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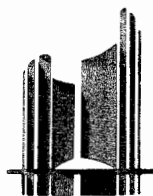
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LETTERS

Correction, Please

The paper "Government Information—Problems and Options" by R. S. Smith in the November issue of *Special Librarians* [64 (no.11): 516–526] was quite interesting. It was based on a meeting held Jun 12, 1973, during SLA's 64th Annual Conference in Pittsburgh.

Among the questions and answers, one exchange, on page 524, concerns our Air Pollution Technical Information Center (APTIC). This information is intended to clarify that exchange.

APTIC normally disseminates microfiche to the staff of the U.S. Environmental Protection Agency (EPA) only. APTIC uses quality control on every individual microfiche duplicate prior to dissemination.

I trust that this information will prove useful to *Special Libraries* and its readers.

Peter Halpin
Air Pollution Technical Information Center
U.S. Environmental Protection Agency
Research Triangle Park, N.C. 27711

On-Line Experience

Eileen Hitchingham's letter in the Dec 1973 issue of *Special Libraries* [64(no.12): 6A, 9A] explores the possible advantages of making literature searches through an on-line commercial service which connects with several data bases rather than through services which run specific searches at a given rate per search. She notes the obvious interactive value of an on-line search and calculates that a library which ran many such searches would save money by running their own searches. Finally, she requests comments from any libraries that might be using such systems, especially from academic libraries.

We are using Lockheed Information Systems which, as she mentioned, connects the user with CAIN, ERIC, INFORM, INSPEC, NTIS, PANDEX, Psychological Abstracts, and TRANSDX. This has been quite economical because there is no membership, subscription or minimum-usage fee. We pay only for actual usage at a rate which ranges from \$25 to \$50 (depending upon the data base) per contact hour plus a \$10 per hour charge for accessing the system through the TYMSHARE Network and any phone costs for reaching the nearest TYMSHARE node. For some locations, other phone arrangements would be preferable to using the TYMSHARE Network. A typical search takes only a few minutes so the total cost per search generally approximates \$5–\$10. Also,

Lockheed provided free training for the person who runs our searches.

For our terminal, we have a Texas Instruments Model Silent 700 which operates at 10 or 30 characters per second, has upper and lower case capabilities, requires only the availability of an ordinary electrical outlet and a telephone, and is being rented for \$70 with no installation charge. An acoustic coupler is needed for the telephone and this can be either purchased for \$295 (which seems more economical to us) or rented for \$15 per month. Besides accessing the Lockheed System, this terminal also can be used to communicate with other libraries that have phone-linked terminals, to contact the several National Library of Medicine computerized services (MEDLINE, SDILINE, CATLINE, SERLINE and TOXLINE), to reach Computer Assisted Instruction programs, and to use computers for mathematical purposes.

In summary, Lockheed Information Systems give access to eight important data banks without requiring any initial expenditures except a rather inexpensive terminal and a telephone connection which, in our case, was already available. Thus, it seems ideal for a library such as ours which does not use these additional data bases very often but, when it does need them, has them always available at an average cost of only a few dollars per search.

Donald J. Morton
University of Massachusetts
Medical School Library
Worcester, Mass. 01604

An Insight?

This is in reference to some of the discussions at the San Diego Midwinter Meeting.

In *Library Journal*, Jan 15, 1974, pages 101–107, there is a report of a survey of large public library statistics including salaries. Those salary results show just about the same picture as the 1973 SLA Salary Survey. The report says that males averaged 30% higher salaries than females but it also points out that there were 89 female directors reporting against 175 male directors and that "it appears that women are more likely to run the smallest of the systems."

Special Libraries, in its report on the SLA Survey, said that more of our women members are in the smaller libraries, more are in "positions identified as specific job functions," and fewer are in administrative positions.

Do we have figures that show that SLA women members are paid less than men for

equal work? Do we have a problem of sex bias in salaries or is it rather in jobs? And is it really a matter of bias? If there is sex bias, how much of it is contributed by the women?

Library Journal states that "the salary which women directors pay beginning professionals—without regard to the sex of the beginning professional—remains substantially less than that which is paid by men directors." Almost the very same statement was made in San Diego during the SLA Advisory Council discussions of the SLA survey.

In our own Special Libraries Association, the last ten and four of the last five Presidents have been men; three of the last three Executive Directors have been men; and the current Board of Directors is composed of six men and six women. In the SLA Chapter of which I am currently President, my four immediate predecessors as President were men. Who elected these men?

Now please don't "get me wrong" here. I'm not saying that I don't think these men are worthy of the positions they hold. Above all, I want to see the best qualified *person* go to the top. But before anyone talks about action against employers, shouldn't we be certain we've identified the real problem?

Marian Wickline
Dow Chemical U.S.A.
Walnut Creek, Calif. 94598

The Third Side of the Coin

While I deeply sympathize with the general intent of Joe Cavanagh's letter to the editor [*Special Libraries* 64 (no.11): 6A (Nov 1973)], I find that his concern with "publication rights relating to government-sponsored research" has been largely misdirected.

To begin with, the government retains the right to publish and disseminate the results of research derived through the expenditure of public funds. In some instances, however, when an option becomes available, the government may choose the private rather than the public sector for disseminating its R&D results. As Mr. Cavanagh and many a special librarian know, the "availability" indexes to GRA list scores of documents which have been submitted as a result of federally sponsored R&D activity, which have been assigned a national documentation center accession number, and which are available not through NTIS, but through access to a copyrighted society journal, proceedings of a conference, or commercially published book. Whether the pub-

lic interest is best served through access to these sources rather than through NTIS is not, as implied, a closed question, but rather one subject to research, analysis, and discussion.

Regretfully, Mr. Cavanagh has chosen my "technical report," AD 666 091, to illustrate his concern and to drive home his opinion. Unknown to Mr. Cavanagh, but easily ascertainable through a (costly?) phone call, is the fact that 50 copies, not of a technical report, but of a bound and printed book, were made available to the government for internal and external distribution. Also unknown to Mr. Cavanagh is the fact that the government provided only partial support for the research study cited. Moreover, unlike the "technical report" which *was* to have been submitted under contract AF49(638)-1741, submitted was a refereed, revised, edited, and indexed volume—cataloged by LC, and marketed by a commercial publisher. Is there a value for Mr. Cavanagh in the fact that the editorial work for the volume cited was carried out by Ralph Shaw?

Briefly, I believe that the issue that should have been raised by Mr. Cavanagh is not whether the government does or does not retain the right to copyright, but rather whether the optimal means are used by federal agencies to provide speedy access to quality intellectual content, in legible copy, and at reasonable cost. It will indeed be a sad day when libraries cannot afford to purchase a needed \$7.00 book—even at 1968 prices—or when an enterprising librarian cannot obtain the volume on interlibrary loan.

I. M. Klempler
School of Library and Information Science
State University of New York at Albany
Albany, N.Y. 12222

"Oops"

I enjoyed reading "IFLA 1973" in the Nov 1973 *Special Libraries* [64 (no.11): 527-530]. I am glad to see how much both the organization and SLA's interest in it have developed.

I was surprised and amused, however, to read that "For the first time an SLA President, Gilles Frappier, attended an IFLA Congress." I'm afraid I "scooped" him by thirteen years. For evidence, see "Report on the IFLA Conference," in the October 1960 *Special Libraries* [51 (no.8): 449-450].

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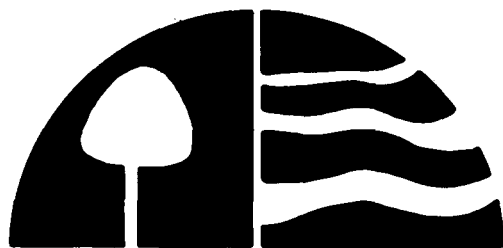
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Information Services for Social Indicators Research

Nancy Carmichael and Robert Parke

Social Science Research Council, Center for Coordination of Research on Social Indicators, Washington, D.C.

■ All researchers concerned with the measurement of social change, no matter how each one defines "social indicators," share certain information needs. This paper describes those needs, mentions some of the sources which exist to meet

them, and shows how the Center for Coordination of Research on Social Indicators functions as an information clearinghouse and communication center to help researchers find the information they require.

A STATISTICAL report entitled *Social Indicators, 1973* was recently published by the U.S. Office of Management and Budget (1). *Social Indicators* contains charts and tables presenting statistical time series selected and organized around eight "social concerns," namely health, public safety, education, employment, income, housing, leisure and recreation, and population. The report is the first of its kind to be issued by the United States Government. Its publication is symptomatic of the widespread interest in social indicators.

Since the mid-1960s there has been a growing enthusiasm in the academic and government sectors for improving our ability to monitor changes in social conditions. Today, the importance of social indicators as a new area of social science research is attested by the interest and activity of governments, international organizations, research institutions, and individual scholars; by a rapidly expanding literature; and by the funding commitments of the National Science Foundation and other foundations and government agencies.

At the same time, the field is highly diverse with respect to disciplinary per-

spectives, substantive focus, purpose, and intended audience. The variety is suggested by the range of terms used to characterize work on social indicators: "monitoring social change," "measuring the quality of life," "assessing national performance," etc.

