p. 16).

Both authors have had distinguished careers as library administrators and have put together an extensive survey of the subject. Comments in the text and in the bibliographical notes point to several lacunae in library literature that library school professors might consider for future thesis topics or surveys, i.e., "We have nothing in the way of administrative histories of smaller libraries" (p. 43), and again "knowledge about citizen motivation and response to books and reading is woefully insufficient" (p. 24).

The book's index includes the footnotes as well as the text.

ROSE L. VORMELKER, Formerly Library Director
Forest City Publishing Co.
Assistant Director, Cleveland Public Library
Head, Business Information Bureau,
Cleveland Public Library

New Serials

ALUMINIUM ABSTRACTS, published biweekly by the Centre International de Developpement de l'Aluminium, replaces *Light Metals Bulletin.* The journal surveys current literature on the production and uses of aluminum and its alloys and on related technical subjects. *Abstracts* is prepared and distributed by The British Aluminium Company Ltd., Norfolk House, St. James Square, London, S.W. 1, for £15.10s. annually.

ELECTRIC POWER, published monthly beginning in February 1963 by the British Electrical and Allied Manufacturers' Association, replaces the *BEAMA Journal.* The new journal represents a wide range of developments in the industry. Table

of contents and new products section are printed in French, German, Spanish, and Portuguese. Annual subscription rates are £3.10s. and can be ordered from the Association at 161-166 Fleet Street, London, E.C. 4.

INDIAN JOURNAL OF CHEMISTRY contains original research in all phases of chemistry previously included in the *Journal of Scientific and Industrial Research:* Section B—Physical Sciences, and research papers from Section C—Biological Sciences. The *Journal* is published by the Council of Scientific and Industrial Research, New Delhi.

INDIAN JOURNAL OF EXPERIMENTAL BIOLOGY is published quarterly. It contains original research papers in the field and largely replaces the *Journal of Scientific and Industrial Research:* Section C—Biological Sciences, mentioned above.

INDIAN JOURNAL OF PURE & APPLIED PHYSICS publishes original research in the field that was previously carried in the *Journal of Scientific and Industrial Research:* Section B—Physical Sciences. See above.

INDIAN JOURNAL OF TECHNOLOGY replaces Section D—Technology, of the *Journal of Scientific and Industrial Research* and is published monthly.

JOURNAL OF SCIENTIFIC & INDUSTRIAL RESEARCH, which has been split into the above journals carries the material presented in its former Section A—General. All of these titles are published by CSIR.

NEUROPSYCHOLOGIA, to be published in the spring by Pergamon Press, Inc., will contain articles covering the fields of neurophysiology and experimental and genetic psychology. The first issue of the quarterly will include the report of the International Neuropsychological symposium at Royaumont, August 27-September 1, 1962. Annual subscription rate is $30.

18-Volume Library of Money and Credit

Eighteen volumes comprising *The Library of Money and Credit* are being prepared for the Commission on Money and Credit by financial, industrial, educational, agricultural, and labor groups, plus ten financial associations. Each monograph covers some phase of finance, such as savings, commercial banking, insurance, investment, mortgages, federal and private financial agencies, credit, markets, and employment. Prices of the volumes, being published by Prentice-Hall, will range from $2.95-$7.50.

Librarianship Recruitment Reprints

The brochure, *Library Journal Articles on Recruitment for Librarianship,* edited by John F. Harvey, contains reprints of the articles that appeared monthly during 1962 in *Library Journal.* Copies may be obtained from LJ Reprints, *Library Journal,* 62 West 45th Street, New York 36, at the following prices: 1-9 copies, 50 cents each; 50 copies, $8.50; 100, $14; 500, $50. Only orders of more than 25 copies will be billed.

Chemical Directory Service

Stanford Research Institute, Menlo Park, California, is publishing the *Directory of Chemical Producers,* a monthly information service, which lists the names of about 3,000 chemicals and product groups, the locations and divisions of producers, a geographical listing by state of companies and products, and information concerning new plants and expansions. Only actual producers of chemicals are listed. There are two ways to subscribe: the payment of $95 for material published to date plus six months service of new and revised pages, and payment of $120, which offers the same service for 12 months. All renewals are $60.