To Coordinate Research

Given the importance of the field, and the diversity, The Social Science Research Council decided in 1972 to establish a center to promote communication among researchers in the field and between researchers and the broad constituency that has need for what they produce. Accordingly, the Center for Coordination of Research on Social Indicators was organized with support from the National Science Foundation, and an international committee of distinguished social scientists was convened to guide its work. The center was established to serve as an information clearinghouse for persons engaged in research on social indicators by making known to them the best work going on in the field. In addition, through the activities of its staff and Advisory Committee, it was to en-

courage the development of improved measures of social conditions and change.

Within the multitude of activities going under the name of "social indicators," there is a central set of concerns: 1) the improvement of techniques for measuring and analyzing change; 2) the actual use of such improved measures of the main features of society and of social processes; and 3) the replication of such measures in order to build time series and analyze trends. While the early literature was marked by a proliferation of programmatic treatises on the notion of indicators, at present what is needed are the skillful development and application of measurement tools for making numbers that tell us something about social change. All of the members of the research community served by the center, from academicians to city planners, share certain information requirements about such measures and measurement techniques.

Information Sources

Since social indicators are measures of social change made of statistical time series, the statistics themselves are the first requisite, and they are to be found in a variety of places. First, there are more or less general compendia of social and economic data, such as the familiar annual *Statistical Abstract of the United States* (2). And this year, the U.S. Office of Management and Budget is publishing its *Social Indicators 1973* (1). The Central Statistical Office in Great Britain has recently produced its fourth annual *Social Trends* volume (3); the Japanese Economic Planning Agency has published *Whitepaper on Japanese Life* (4); in France, the "Institut National de la Statistique et des Etudes Economiques" has just put out its first edition of *Données sociales* (5), which in some ways parallels the British *Social Trends* in scope and character. The United Nations Statistical Office compiles and publishes cross-national social data, and many other countries are beginning to put together regular compendia of social statistics and trends.

In addition to compendia, there is a great deal of statistical data published, most of it by the federal government, on a variety of topics of social concern. The Census Bureau, in addition to the myriad printed reports from the decennial censuses of population and housing, publishes a wealth of demographic and economic data collected through a regular program of sample surveys (6). The National Center for Health Statistics gives us the *Vital and Health Statistics* series—sometimes known as the "rainbow series"—wherein are regularly reported findings from the National Health Survey (7). The FBI's annual *Uniform Crime Reports* (8) and the new National Crime Victimization Survey, which is being conducted by the Census Bureau on behalf of the Law Enforcement Assistance Administration, will add significantly to the available data on the incidence and impact of crime by interviewing the victims of crimes rather than merely consulting records of police activity. The National Assessment of Educational Progress, under the U.S. Office of Education, reports on how much American schoolchildren are learning in twenty subject areas (9), and the International Association for the Evaluation of Educational Achievement (IEA), in Stockholm, makes cross-national quantitative comparisons of educational achievement for twelve countries (10). The Department of Labor regularly publishes data on labor force activity and on special subjects related to employment (11). In addition, most state governments produce tabulations of social and economic data, often for administrative purposes, and publish them in some form.

Besides the numbers printed in books, reports, and periodicals, there are data archives available to the social indicators researcher. For example, some data from the Census Bureau are available on tape, and the researcher who uses the tapes has a chance to rearrange and otherwise manipulate the numbers they contain in order to answer questions for himself which the printed reports do not answer. DUALabs, Inc., is a private organization

that provides assistance in accessing the Census tapes (12).

Because changes in people's attitudes, perceptions, and opinions are important components of social change, the data that provide such "subjective" measures are a valuable resource for work on social indicators. An important source is the General Social Survey (GSS) conducted by the National Opinion Research Center at the University of Chicago (13). By exact repetition of survey questions asked of a national sample of adults in the 1950s and 1960s, the GSS makes possible the analysis of changes in attitudes as well as general population characteristics. Data from the General Social Survey are housed at the Roper Center at Williams College, which also maintains most of the data collected by the national polling organizations in this country and abroad. To make the Roper Center's wealth of survey data more accessible to researchers for the construction of time series, an index is being prepared (for publication in the latter half of 1974) listing all of the questions that have been asked more than once in the archive's surveys of the U.S. (14).

At the University of Michigan, the Inter-University Consortium for Political Research holds social and political survey data in three archives: the Survey Research Archive, the Historical Archive, and the International Relations Archive (15). These data are available to researchers for a small fee. While there are quite a number of other social science data archives throughout the United States, most of them have not developed a clearcut policy with regard to outside users, and the researcher who wishes to access their holdings must pursue each case individually (16).

There are guides for getting at the wealth of information described above. For the federal government's published statistical output we have the Congressional Information Service's year-old *American Statistics Index* (17). This is to be an annual publication with periodic supplements which provides a detailed index and abstracts to the social

and economic data contained in reports and regular serials. For data published by state governments, there is the *Directory of Non-Federal Statistics for States and Local Areas* (18). Part II of the *Bureau of the Census Catalog* (19) lists machine-readable census files which are available to the public, and *Guide to Census Bureau Data Files and Special Tabulations* (20) is a more descriptive catalog of all nonprinted data sources, including magnetic tapes, punched cards, microforms, etc. For data files in other government agencies, the Department of Commerce National Technical Information Service has published the *Directory of Computerized Federal Data Files and Related Software* (21), which will describe the contents and location of machine-readable files that are publicly available. The newsletter *ss data* (22) abstracts new data sets in nongovernment social science archives and provides descriptions of the archives themselves.

For researchers with an interest in a particular substantive area, there are special subject information centers and clearinghouses in operation now, and new ones are being established. The National Institute of Mental Health, for example, operates a drug abuse information center in Rockville, Md.; a religious information network has been established by the Department of Sociology and Anthropology at Marquette University; at the State University of New York at Albany, the Justice Department has a National Criminal Justice Statistical Research Center, where a Sourcebook of Criminal Justice Statistics is being compiled; and the National Center for Health Statistics has set up a Clearinghouse on Health Indexes. These are only examples of the kinds of specialized information sources which are available, and which serve research needs in the social indicators field.

The Center for Coordination of Research on Social Indicators

The enterprise of developing and applying indicators of social change is built on a groundwork of conceptual

and methodological investigation. The theoretical treatments of problems related to indicators development come from a wide range of subjects and sources and represent numerous interpretations of the proper structure and function of indicators for social reporting. The social indicators researcher needs to have access not only to conceptual treatments of the specific problems of indicators development, but also to an array of actual models of social reporting systems, and the literature of the latest measurement techniques in demography, economics, survey research, etc.

The variety of the work in the social indicators field, the inaccessibility of much of it, and the lack of an overriding disciplinary perspective and clearcut community of participants are some of the reasons why the center was established to improve communications in this field. Some good and useful bibliographic work has been done, notably by a group of sociologists at Iowa State University (23) and by the Library of Congress Congressional Research Service (24), but the rapid growth of the literature and the unofficial nature of some of it makes such listings obsolete as soon as they are published. For example, some of the most interesting and forward-looking research in social indicators is now being performed under grants from the National Science Foundation, Division of Social Sciences. Except through personal contacts among members of the research community, that work would be for the most part unheard of until it was published in books or journal articles. Papers delivered at conferences—and conferences dealing with social indicators seem to be springing up under quite unexpected auspices—often remain fugitive from bibliographers, either forever or until conference proceedings are published. Authors of works not yet published are often willing to make their manuscripts available to other serious researchers in exchange for comments, but this can only happen when the two are put in touch with each other.

Answering these kinds of information needs—the ones not met by traditional statistical sources or bibliographies or data banks—is one of the purposes of the SSRC Center for Social Indicators. The center's place in the social indicators information system is as a kind of switchboard. The center does not intend to become a resource for statistical data nor a distributing agency for printed material. Its business is information about information; its purpose is to know the best sources for social indicators data and to direct researchers to those sources. The center does not endeavor to provide any service someone else can provide better, but rather to encourage the further development and use of information sources for indicators research, and to encourage the improvement of both the quality and range of measurements in substantive areas such as health, and the validity of the concepts and methods of social measurement. This includes improving the level of communication between researchers and their constituencies. It is hoped that the center can, first, direct researchers to those data which are appropriate to their needs, and also make known to them works which might not be easily discovered through any other source. The information services fall into the categories of reference and bibliography. There are three essential products.

Social Indicators Newsletter

The announcement of the establishment of the SSRC Center for Coordination of Research on Social Indicators identified the center as the locus and source of information for the scholarly and policy communities which have an interest in social indicators, and named the *Newsletter* as the center's chief instrument for communicating with these constituencies. To date, three issues of the *Newsletter* have been published: in March, July, and December of 1973. The *Newsletter* is available without charge to persons who request it, and at present has a circulation of about two thousand.

The *Newsletter* serves first as an information bulletin for the social indicators community. It reports on current and developing research, new information sources, and new publications and unpublished papers of interest, such as the forthcoming journal, *Social Indicators Research* (25). In addition, *Social Indicators Newsletter* brings to light activities at conferences, symposia, and panel discussions on social indicators which are not likely to be reported elsewhere. Finally, the *Newsletter* gives early visibility to some of the best and most important work going on in the field. A major consideration for inclusion is selectivity—only items which are judged to be of high quality and of significance to the enterprise are chosen. Careful attention is given to publicizing the best new material.

The center's staff selects a particular aspect of the social indicators enterprise as the focus for each issue of the *Newsletter*. The second issue, for example, treated cross-national and international work, identifying many foreign publications and programs known to relatively few persons in the domestic research community. The third dealt chiefly with indicators below the national level, with emphasis on the social reporting efforts of states and smaller jurisdictions, since individuals in state and local planning agencies who are engaged in such efforts have emerged as some of the center's most numerous and eager correspondents. Each issue will continue to mention new publications and items of current interest, whether or not they pertain to the subject highlighted in that issue.

The volume of requests for the *Newsletter* bespeaks the eagerness of the social indicators research community for such a publication, and, because the center is identified as the information clearinghouse on social indicators, it is abundantly provided with the research products of its correspondents. The library also actively seeks out and collects new material related to the problems of measuring social change. It is from these sources, from symposia and meetings at-

tended by the staff, and from conversations and communications with interested persons, that items for the *Newsletter* are gleaned.

Reference Services

After the *Newsletter*, the center's most important vehicle for communication is direct contact with persons engaged in social indicators research. The center's staff is available to respond to questions from social indicators researchers, in person and through correspondence. During the first year of operation visitors and correspondents have come from all over the world, from universities, government, and business. When a researcher comes in person to the center, he is interviewed, given access to items in the library's collection which answer his particular need, and guided to other information sources outside the center. He may also be put in touch with persons engaged in work similar to his own. Letter requests are usually answered with a short, specialized bibliography, and almost always with an invitation to the researcher to keep the center informed of the progress of his own work, thereby adding another link to the information system.

Staff Papers and Appearances

In addition to the *Newsletter* and reference services, center staff members frequently deliver invited papers, speeches, and briefings at professional meetings, educational institutions, and government agencies. These papers and briefings provide opportunities for staff members to share their knowledge of ongoing activities in social indicators with interested professional audiences, to survey the scope and direction of current research and development efforts, and to describe particular aspects of the field in greater depth than is possible in the *Newsletter*. The staff has also used these occasions to advance the center's coordinating and guidance functions by pointing out problems and gaps in existing work and by communicating the

concerns and recommendations of its Advisory and Planning Committee. Such presentations communicate the center's need to receive documents from researchers, result in many requests for the *Newsletter*, and encourage the use of the center's library.

The Library

The center's library collection is available for on-site use to all researchers and through interlibrary loan. The holdings include:

- the complete 1970 census printed reports, and selected reports from earlier decennial censuses;
- a small collection of books, chiefly new works dealing with social change in general, its components and related topics, and measurement techniques;
- about 75 serial titles, mainly in the fields of sociology, demography, behavioral science, and statistics, particularly U.S. Government statistics;
- a small collection of standard general reference works;
- a large collection of miscellaneous material, including: government reports and pamphlets, research reports and reprints of papers, conference and symposium papers, unpublished material, and proposals funded by the National Science Foundation for research on social indicators.

The library acquisitions policy has evolved to reflect what is seen as the central concern of social indicators research today: the perfection and application of good measurement techniques. Consequently, the library tries to be highly selective in collecting programmatic statements (although a great deal of unsolicited material is received from constituents), and to make a point of collecting and publicizing the best technical treatments of measurement methods and examples of their application.

The organization of the library's collection, too, is dictated first by this definition of the enterprise, but also by the

nature of the literature itself and by the nature of user inquiries. The library gets, and endeavors to answer, reference requests on topics ranging from demographic and economic characteristics of the American Indian population, to cross-national comparisons of social welfare, to examples of factor analytic techniques applied to social statistics in the census tracts of an urban area. A system of subject headings has been developed, into which the better part of social indicators literature can be made to fit fairly reasonably and from which it can be retrieved with minimal translation and manipulation of the requesters' concepts. The headings, which are mostly topical, e.g., Education, Family, etc., are expanded with subheadings which either divide the main subject into more specific ones (Family-Family Planning), or describe the nature of its treatment in a particular piece (Education-Cross-national comparisons). Cross-references and additional cataloging entries are used liberally.

The council expects the Center for Social Indicators to develop during the next few years both as an information clearinghouse for indicators researchers and, through the Advisory and Planning Committee on Social Indicators, as an influence for improving the measurement and analysis of social change.

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A Comparison of Manual and Machine Literature Searches

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■ The NOAA/ERL library in Boulder, Colorado, performed a sample of six literature searches in an effort to gain management support for searches prior to launching research projects. It was found that manual searches are very time consuming and, in our opinion, can better be done by persons with subject back-

ground. The machine searches furnished a higher percentage of unrelated materials. However, little staff time is required to obtain them. Lacking qualified persons to do literature searches, either in the library or in the research groups, greater use should be made of the available computerized searches.

BECAUSE of concern that scientists might be duplicating research done elsewhere, one library undertook a number of literature searches in an effort to gain management support for literature searching as a standard procedure. Time limits on the project permitted only a small number of searches. In these, no case of duplication was found. However, the study provided a good comparison of the time required and the results obtained through manual searches and machine searches.

The project was initiated in the Department of Commerce library of the Environmental Research Laboratories (ERL) of the National Oceanic and Atmospheric Administration (NOAA). The library serves not only NOAA/ERL but also the National Bureau of Standards (NBS) and the Office of Telecommunications' Institute for Telecommunication Sciences (OT/ITS) located in Boulder, Colorado.

In the past, the librarians have not regularly performed literature searches for users of this library, though they are eager to guide scientists to bibliographic tools and show them how to initiate their own subject searches.

Procedure

As a spin-off from a user survey being conducted by the library director, topics from six scientists were selected for literature searches. Free machine searches were requested from the Defense Documentation Center (DDC)—both work unit summaries and report bibliographies—and from the National Aeronautics and Space Administration (NASA). At the same time a manual search was done on each topic through recent years of an indexing and abstracting tool owned by the NOAA/ERL library. Later a machine search of current work was purchased from Smithsonian Science

Table 1. Topics Searched.

Case	Title	Division of Laboratory
A	Organization and evaluation of research activities	NOAA, Research Support Services
B	Undercover electronic communications	NBS, Electromagnetics Div., Circuit Standards Sec.
C	Paraelectric cooling and the electro-caloric effect in solids with large dielectric constants	NBS, Cryogenics Div.
D	Fracture toughness and fatigue of structural materials at cryogenic temperatures	NBS, Cryogenics Div.
E	Microwave holography	NBS, Electromagnetics Div., Fields and Antennas Sec.
F	Interference of CATV with aircraft radio navigation systems.	OT/ITS

Table 2. Abstracts Covered in Manual Searches.

Case	Abstracts covered	Hours spent	Items found
A	<i>Business Periodicals Index</i> 7/70 to 7/71, 1 & 4/72 Battelle Memorial Inst. Bibl. 1970	1	25
		<u>1/4</u>	<u>1</u>
		1 1/4	26
B	<i>E & E Abstracts</i> , 1971, '72, 1/73 <i>Applied Science & Tech.</i> (sample) Misc. (<i>Interdok</i> , etc.)	14 3/4	133
		1 3/4	9
		<u>6 3/4</u>	<u>8</u>
		23 1/4	150
C	<i>Physics Abstracts</i> , 1967-3/72 Misc. (conference, photocopying, etc.)	25 1/4	165
		<u>4</u>	<u>1</u>
		29 1/4	165
D	<i>Metals Abstracts</i> , 1972-1/73 Battelle Bibl. 1/61-6/69 and some 1970 Misc. (searching for materials in library, photocopying abstracts, etc.)	14	308
		5 1/2	47
		5 3/4	11
		<u> </u>	<u> </u>
		25 1/4	366
E	<i>E & E Abstracts</i> , 1968-1/73 Conference, Photocopying, etc.	7 3/4	82
		<u>4 3/4</u>	<u> </u>
		12 1/2	82
F	<i>E & E Abstracts</i> , 1971-1/1973 Misc.	9 1/2	154
		<u>4 3/4</u>	<u> </u>
		14 1/4	154
		<u>105 3/4</u>	<u>943</u>

Information Exchange (SIE) for those who desired it.

Each scientist was asked to write his request in natural-language terms; the library searcher interacted with the scientist to define the specific subject more clearly. In at least one instance a NASA searcher to whom the machine search was assigned called the scientist and discussed the subject matter. This interaction seemed valuable—in fact the printing of nonrelevant materials on some of the machine searches showed that there should have been more discussion between the searcher and the scientist.

The topics searched are shown in Table 1. As searches were completed, the scientists selected relevant abstracts; then attempts were made to obtain the complete papers either from journals in the library, through interlibrary loan procedures, or by ordering technical reports. Some papers which seemed helpful from the abstract proved to be relevant to the current research project; some were not.