Astronautical Society Proceedings

Aerospace proceedings are being published as volumes 10-13 of the series, "Advances in the Astronautical Sciences," issued by the American Astronautical Society. Plans are to publish these volumes a month after the meeting has been held. Volume 10, *Manned Lunar Flight,* covers the symposium at Denver, Colorado, December 29, 1961, cosponsored by the American Association for the Advancement of Science, NASA, and the American Physiological Society. Volume 11, *Eighth Annual Meeting,* contains the important papers presented at the AAS national meeting, January 16-18, 1962, in Washington, D. C. Volume 12, *Scientific Satellites—Mission and Design,* contains the papers presented at an astronautics symposium sponsored by NASA and AAAS, December 27, 1962, in Philadelphia. Volume 13, *Interplanetary Missions Conference (Ninth Annual Meeting),* will contain the proceedings of the AAS conference held January 15-17, 1963 in Los Angeles.

SLA Authors

ARTANDI, Susan and HINES, Theodore C. Roles and Links—Or Forward to Cutter. *American Documentation,* vol. 14, no. 1, January 1963, p. 74-7.

BINKLEY, George W. SPE To Adopt Indexing Plan in 1963 Publications. *Journal of Petroleum Technology,* December 1962, p. 1359-60.

CHICOREL, Marietta. Trends in Book Prices and Related Fields in West Germany, 1954-1960. *Library Resources and Technical Services,* vol. 7, no. 1, Winter 1963, p. 47-56.

CLAPP, Verner W. Research in Problems of Scientific Information—Retrospect and Prospect. *American Documentation,* vol. 14, no. 1, January 1963, p. 1-9.

GREENAWAY, Emerson. Library Needs and Federal Legislative Possibilities. *ALA Bulletin,* vol. 57, no. 1, January 1963, p. 31-5.

HEUMANN, Karl F. The Program of the United States National Committee for FID. *American Documentation,* vol. 14, no. 1, January 1963, p. 78-81.

RICHMOND, Phyllis A. A Proposal for Dual Publication of Scientific Journals. *American Documentation,* vol. 14, no. 1, January 1963, p. 54-5.

———. A Short-Title Catalog Made with IBM Tabulating Equipment. *Library Resources and Technical Services,* vol. 7, no. 1, Winter 1963, p. 81-90.

SCHULTZ, Claire K. A Generalized Computer Method for Information Retrieval. *American Documentation,* vol. 14, no. 1, January 1963, p. 39-48.

SHAW, Ralph R. Classification Systems. *Library Resources and Technical Services,* vol. 7, no. 1, Winter 1963, p. 113-8.

TAKLE, Karen G. New Problem: The Information Explosion. *The American Engineer,* vol. 32, no. 5, May 1962, p. 25-8.

TRITSCHLER, R. J. A Computer-Integrated System for Centralized Information Dissemination, Storage, and Retrieval. *Aslib Proceedings,* vol. 14, no. 12, December 1962, p. 473-503.

VOIGT, Melvin J., et al. Computer Processing of Serial Records. *Library Resources and Technical Services,* vol. 7, no. 1, Winter 1963, p. 71-80.

WADDINGTON, Charles C. Creating the Chemistry Librarian. *Journal of Chemical Documentation,* no. 2, 1962, p. 195-7.

WEST, Stanley. Acquisition of Library Material from Latin America. *Library Resources and Technical Services,* vol. 7, no. 1, Winter 1963, p. 7-12.

WHITTEN, Sam G. Science in the Southwest. *Library Journal,* December 1, 1962, p. 4384-6.

YONGE, Ena L. World and Thematic Atlases: A Summary Survey. *The Geographical Review,* vol. 52, no. 4, 1962, p. 583-96.

ALA Proceedings Published

A complete report of the American Library Association's 1962 annual conference in Miami Beach, Florida has just been published in a 130-page booklet, *Proceedings.* Division and committee reports and the President's Report to Council, plus the programs and actions from every meeting at the convention, are included. Copies will automatically be sent to institutional members, and members who request it will receive it free. Others who wish to obtain a copy may do so for $2 from the Membership Records Department, ALA, 50 East Huron Street, Chicago 11.