At the end of the search, the scientists evaluated each search as a whole by completing the evaluation supplied with the machine search and a similar form on the manual search. Individual papers retrieved were also evaluated as to their relevance and usefulness.

The Manual Searches

The original plan was for the library searcher to pursue each question through the subject index of the one most appropriate available bibliographic tool for a time span of one to ten years as deemed useful by the requesting scientist.

In some cases time limitations made it necessary to stop before covering the number of years originally requested by the scientist. In all cases the most recent years were searched first. Considerably more time was required for scanning current unindexed issues of abstracts than for the volumes which had been indexed. Table 2 shows significant material covered and number of items found.

It was originally planned to complete the entire project within ten weeks,

working at the searches along with other reference and interlibrary loan work; however, a 5-week extension was necessary. No more searching was done after the extension, but since many desired papers had not been obtained, the interlibrary loan process was continued for another month or two after that. The time spent trying to locate the materials through interlibrary loan was not charged against the searching project and is not included in the tables.

The Machine Searches

The submission of requests for machine searches was handled on a non-priority basis, one batch being forwarded 7 working days after the beginning of the project, the others 17 working days after the beginning. The completed searches were received from 2½ weeks to 6½ weeks after submission of the requests. Most of the NASA searches came back in 11 or 12 working days; one in 16 working days. The average time for DDC report bibliographies and work unit summaries was 17 working days.

Table 3 gives the scientist's evaluations of the various machine searches and the manual searches. The NASA searches furnished a higher percentage of unrelated material than the manual searches while the percentage of precisely related material was comparable.

Generally the DDC searches contained more items, but NASA furnished one large bibliography for Case D, 70 percent of which was rated either generally pertinent or precisely related on the scientist's evaluation of the search. Smithsonian SIE searches provided fewer items and only one of the three contained any precisely related items.

Some of the search questions were divided into two or more parts so the total number of DDC reports, bibliographies, and work unit summaries received was not 12 but 18. The DDC evaluation form asked for value of searches but not for percentages of relevant items. None were rated extremely valuable by the scientists; 7 were rated valuable, 7 satisfactory, and 4 unsatisfactory.

Table 3. Evaluations of Searches and Time Spent

	Case A Research Organ.	Case B Undercover Comm.	Case C Heat Switches	Case C Paralec. Cooling	Case D Finite Element	Case D Fracture Tough.	Case E MW Holog.	Case F Cable TV	Case F Radio Navig.
a. Evaluations of manual searches performed in NOAA-ERL Library.									
Precisely related	3 12%	50 33%		24 14 1/2%		33 10%	51 62%	21 14%	(a)
Generally pertinent	18 69%	100 67%		21 13%		167 40%	18 22%	116 75%	
Not related at all	5 19%	0 0%		120 72 1/2%		166 50%	13 16%	17 11%	
	<u>26</u>	<u>150</u>		<u>165</u>		<u>366</u>	<u>82</u>	<u>154</u>	
Staff time spent	1 1/4 hr.	23 1/4 hr.		29 1/4 hr.		25 1/4 hr.	12 1/2 hr.	14 1/4 hr.	
b. Evaluations of NASA Machine Searches.									
Precisely related	30 42%	2 17%	3 5 1/2%	7 54%		50 10%	16 18%	23 10%	(a)
Generally pertinent	7 10%			3 23%		295 60%	35 39%	133 60%	
Not related at all	34 48%	10 83%	52 94 1/2%	3 23%		150 30%	39 43%	66 30%	
	<u>71</u>	<u>12 (b)</u>	<u>55 (c)</u>	<u>13</u>		<u>495</u>	<u>90</u>	<u>222</u>	
c. Evaluations of DDC Searches (d).									
Work unit summaries	499 V	225 S	15 U	8 S	6 V	8 S	25 S	2 U	25 S
Report bibliography	600 V	61 U	220 U	31 S	15 V	300 V	30 V	54 S	300 V
	<u>1099</u>	<u>286</u>	<u>235 (c)</u>	<u>39</u>	<u>21</u>	<u>308</u>	<u>55</u>	<u>56</u>	<u>325</u>
d. Evaluations of Smithsonian Science Information Exchange Searches.									
Precisely related				0 0%		0 0%	2 67%		
Generally pertinent				5 50%		2 20%	1 33%		
Not related at all				5 50%		8 80%			
				<u>10</u>		<u>10</u>	<u>3</u>		
Staff time spent on machine searches	(e) 1 hr.	2 hr.	4 hr.		3 hr.		2 hr.	3 hr.	

- (a) Both questions combined.
- (b) NASA considered this only partially responsive.
- (c) Scientist felt he did not explain heat switches sufficiently.
- (d) E = Extremely valuable, V = Valuable, S = Satisfactory, U = Unsatisfactory.
- (e) Time spent on preparation of requests and reviewing machine searches is estimated.

Table 4. Evaluation of Papers and Reports Obtained from Manual Searches

	Case A	Case B	Case C	Case D	Case E	Case F	Totals
Had previously seen this			4	1			5
Useful as background info.	2	23	21	16	4	14	80
Useful in planning procedure	1	3	2	6	1	4	17
May apply techniques to my problem		1	3	3	3	3	13
Causes alteration in my plan							0
Duplicates my plan							0
Useless/cannot read language			2				2
Will get it translated				1			1
Not relevant		2	16		1		19
Other		1					1

No direct comparison of the numbers of items can be made, because the different searches covered different data bases. The DDC searches covered primarily technical reports done on government contract for the Department of Defense; the NASA searches, the aerospace technical reports; the manual searches, the periodical or journal articles.

Recommendations

Even though no cases of duplication were found, the evaluations turned in by the six scientists do indicate that much of the information received was relevant to their questions. The searches provided background information on the topic, apprised the scientist of other materials or methods of which he was not aware, provided information needed to continue the work, and suggested alternative methods. But in none of the cases was information found to indicate that the proposal for research duplicated a previously completed project or one presently underway elsewhere.

In other research on duplication, Martyn (1) found that there were losses caused by avoidable late discovery of

published information associated with 9% of the projects. The NOAA project involved only six cases. Assuming a similar percentage of duplication, the probability that any of the nine percent would be uncovered in such a small sample was slight. It was not possible to do a comprehensive search of all possible literature on the subject in the time limit set for the searches. Excluding Case A, which was stopped after 1.25 hours because the requester wanted only a few articles, the average time spent on manual searches was 20.0 hours per case. Considerably more time could have been spent if it had been felt worthwhile to search through more years of abstracts, or through other indexes and abstracts, or to trace the authors found through *Science Citation Index*.

As an article desired by the scientist was located in the library or obtained through interlibrary loan, each paper was forwarded to the scientist with a ticket for evaluation of the individual article. Replies are tabulated and summarized in Table 4. Technical Reports available from National Technical Information Service (NTIS) are ordered directly by the scientist; therefore, the

library did not have the necessary control to obtain individual opinions on the usefulness of these reports.

The fact that such a large percentage of articles found through the searches were rated as useful for background information and for planning procedures indicates that it would be worthwhile if literature searches could be undertaken on all new projects.

The machine searches obtained did not duplicate the material located through hand searches. Both were valuable. These searches could be done either by librarians assigned to research groups or by scientists assigned to the library. The average librarian cannot be enough of a specialist in all the scientific fields being studied in these laboratories to do hand searches on all topics equally well. Lasslo (2) was a proponent of the team concept in which "the science librarian should serve as the literature specialist on that team; and that he or she should be a full-fledged member of that team, at once stimulating, and in turn being stimulated by his or her scientist colleagues."

Hanson (3), head of research at Aslib, after reporting on research on users' needs, stated:

Nevertheless I think we are justified in believing that a competent scientist trained in information handling, or a competent librarian with a specialist knowledge of scientific literature, can relieve his colleagues in research and production of much of the work they now do themselves, and that this division of labour would be economic.

Lacking adequate staff to provide a literature searching service, a library should at least concentrate on providing retrospective and current materials, well organized, so scientists can accomplish their own searches in the library. This was the reaction of Fishenden (3, p.75) to Hanson's paper.

In addition, the library can supply supplemental literature searches at a minimal cost in time and money by utilizing computerized search services provided by various information services. The ones chosen for this study were the

least expensive ones available and covered primarily technical report literature. Other machine searches covering periodical literature are available for a fee.

The observant librarians in the NOAA/ERL library know that many scientists perform their own literature searches since many have been helped in starting a search and many others who are already familiar with the tools available are seen in the library. Others use source materials available in their own laboratories or divisions. However, there are undoubtedly many others who delve into a project without preliminary background searches. These are the scientists who need to be served by literature searches or informed about machine searches available. It seems obvious that, if a preliminary literature search were done on every project being started, some wasted duplication of effort would be prevented.

Conclusions

Manual searches of periodical literature indexed in bibliographic and abstracting tools proved to be valuable to scientists undertaking new projects and did not duplicate material obtained from DDC, NASA, and SIE machine searches. However, manual searches are time consuming if done thoroughly. In order to select references which are specifically relevant to the proposed research, the literature searcher should have some subject background. No one person will have the necessary background in all fields being researched in these laboratories.