RECENT REFERENCES

Librarianship

BORGESON, Earl C. *Proceedings Fifth Biennial AALL Institute for Law Libraries* (AALL Publications Series No. 3). South Hackensack, N. J.: Fred B. Rothman, 1962. ii, 85 p. pap. $5.50.

Papers and discussion-group reports presented under the theme "Literature of the Law—Techniques of Access," June 19-23, 1961, at Cambridge, Massachusetts. Topics include legal materials and access in historical perspective, literature of the law, law book publishing, and information retrieval.

FOSKETT, D. J. *The Creed of a Librarian—No Politics, No Religion, No Morals*—(Occasional Papers No. 3). London: Library Association, 1962. 13 p. pap. 3s. 6d.

Paper given at the March 27, 1962, meeting of the North Western Group, Reference, Special and Information Section of the Association.

JACOBY, J. and SLAMECA, V. *Indexer Consistency under Minimal Conditions* (RADC-TDR-62-426). Bethesda, Maryland: Documentation, Inc., November 1962. x, 90 p. pap. Apply.

Prepared for the Rome Air Development Center, Air Force Systems Command, USAF, Griffiss Air Force Base, New York. Study of three experienced and three inexperienced indexers who employed Uniterm system of coordinate indexing. Experienced indexers show higher degree of inter-indexer consistency. Charts and tables present analyses, results, variables.

JESSUP, Libby F. et al. *Manual of Procedures for Private Law Libraries* (AALL Publications Series No. 5). South Hackensack, N. J.: Fred B. Rothman & Co., 1962. ix, 90 p. pap. $5.50.

Procedures for acquisitions, cataloging, arrangement, vertical files, circulation, weeding, bookkeeping, approaches and materials, loose-leaf services, government documents, legislative histories, non-legal materials, memoranda and briefs, forms file, personnel, office communication, and moving and maintaining the library. Bibliography.

KURTH, William H. *Survey of the Interlibrary Loan Operation of the National Library of Medicine.* Washington, D. C.: U.S. Department of Health, Education, and Welfare Public Health Service, April 1962. viii, 49 p. pap. Apply.

Findings and analyses of survey and operation. Tables, charts, biblography.

LIBRARY ASSOCIATION. *Books and Periodicals for Medical Libraries in Hospitals,* rev. ed. London: 1962. 16 p. pap. 75 cents.

Books and periodicals in the field and hints on organizing a medical library. Compiled by a subcommittee of the Association's Medical Group.

NATIONAL SCIENCE FOUNDATION. *Current Research and Development in Scientific Documentation No. 10* (NSF-62-20). Washington, D. C.:

1962. xv, 383 p. pap. $1.25. (Sold by Government Printing Office.)

Information needs and uses, storage and retrieval, mechanical translation, equipment, and potentially related research done by various organizations. Includes glossary and subject, equipment, sponsor, and organization indexes, plus list of acronyms and abbreviations.

NATIONAL SCIENCE FOUNDATION. *Nonconventional Technical Information Systems in Current Use, no. 3* (NSF-62-34). Washington, D. C.: October 1962. xx, 209 p. Apply.

Systems used by over 70 organizations. Material presented according to systems storing references, storing data, and producing general research aids. Subject and geographical locations indices and supplementary guide to individuals and organizations.

Bibliographic Tools

BONI, Albert, ed. *Photographic Literature.* New York: Morgan & Morgan, Inc. in association with R. R. Bowker Co., 1962. xvi, 335 p. $22.50. (Distributed by Bowker). (L.C. 62-21351)

Guide to general and specialized literature on photographic process, techniques, theory, chemistry, physics, apparatus, materials and applications, industry, history, biography and esthetics from earliest period to present, arranged by subject. Author index.

HOLLOD, Helen L. *Personnel Management and Training.* (PACAF Basic Bibliographies). San Francisco: Commander-in-Chief, Pacific Air Forces, ATTN: PFPPS-P, Command Librarian, APO 953, 1962. v, 108 p. pap. Gratis.

Supersedes August 24, 1961, bibliography.

Index of Corporations & Industries: 1961 Annual Cumulative Volume. Detroit: Funk & Scott Publishing Company, 1962. 338 p. $24.