Whether or not staff is provided for doing manual searches, greater use of machine searches now available from various sources can yield valuable material. This option does not require a significant increase in staff nor does it require subject specialization. A comparison of the staff time required for the manual searches versus that required for submitting and receiving machine searches clearly demonstrates the practicality of the computerized services.

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The Small Library's Large Problem

"I'm Ready and Eager, but Where Are the Clients?"

Loyd Rathbun

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■ "How do you get them to come into the library?" she asked one of the speakers at a Division technical meeting at the annual Conference. Others in the audience nodded assent to the question. The age of technology has brought wonderful tools to aid library services, but the use

of these tools has caused some of us to forget that libraries are by and for human beings. The special library must function actively and productively to exist. To be active requires human clients. Basic means of attracting clients are suggested.

FOR SOME TIME, it has seemed that library education in school and in our journals has increasingly neglected the personal elements in special library operation. For several years there has been a preoccupation with efficiency, automation, systems analysis, flow charting, programming, and all aspects of computer aid to librarians, from simple housekeeping to sophisticated SDI and retrieval. These are important and valuable applications of a gigantic new tool, but our preoccupation has kept us from communicating the fundamentals of service. Libraries are still run by human beings for other human beings. We must not forget that human element.

Students, new librarians, and established professionals all profess that librarianship is a service profession. But

less experienced librarians sometimes assume that clients will beat a path to their doors, that their responsibility for service lies in having their expertise available to those who ask or come after it. If no one comes, they and their jobs are unfulfilled.

To justify its existence, the special library must produce. This generally means demonstrating that its services are required and used. At the core of the fundamentals of service lies the need for someone to whom to give the service. This was recognized in the question, "How do you get them to come into the library?"

Both the philosophy and the fundamentals of service are human concepts. The service philosophy of effective professional librarians could be well ex-

pressed in the charity drive slogan: "Give till it feels good." The service fundamentals, as expressed in techniques, are more specific. It is from these that we provide the answers to the question.

We must assume that those whom we wish to get into the library would ask for library services if they considered them useful. We also assume that the sponsoring organization considers a library necessary, and, for the purposes of this commentary, that the library and its services are adequate.

If the library and librarian are being generally overlooked by clients, many of the librarian's initial corrective endeavors will have to be essentially "public relations" activities. Extreme effort will be necessary, and a great deal of patience, to convincingly alert the potential clients to the library's potential for them. It will take months, and it may take years. Furthermore, the librarian must recognize that, like some diseases, this is a situation which can be controlled but never completely cured. It will continually require a professional program to keep every client aware of the library's usefulness to him.

Go After the Client

Personally go to his office or laboratory. If he is new to the organization, welcome him. Get him to tell you what his specialties are and what his library interests will be. Then you can describe the library resources which might be of use to him, and you can offer specific services. On departure, leave with him your printed description of the library's philosophy, service, and procedures.

If the potential client is not new in the organization but you, the librarian, are, learn what you can of his interests, professional or personal. Then take some selected current material to him and ask if you have judged his needs correctly or can he suggest what you might better watch for. Follow this up later with pertinent mailings to him. If you see relevant articles in journal literature, a photocopy of only the first page is an

easy and effective item to send. Be sure it contains the citation information. You will get "feedback" when he comes or sends for the remaining pages.

The key element, of course, is extensive knowledge by the librarian of the business and projects of the organization and as much personal information about the client's work as possible. The obvious way to acquire this is by attending all organizational meetings, reading all reports, and listening attentively. Another technique is to visit the various work areas and ask questions; almost no one can resist talking about his activities with a qualified person who shows a legitimate interest. Librarians are legitimately interested in everything. It is a distinct asset, particularly in this situation.

One way of making a friend for the library is asking the client for his expert advice or help. The help must meet a real need, not be a contrived gesture. It could be in classifying a problem book or calling on his knowledge of information sources and subject literature in his especial competence. Another legitimate favor is to request him to bring, for the library, a "Proceedings" from a conference he is going to attend. (You may overhear him discussing the trip; the travel office or secretary may routinely alert you; or you may see him consulting maps in the library.) If you alone are the entire library staff, the exhortation still holds. Do not wait for the client; seek him out. (Leave a note saying when you will return; lock the library door if you must.) Tell him how your dynamic library services can fill his information requirements. Find out some specific needs, and satisfy them promptly and thoroughly.

Communicate

Communication is vital. Admittedly it should be in both directions. But it must be initiated at one end, and it is the library which has information to communicate. Announcement of new books and other materials is essential, and it is expected by library users. For

the unexpected, create something original which can go out through company mail regularly every week. Keep it short and useful. A single page will be read by more people than will two pages, and it will constantly remind them of the library. It could carry citations with simple annotations of a few relevant journal articles, a short review of an important book, a pertinent news clipping which might be missed, brief announcements of changing library procedures or arrangements, etc. Libraries which publish this kind of memo generally include a cartoon or a selected quotation as the teaser to keep the clients watching for every issue. If occasionally the recipient can check a box on the publication and return it to request a service, you will have a desirable "feedback" mechanism.

When the library has an appreciative clientele, another means of communication to maintain interest and loyalty is an annual or periodic report. This might be the same report which is sent to management, but it can contain additional information of interest to others. Users often want to know the quantities of books, journals, technical reports, and other materials which the library receives. The report can include statistics, in lay language, of the number of ILL transactions and how far you go for them. Special projects, bibliographies, and unusual searches can be mentioned in a readable text. This can also be a place in which to tell of honors, academic activities, and other items about library staff members which their friends might like to know. Names should be used; anonymity is not desirable in a friendly special library. If this whole idea seems to you too folksy, remember that it can be done tastefully, and the effect is to make the clients think of the library as part of their organization and themselves as recognized contributors to its success.

So the Ideas Won't Work

There are special librarians who will think, "My situation is unique. These ideas would not work, because my clien-

tele is different." This may be true. There are loosely structured organizations and there are potential users who have no strict ties with the organizations. But the special librarian must somehow get service to them, and the ideas presented here will serve as leads to other techniques which can work.

In the minds of some readers there is another argument, one which seems always to be with us, "Yes, these things might be good, but we have no time. It takes all of our time just to order and process the materials." With restraint, we can only respond that these priorities are topsy-turvy. Until you get the clients in to use it, the best cataloged collection in the world is unproductive. But when the clients come and make use of the services, you will be in a position to ask for more help for processing and housekeeping. I urge this order of precedence:

Top Priority

A planned program for continuing effort to acquire and retain clients

At The Same Time

1st—Instant response:
personal friendly service
2d—Enterprising and progressive library services
3d—Housekeeping, including selecting, ordering, and processing.

Summation

In recent years, automation and computerized handling of information have given special libraries new tools and vast resources for library services never before possible. But preoccupation with the new tools has caused neglect of the personal considerations involved in library operation. One of these is the continuing problem of getting the clients to come to the library and to keep coming. The solution requires going out to them and cordially and diplomatically informing them about the library services and about the specific ones which might benefit them. We suggest wise and discreet employment of all possible ap-

proaches to sustain their interest and develop their use of the available materials and services. We emphasize that even after the clients are convinced of its usefulness, they must be continually reminded of the library's existence and the services offered. The special librarian does everything in his power to fill all of

the users' needs, and he carries out whatever action is necessary to develop further the clients' use of the library. This is special librarianship.

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Reference Facilities and Services of the Geography and Map Division, Library of Congress

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■ The Geography and Map Division of the Library of Congress is the world's largest and most comprehensive cartographic collection. Consisting of 3,500,000 maps and 36,000 atlases of all parts of the world, the collection includes original cartographic works ranging in date from the Age of Discovery to the most recent scientifically produced government map. The great growth of

the collection since World War II necessitated the move of the entire Geography and Map Division in October 1969, from Capitol Hill to a new single-story building in Alexandria, Va. The present facilities, services and bibliographic programs of the Geography and Map Division, and the wealth and variety of its cartographic holdings are explained.

THE NATION'S Capital is a map user's paradise. Here is the largest concentration of cartographic resources in the world. The directory of *Map Collections in the United States and Canada* (1970) describes 19 separate collections ranging in size and scope from the District of Columbia Public Library's collection of 648 maps and 95 atlases pertaining to Washington, D.C., to the broad cartographic holdings of America's national map library—the Geography and Map Division of the Library of Congress. This paper examines the facilities, services, and bibliographic program of the Geography and Map Division, and describes briefly the wealth and variety of its cartographic holdings.

The Geography and Map Division embraces one of the world's great map libraries. Established 76 years ago as a separate division of the Library of Congress, its collections now include an esti-

mated 3,500,000 maps and 36,000 atlases. The collection is comprehensive in size, scope, and date. The holdings encompass small-scale reference maps of countries and regions, maps of counties and districts, city and town plans, thematic maps, planimetric maps, nautical and aeronautical charts, and large- and medium-scale topographic maps. Virtually all maps, regardless of scale or date, are considered for the collections. The library's broad acquisitions policy empowers the Geography and Map Division to obtain "at least one copy of each edition, revision, or reproduction of every currently available map, atlas, globe, or other publication in cartographic form which makes significant contribution to knowledge." Cartographic materials in many formats are acquired on a continuing basis by copyright deposit, government deposit, foreign and domestic exchange, gift, transfer, and purchase.