Under the two sections, Basic Industries and Corporations, alphabetical listings also include articles appearing in over 140 pertinent periodicals, 350 stock broker reports, and speeches before 30 financial analysts societies.

LIBRARY OF CONGRESS. Science and Technology Division, Reference Department. *Soviet Science and Technology: a Bibliography on the State of the Art 1955-1961.* Washington, D. C.: 1962. 209 p. pap. $1. (Sold by Government Printing Office.) (L.C. 62-60058)

About 2,000 annotated entries for periodicals and monographs from Soviet and Western sources, primarily published from 1955 to 1961. Entries arranged by author or title under about 100 subject headings.

A Selected Bibliography of The Port of New York Authority 1921-1962. New York: Port of New York Authority Library Services Section, 1962. 110 p. pap. Gratis.

Alphabetical listings of publications under subject headings such as administration, bridges, highways, finance, etc. Most of the material listed is on interlibrary loan from the PNYA library. Future supplements planned.

VANCE, Mary, comp. *ASPO Index to Proceedings of National Planning Conferences 1909-1961.* Chicago: American Society of Planning Officials, October 1962. ix, 134 p. $6; $5 to members. (L.C. 39-3313)

Alphabetical listing of authors of papers, subjects, and geographic locations. Chronology of meetings.

Dictionaries and Glossaries

CLASON, W. E., comp. *Elsevier's Dictionary of General Physics.* New York: Elsevier Publishing Co., 1962. 859 p. thumb-index. $22.50. (L.C. 62-13015)

English terms are translated into French, Spanish, Italian, Dutch, and German. Sections for languages other than English give page references to English section. Short bibliography of dictionaries and textbooks.

DANMARKS BIBLIOTEKSSKOLE. *Biblioteksgloser: Dansk — Engelsk — Fransk — Tysk.* Copenhagen: Dansk Bibliografisk Kontor, 1962. 29 p. pap. Apply.

Glossary of library terms in Danish translated into English, French, and German. Also a combined alphabetical listing of terms with item number for reference to translation.

EMIN, I. et al., comp. *Russian English Glossary of Named Effects, Laws, and Reactions and Miscellaneous Terms in Physics, Mathematics, and Astronomy.* New York: Interlanguage Dictionaries, 1962. 22 p. pap. Apply.

Work is final interim glossary provided for subscribers to the *Russian-English Dictionary of Physics* compiled by the author. Completed *Dictionary* will be published in 1963 and sent to subscribers.

OUSEG, H. L. *International Dictionary.* New York: Philosophical Library, 1962. $10; $12.50 deluxe edition. Distributed by Universum, Box 948, Chicago 90.

Words and phrases translated into 21 languages including English, Czech, Dutch, Croatian, the Romance languages, Turkish, Russian, Danish, Finnish, German, Hungarian, Norwegian, Polish, Portuguese, Slovak, Swedish, Serbian, and Ukrainian.

WILLIAMSON, David B. and MCGINTY, John J. *A Definitionary of Business Terms.* Eugene, Oregon: Definitionary, 282 West 23rd Ave., 1962. 51 p. pap. $1.

Glossary of terms covering all fields of business administration and allied businesses.

Directories

World Aviation Directory, rev. winter 1962-63 ed. Washington, D. C.: American Aviation Publi-

cations, 1962. 1,200 p. $12 for 1-9 copies; $11 for ten or more; $13 and $12 for foreign.

Over 55 per cent editorial revision listing more than 2,900 products, 8,000 companies and organizations, and 28,000 personnel. Includes buyers' guide, manufacturing guide, air transport guide, special data guide, and guides to international aviation, and government agencies.

Miscellaneous

DOUGLAS, William O. *Freedom of the Mind.* (Reading for an Age of Change Series, no. 3). Chicago: American Library Association, 1962. 44 p. pap. 60 cents. (Distributed by Public Affairs Committee, Inc., New York City.)

Essay by a Supreme Court Justice on the right to speak, write, and think as one pleases. Includes bibliography of books pertaining to topic.

GOROKHOFF, Boris I. *Providing U.S. Scientists with Soviet Scientific Information,* rev. ed. April 1962. 46 p. pap. Apply. (Distributed by National Science Foundation.)

Data on form and extent of Soviet scientific information and its availability in English and other languages, including translations programs, abstracts, bibliographies, and reviews. Prepared at the Massachusetts Institute of Technology Libraries under an NSF grant.

MAXWELL, Robert, ed. and comp. *Information U.S.S.R.* New York: Pergamon Press/Macmillan, 1962. xii, 982 p. $30. (L.C. 62-9879)

Volume 1 of Countries of the World Information Series. Includes translation of vol. 50 of the *Great Soviet Encyclopaedia.* Up-dated annual supplements will be published. Encyclopedic presentation of government, industry, science, sports, art, geography, culture, including 1960 census figures in special statistical section. Biographies. Subject index.

OFFICE OF CRITICAL TABLES. *Consolidated Index of Selected Property Values: Physical Chemistry and Thermodynamics* (Publication 976). Washington, D. C.: National Academy of Sciences—National Research Council, 1962. xxiii, 275 p. $6. (L.C. 62-60077)

First issue of this consolidated index containing over 100,000 items of coded information. Presentation illustrates an approach to information storage and retrieval. Contains six compilations of physiochemical and thermodynamic data including hydrocarbons, chemical compounds, theoretical metallurgy.

PRESIDENT'S SCIENCE ADVISORY COMMITTEE. *Meeting Manpower Needs in Science and Technology* (Report no. 1. Graduate Training in Engineering, Mathematics, and Physical Sciences). Washington, D. C.: December 12, 1962. vi, 45 p. pap. 20 cents. (For sale by the Government Printing Office.)

Includes statement by President Kennedy and recommendations by the Committee for a program to encourage study in the above-mentioned fields.

REISMAN, S. J., ed. *A Style Manual for Technical Writers and Editors.* New York: Macmillan, 1962. xi, 223 p. $7.95. (L.C. 62-8748)

Handbook for preparation, format, and style of technical reports, proposals, and manuals. Includes sample pages, annotated bibliography, and proofreading marks. Index.

CLASSIFIED ADVERTISING

Positions open and wanted—50 cents per line; minimum charge $1.50. Other classifieds—75 cents a line; $2.25 minimum. Copy must be received by tenth of month preceding month of publication.

POSITIONS OPEN

ALBION COLLEGE LIBRARY is seeking a cataloger. Position now open. Albion is a liberal arts college located in a city of 12,700 population, 90 miles west of Detroit and 55 miles west of Ann Arbor, Michigan. Nearby lake recreation areas. 39-hour week. Graduate library science degree required and experience helpful. Salary open depending upon qualifications and experience. Fringe benefits include T.I.A.A., social security, Blue Cross-Blue Shield, one month's vacation with other shorter college holidays, plus time for professional meetings. Send complete resume to Dr. Herbert H. Wood, Academic Dean, Albion College, Albion, Michigan.

ALBION COLLEGE is seeking a Head Librarian. Position open as of April 1, 1963. Albion, a coeducational, liberal arts college related to The Methodist Church, is a charter member of the 12 member Great Lakes Colleges Association. Located in Albion, Michigan, a city of 12,700 population, 90 miles west of Detroit and 55 miles west of Ann Arbor. Nearby lake recreational areas. Student body of over 1,400. Faculty of 100. Library collection of 110,000. College and library at the beginning of a 10 year period of expansion. Head librarian to assist in planning of new addition to present library. Library budget will have doubled between fiscal 1960 and fiscal 1964. Staff of ten plus student library assistants. Academic requirements: Master's degree in a subject field, M.A.L.S. from A.L.A. accredited school. Salary open depending on training, experience, and academic qualifications. T.I.A.A., Blue Cross-Blue Shield, social security, faculty rank, 4 weeks' vacation, time for professional meetings. Send complete resume to Dr. Herbert H. Wood, Academic Dean, Albion College, Albion, Michigan.

ASSISTANT, BUSINESS AND INDUSTRY DEPARTMENT. Beginning salary up to $6,335 depending on experience. Annual increments to $7,131. Credit for military experience. Library Science degree required. 4 weeks vacation. 5 day week. Sick leave, social security and good retirement plan. Apply: Flint Public Library, Personnel Office, 1026 E. Kearsley St., Flint, Michigan.