Retention Policy

Maps of all dates are preserved in the Geography and Map Division. If a particular item is superseded by a later edition, both old and new are retained. It is this policy that provides historical depth to the holdings. Rand McNally, for example, published in 1973, the 104th edition of its well-known *Commercial Atlas and Marketing Guide*. The atlas is widely used and current editions are readily available in most large libraries. The Library of Congress, however, has not only the latest edition, but each of the past versions. Early editions are regularly consulted to locate abandoned rail lines and railroad stations, small towns that today have lost their identity or changed their names, as well as short-lived mining communities in the Western states.

The Geography and Map Division's retention policy distinguishes it from most other federal map libraries. Military map libraries, such as those maintained by the Defense Mapping Agency's Topographic Center and Hydrographic Center, periodically weed their collections of obsolete maps and charts and, in accordance with law, transfer surplus materials to the Library of Congress. Those maps and charts not already in the collections are added to the permanent holdings. The remaining duplicates are offered to university map libraries during the summer months in a cooperative work program sponsored by the Geography and Map Division during the past 23 summers.

The comprehensive acquisitions policy, that has so greatly enriched the collections and provided historians and historical geographers with rich cartographic resources, also poses for library administrators the problem of providing adequate storage facilities. Since 1897, the map collections, or major segments, have been moved some twenty times.

Housing the Collection

The rapid growth of the Library of Congress' staff and collections since World War II has necessitated construc-

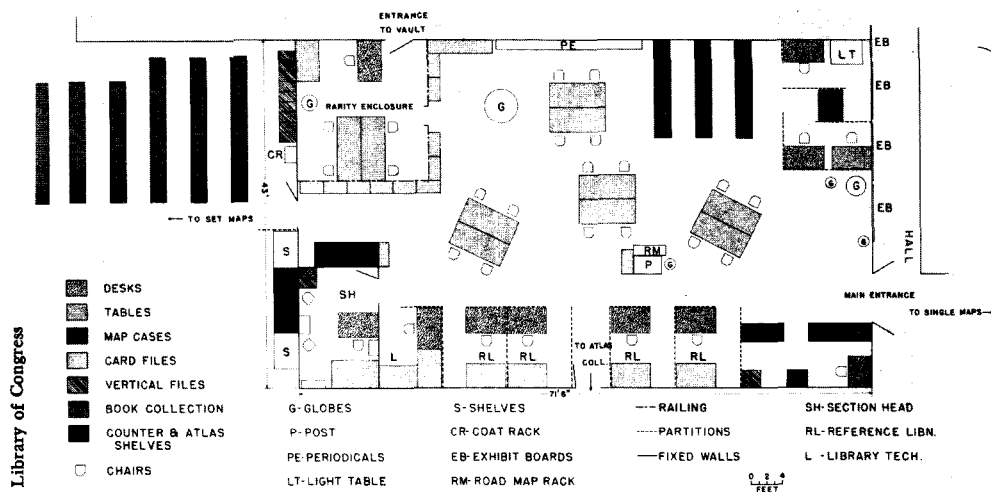
tion of a third library building on Capitol Hill. Progress is well under way, with occupancy expected by mid-1977. The Geography and Map Division will occupy some 93,000 square feet in the basement level of the new James Madison Memorial Building. To relieve the pressures for space pending completion of the new headquarters building, the library began to move selected divisions to rental quarters throughout the Washington area in 1964. In 1968, the decision was made to move the Geography and Map Division to a temporary location. Subsequently a partially completed single-story warehouse was leased for the purpose. The interior of the building was finished according to division specifications, and on September 19, 1969, the move of the collections began. The large open-sided vans used by the moving company were capable of handling 40 full five-drawer steel map cases per load. Over 100 trips were required to move all the map files. Despite the magnitude and complexity of the task the move was completed, without major incident, in one month.

The building presently occupied by the Geography and Map Division is situated in the western part of Alexandria. Ample parking facilities for staff and guests are available immediately adjacent to the building. There are stops for public buses only a few blocks from the building. The library operates a scheduled shuttle bus ten times a day, to give division staff members access to the library's Main and Annex Buildings. Although primarily for the use of library staff, the shuttle bus may also be used by federal government employees on official business to the Division.

Centrally located in the Pickett Street Annex is an attractive, carpeted reading room containing some 3,000 square feet of floor space. Here members of Congress, federal employees, and the general public may consult maps, atlases, and related publications in comfortable, modern surroundings. The Reading Room is open to the public Monday through Friday from 8:30 A.M. to 5:00 P.M. and on Saturdays from 8:30 A.M. to

Figure 1. Plan of the Geography and Map Reading Room, Library of Congress

GEOGRAPHY AND MAP READING ROOM LIBRARY OF CONGRESS



12:30 P.M. Furnished with eight 3×7 foot tables grouped in four units, the main reading area can accommodate up to 16 patrons.

There are two specially equipped carrels. One houses a light table for tracing maps, and the other has a Recordak Motormatic reader which is capable of handling both 35 mm microfilm and microfiche. The Geography and Map Division presently has only a modest amount of material on microfilm but a program is under way to film the entire collection of rare atlases. Thought is also being given to the microfilming of other parts of the collections and to the acquisition of microfilm of complete runs of significant geographical and cartographical serials.

Reference Staff

Five reference specialists and a library technician, with academic backgrounds in geography, cartography, history, and library science, are on duty in the reading room to assist patrons. Because only a small percentage of the division's holdings is controlled by catalogs or printed bibliographies, the reference specialist is an essential link between the reader and

the collections. It is the responsibility of the reference librarians to ascertain the needs of the patron and to select appropriate materials from the collections to fill the request. This sometimes requires patience on the part of the reader as well as the specialist; but it is essential if the patron is to be effectively served. A photocopier is available on the premises for making page-size reproductions of small maps and atlas plates not protected by copyright. Larger size or fine quality photoreproductions of maps and atlases may be ordered from the Library of Congress Photoduplication Service located in the Annex Building.

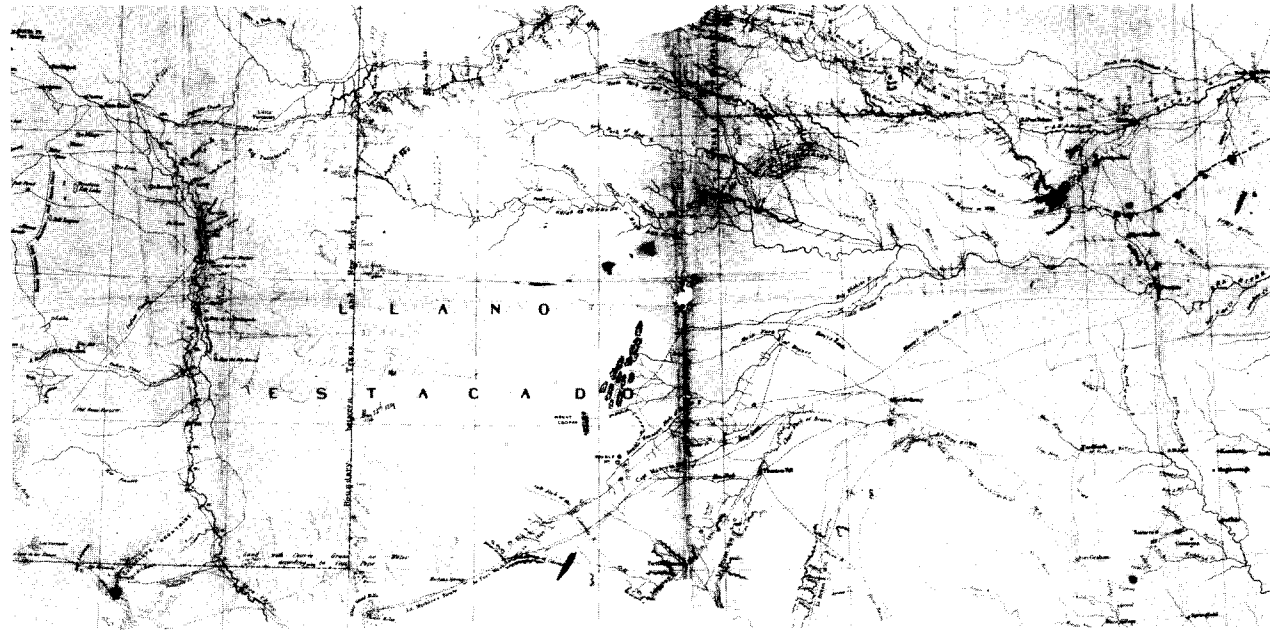
In fiscal year 1973, some 170 readers visited the division's suburban facilities each month. This was a disappointing 39% of the number of patrons who consulted maps when the reading room was situated on Capitol Hill. The loss of readers, however, has been partially offset by a substantial increase in telephone calls and correspondence requests for information.

Use of the Collection

As might be expected, Geography and Map Division patrons come from all

Figure 2. Part of a map annotated to show tracks of and campsites occupied by John Clark and his party while exploring, surveying, and marking the northwest boundary of Texas in 1859 and 1860

Library of Congress



walks of life: government workers and the general public, students and scholars, the young and the old. Requests may be for a recent street plan of Birmingham, Ala., for an 18th century map of Boston, a general reference map of Nevada, or a land use map of Minnesota. The variety seems inexhaustible, but most inquiries involve older maps. An informal survey of readers in January 1972 indicated that 66% of the requests were for non-current maps, 25% were for current maps, and 9% did not pertain to specific maps. Similarly, a three-month survey of correspondence revealed that 57% of the requests were for noncurrent maps, 12% required current maps, 19% were answered by referral to a division publication, and 11% did not involve maps.

The rich and varied cartographic holdings provide unusual opportunities for the scholar or the curious to discover hidden treasures. Hardly a week goes by that a reader or staff member does not identify yet another map whose existence was not known. Recently, for example, a printed base map, with manuscript annotations in pencil and ink, was located

by a staff member in the Texas map file, under the subject "Exploration" and the date "1859." There was no indication on the map or on its filing jacket as to the publisher of the printed map, the name of the person responsible for the annotations, or its provenance. Careful examination of the map has revealed, however, that the printed base is the northern part of the U.S. Army, Bureau of Topographic Engineer's "Map of Texas and Part of New Mexico" made in 1857, and that the annotations trace the route of an expedition by United States Boundary Commissioner John H. Clark and associates in 1859 and 1860. The different inks used in the annotations suggest that additions to the map were made over an extended period of time, probably in the field by Clark or members of his party. The annotations show the routes followed and the campsites occupied by the survey party while establishing the northwest boundary of Texas, as well as occasional form lines, streams, dates, coordinates, spot elevations, and brief comments on the landscape (Figure 2).

Publication Program

The Library of Congress has traditionally encouraged and supported an active publication program as a method of getting bibliographic control over special portions of its collections and to make them more accessible to the public. Present members of the Geography and Map Reference and Bibliography Section are engaged in research which will eventually result in cartobibliographies and professional articles which describe and interpret segments of the collections. Current projects include Andrew Modelski's annotated bibliography of selected maps of *American Railroads, 1828-1900*, John Hébert's cartobibliography of maps of the *U.S.-Mexican War, 1846-1848*, Thomas DeClaire's checklist of fire insurance maps by the Sanborn Map Company, and Richard Stephenson's revised and enlarged edition of *Civil War Maps*. Dr. Hébert is contributing editor for maps and atlases to the *Handbook of Latin American Studies*, and Mr. Stephenson compiles the "Distinctive Recent Maps" feature published quarterly in the American Congress on Surveying and Mapping's journal, *Surveying and Mapping*.*

One of the division's basic aids to cartographic research is the analytical card catalog known as the "Bibliography of Cartography." Initiated nearly 100 years ago by Philip Lee Phillips, the first chief of the division, the Bibliography of Cartography now contains an estimated 106,000 cards which describe the literature of maps, mapmaking, and the history of cartography. Current monographs, as well as some 200 geographic and cartographic serials, are regularly examined for additions to the bibliography. Microfilm of this unique card record has been available for purchase from the Library for some years. In 1973 G. K. Hall and Company, Boston, reproduced the bibliography by

photo offset and published it in five bound volumes. Publication of the card bibliography in convenient book form has made this unique research tool readily available to researchers and libraries throughout the world. Division officials are considering ways to modernize the bibliographic style and subjects and input the new data (beginning with 1972 citations) on magnetic tape. Regularly published supplements, perhaps issued quarterly in a journal or annually in book form, are also under consideration.

A reference book collection containing some 6,000 volumes, chiefly in the subject fields of bibliography, cartography, geography, history, and toponymy is maintained in the reading room for consultation by staff and patrons. It includes many volumes concerned with the examination, identification, and location of maps and atlases, such as the British Museum's *Catalogue of Printed Maps, Charts and Plans*, in 15 volumes, and Carl Wheat's *Mapping the Transmississippi West*, in 6 volumes. Because questions concerning the origin and location of place names frequently arise, gazetteers of all parts of the world, including the complete series published by the U.S. Board on Geographic Names, are on file.

Current editions of 200 geographic and cartographic journals are displayed on a periodical rack in the reading room. The division keeps only the most recent editions of the journals. Superseded editions are forwarded to the Library of Congress' Serial Division for shelving and binding. For a few selected professional journals, such as *Surveying and Mapping*, the *Geographical Journal*, and the *Bulletin of the Geography and Map Division (SLA)*, bound volumes are shelved in the Geography and Map Division's reference book collection.

Rare Materials

Rare cartographic materials are consulted in an enclosure immediately adjoining the rarity vault. In wooden card file drawers surrounding the enclosure are the division's dictionary atlas catalog

* A brochure listing current publications of the Geography and Map Division is available upon request.

containing citations to a major segment of the atlas collection, and the MARC Map catalog. The latter, the fastest growing bibliographic record in the division, includes author, subject, title, and series citations to some 25,000 general and thematic maps received or recataloged by the division since 1968. Every bibliographical citation in the MARC Map card catalog is also stored on magnetic tape in the library's computer storage bank. In 1973 the Library began distribution, on a subscription basis, of monthly MARC Map tapes and computer-produced catalog cards. Each tape contains about 400 citations for new and revised map records.

The specially designed vault, with independent temperature and humidity controls, is adjacent to the reading room. It contains 5,000 square feet of floor space and provides first-rate fire and security protection for some of the nation's rarest cartographic treasures. Presently there are approximately 5,000 manuscript and printed maps and 2,000 atlases filed in the vault, with plans to add another 2,000 rare maps and 300 atlases which are now in the division's general collections.

The rare atlas collection includes examples of the works of most of the leading Dutch, French, German, English, and Italian publishers of the 15th through the 19th centuries. Included are the atlases of Ortelius, Mercator, Hondius, Speed, Saxton, Blaeu, and Lafréry, to name but a few. The Greek scholar, Claudius Ptolemaeus, known as the father of geography, compiled his monumental *Cosmographia* in the second century A.D. Translated into Latin in the 15th century, it was subsequently printed in numerous editions by renaissance publishers, beginning in 1475. The Geography and Map Division has 43 printed versions dating from 1475 to 1845, the most beautiful of which is the Nicolaus Germanus edition published in Ulm, Germany, in 1482.

The collection of single sheet manuscript and rare printed maps is particularly rich in 18th and 19th century maps of portions of America. Many of the

maps, especially for the Revolutionary War period, were acquired by the Library of Congress with the purchase of the extensive Peter Force collection of Americana in 1867.†

Noteworthy groups include the map collection of William Faden, 18th century English publisher and engraver, and Geographer to King George III; the personal map collection of the Comte de Rochambeau, commander of the French troops in North America during the Revolutionary War; the Civil War map collection of Major Jedediah Hotchkiss, topographic engineer with the Second Corps of the Confederate Army of Northern Virginia; the collection of 19th century maps assembled and autographed by President Millard Fillmore; and a collection of Oriental maps and atlases which date from the Ming Dynasty (1368-1644) through the 19th century.

Also preserved in the vault are such unusual cartographic formats as six powder horns decorated with maps, which were used by British soldiers during the French and Indian and American Revolutionary wars, and a hand-drawn terrestrial globe made in Cologne by Caspar Vopell in 1543. The globe is in a brass stand and surrounded by eleven brass rings which trace the paths of the planets.

Exhibits

The central hall of the building, which links the public reading room with the entrance foyer, is used to exhibit maps. Ten display boards, each 36 × 80 inches, are mounted along one wall of the corridor. The panels, designed by Geography and Map Division personnel and constructed in the library's carpenter shop, consist of flush plywood doors covered with burlap in several colors and faced

† For a description of this collection see Richard W. Stephenson/Maps from the Peter Force Collection. *The Quarterly Journal of the Library of Congress* 30 (no.3): 183-204 (Jul 1973).

with Plexiglas. Metal U-shaped brackets are used to suspend the panels from a wooden molding strip running the length of the wall. This permits the boards to be easily repositioned, or to be removed and placed in a horizontal position when mounting and dismounting an exhibit. The inexpensive panels provide an attractive, flexible, and secure means for displaying old and new maps.

Recent cartographic exhibits have featured panoramic maps of Anglo-American cities, maps from the Peter Force collection, and geographic profiles depicting the heights of mountains and the lengths of rivers. Three major displays for which exhibition catalogs were prepared, were titled "Alexandria: City and Suburb," "The World of Maps," and "Maps of the Mississippi River."†

† Copies of the exhibition catalogs are available upon request from the Geography and Map Division.

The first mentioned contained a selection of historic and current maps tracing the growth of Alexandria from a tobacco port on the Potomac River in 1748 to its present position as an integral part of the Washington suburbs. The "World of Maps" exhibition which commemorated the 75th anniversary of the Geography and Map Division, included a selection of maps that illustrated the depth and variety of the cartographic holdings. The display of "Maps of the Mississippi River" honored the 300th anniversary of the discovery and exploration of the "Father of Waters" by Father Jacques Marquette and Louis Jolliet.