BIBLIOGRAPHER to head acquisition and bibliographic activities of non-profit biological information service and publishing firm, located in eastern U. S. Prefer applicant combining library training and some administrative experience with training in one of the life sciences. Salary open. Opportunity for advancement. Please submit application and approximate salary requirements to Box B 104.

BIOLOGICAL SCIENCES LIBRARIAN to organize and develop services for a divisional library to be composed of the present libraries for Botany, Geology, Microbiology, Public Health, and Zoology. Academic training and experience in a biological science and cataloging are desirable and more important than a library science degree for which experience may serve as an equivalent. Small New England college community, lectures and concerts available at four valley colleges (University, Amherst, Mount Holyoke, and Smith). Year-round outdoor recreation opportunities. Usual benefits: retirement, health insurance, one month's vacation, faculty status. Beginning salary $5460-$7020 depending upon education and experience. Apply to Hugh Montgomery, University Librarian, University of Massachusetts, Amherst, Massachusetts.

CATALOGUER required immediately for the Library of the World Health Organization, Geneva. Qualifications: Degree from accredited library school and at least two years' experience in cataloguing medical and scientific literature necessary. Languages: Good knowledge of English or French with a working knowledge of the other. Knowledge of German and other European languages would be an asset. Salary: Starting at the equivalent of U.S. $4800, rising by eight yearly increments to U.S. $6310, plus post adjustment, dependents' allowance and education grant for children, under certain conditions. Sickness and Accident Insurance; annual and home leave facilities. Initial contract for two years. Above amounts are net of taxes. Applications should be sent to the World Health Organization, Geneva, marked VN 708 within two weeks of the date of issue of this advertisement. Only candidates under serious consideration will receive a reply.

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LIBRARIAN—University teaching and industrial scientific research experience, presently department head. Post-graduate degree, 3 languages, M.L.S. Prefer East or Midwest metropolitan area. Box B 100.

WOMAN—B.A., B.L.S. Experience in technical library, proficiency in foreign languages. Position in United States or Canada. Write Box B 105.

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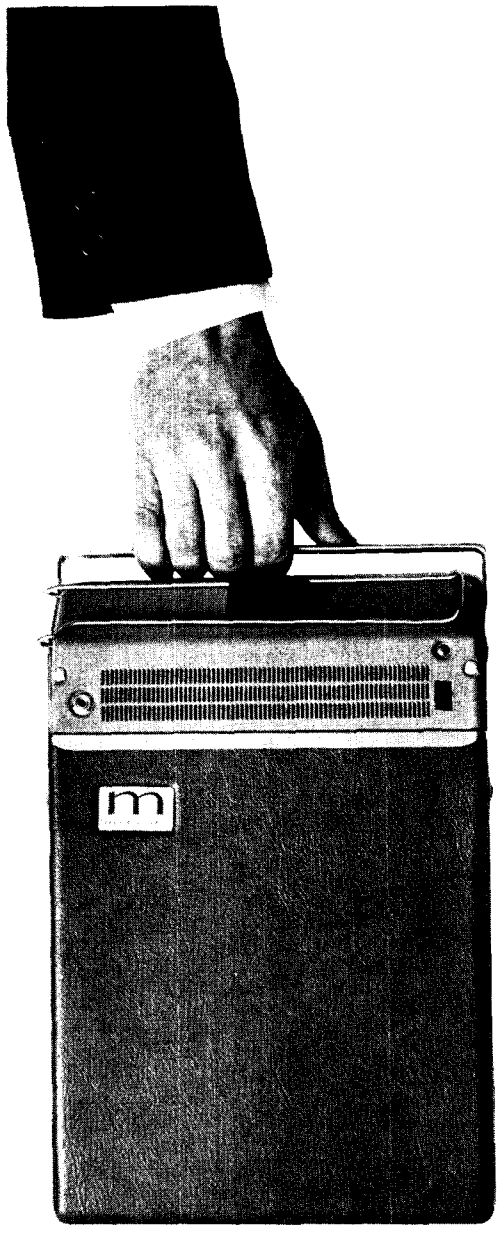

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