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New UN Microfiche Service Augurs Large Storage Economies

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■ The United Nations publishes an average of 12,000 separate pieces in each official language every year. Since the Dag Hammarskjold Library has the responsibility of indefinitely preserving all UN documents, storage and accessibility have become increasingly difficult. The solution to this problem and the products now available are discussed.

AFTER YEARS of preparatory groundwork, the microfiche program of the United Nations has moved into its service phase, and users are now being supplied with the long-awaited microfiche texts of United Nations documentation.

This means that governments, universities, delegations to the United Nations, and some three hundred United Nations depository libraries scattered throughout the world can now begin discarding bulky paper documentation in the effort to cope with the physical problem of managing the mass of constantly growing United Nations material.

For the Permanent Missions and delegations to the United Nations, for whom essentially the documents are prepared, the development is particularly important. For the small Permanent Missions and delegations, it is crucial. Since they lack the spacious physical quarters and sizable staff of the Permanent Missions of the major powers, these Missions have long grappled with an acute physical problem—a stricture of which the Dag

Hammarskjold Library has always been acutely aware.

Often these Missions operate under conditions which preclude any attempt at setting up even the smallest of collections of source materials. For these special situations the advent of microfiche carries the possibility of mere desk-top file-drawer storage of documentation that would ordinarily demand many square feet of floor space.

In general, however, miniaturization really addresses itself to the larger physical problem that plagues modern librarianship: The publication explosion has all libraries hard-put for storage space. Given the UN's standing as a prolific publisher, said to be second only to the government of the United States, microfiche reproduction of its documentation should stand out as an important contribution.

A Change Became Necessary

The new microfiche program traces its origin to 1969 when the UN's presses began clocking some 500 million pages a year that averaged out to about 12,000 separate publications in English alone (and a like number in each of the other official languages). The library was forced to face the problem of satisfactorily discharging the responsibilities assigned to it since the Organization's infancy, i.e., to preserve, indefinitely, full documentation of the United Nations in all languages, and to make the content of that documentation as fully accessible as possible.

With the formidable growth in volume and complexity of the documentation (and concomitantly, in service demands), bibliographic control, then lodged in conventional English language indexes, checklists and the like (1) waned and the library then turned to the computer.

The birth of UNDEX (2), a computer-produced series of indexes in English, French, Russian, and Spanish compiled from an English input, presaged the demise of some of the conventional indexes, an event that will occur this year.

Of paramount importance in the shift was the establishment of computer-based files with capabilities for information retrieval from a variety of approaches—by subject, country (author), form, date, type of action, etc. While that takes care of the intellectual aspects of the service problem, the solution of the physical aspects, that of preserving the full documentation, finding storage space, collating and binding the material, combating deterioration of paper, etc., appeared to hinge on miniaturization.

Why Microfiche?

Several forms of micro-reproduction were considered. Microfiche, the flat film transparency, 105 mm × 148 mm, containing 60 pages of text, reduced by a ratio of 20 to 1, seemed to fit the library's peculiar needs neatly. While fulfilling some of the essential requirements of preservation, reduction of storage space, ease of retrieval, and facility of reproduction, it offered the following advantages of special import to the United Nations, with its far-flung, world-wide outposts.

- Microfiche are compact (a file of microfiche containing the full text of 800 documents totalling 30,000 pages, can be housed in a desk-top filing-drawer).

- Microfiche are at least as permanent as good quality rag paper, whereas the useful life of sulphite paper used in mimeographing is perhaps 20 years, after which it is too brittle to handle.

- All microfiche are produced according to the specifications of the United

Nations Microfiche Standard, which conforms to international standards and is followed by all organizations in the United Nations system. They are easily filed by symbol of document, by issuing organ, or by microfiche numbers—all of which are elements of the heading, easily readable without magnification.

- Microfiche are easily duplicated.

- Microfiche are easily transportable (60 pages of documentation in this form can be delivered speedily anywhere in the world at the cost of an airmail stamp).

- Microfiche can be used to produce paper copies of a page or of an entire document enlarged to the size of the original text, speedily and inexpensively.

- Equipment for viewing or viewing and enlarging from microfiche is available at moderate prices.

The United Nations microfiche program is a component of UNDIS (the United Nations Documentation Information System) (3), which aims at providing a generalized information base of the activities of the United Nations as recorded in official documents. Its thrust is to minimize the time lag between availability of the documents and accessibility to users of the information contained in them and then, by maximizing the capability to compile summaries, to rapid-search a large store of information and answer complex queries. The library can thus provide through this computer-based system complete and detailed documentary information services to official and other interested users.

Material Now Available

Full texts of the source documents for which analytical descriptions are contained in the computer-based files are reproduced and preserved on microfiche as part of this program. Under the program there is a two-pronged approach in microfiche reproduction of the documentation. The starting point was 1969. As of that date current material was micro-filmed so that users could discard current paper material in favor of microfiche.

Material dated prior to 1969 was micro-filmed on a selective basis working backward.

To date, microfiche reproductions paralleling the UNDIS computer-based files on sale now comprise the following documentation:

1. United Nations (and Cumulative Indexes) *Treaty Series* Vols. 1-700, 1947-1969
2. General Assembly *Official Records*
 - a. Resolutions, A/Res.1-3049, 1946-1972
 - b. Plenary Meetings, Verbatim Records A/PV.1-1501, 1946-1966
 - c. Supplements, 1st-27th Sessions, 1946-1972
 - d. Annexes, 1st-23d Sessions, 1946-1968
3. Security Council *Official Records*
 - a. Resolutions, S/Res.1-324, 1946-1972
 - b. Verbatim Records, S/PV.1-1189, 1946-1964
 - c. Supplements and Special Supplements, 1st-24th year, 1946-1969
4. Economic and Social Council *Official Records*
 - a. Resolutions, 1st-51st Sessions, 1947-1951
 - b. Summary Records, E/SR.1-1732, 1947-1971
 - c. Supplements and Special Supplements, 2d-50th Sessions, 1947-1971
 - d. Annexes, 1st-13th Sessions, First Special Session, 14th-52d Sessions, 1946-1972
5. Trusteeship Council *Official Records*
 - a. Resolutions, T/Res.1-2148, 1947-1967
 - b. Summary Meeting Records 1st-35th Sessions, 1947-1968
 - c. Supplements, 1st-34th, 2d Special Session-11th Special Session, 1947-1967

Additionally a microfiche version of the following publications is in production (possible availability April 1974): Yearbook of the International Law Com-

mission, 1949-1971; Documents of the United Nations Conference on International Organizations, San Francisco 1945 (Vols. 1-22); Yearbook of the United Nations, 1946-1970; Yearbook on Human Rights, 1946-1960; Demographic Yearbook, 1948-1970; Statistical Yearbook, 1948-1971.

United Nations Publications (Sales Section, Room LX-2323, New York, N.Y. 10017), the sales arm for United Nations publications, has been filling orders for microfiche at a rate that might earn fair marks as a sales venture, but which in reality merely reflects a demand generated by the wealth of material already available.

A graphic illustration of the economies in storage space achieved by use of microfiche is demonstrated by the space needed to accommodate the total collection. All languages now offered for sale—representing the equivalent of some 750,000 printed pages in hard copy—can be housed in a single cabinet, 52" x 28" x 14-13/16", containing eight double drawers.

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Future Role of Special Libraries in India

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■ A sharp increase in specialized areas and the subsequent self-imposed limitation of fields of interest in many old and well equipped libraries has imperceptibly resulted in special libraries redefining and reorganizing themselves to suit the growing needs of the country. New problems of methodology have sprung

up as an increasing number of books are being published in Indian languages on technical subjects. Practical solutions in achieving a solid standard of qualitative holdings on a particular specialized subject, including interlibrary loan and exchange arrangements, are discussed.

INDIA is a great colossus with fourteen regional languages and three scripts—Devanagari, Arabic, and Roman. It is the largest democracy and the second most populous developing country in the world. While Hindi is the national language, English is still being used for official purposes though several states have recently resorted to using their regional language in administrative matters and secondary education.

Special Libraries in India

While manuscript libraries in India date from the early Vedic period, the special library in India, as we understand it today, was first opened in Madras in 1782. This library is still in existence and contains rare and important collections in Sanskrit and South Indian classics. From this period until the present there have been an estimated 2,000 special libraries. These libraries were set up to serve specialized interests and over the years have accumulated rich stores of information, thereby becoming genuine

resource centers. They have a selective working collection of books and other material in specific subject areas ranging from accounting to zoology. Their collections, regardless of their size, are frequently definitive in one or more subject fields and have unique sources of information which are not indicated in the usual bibliographic channels, such as primary sources of information, original departmental notes, diaries, reports, correspondence, sketches, maps, diagrams, etc. Some of the larger special libraries have documentation facilities for collecting, evaluating, organizing and disseminating information in special fields.

A large number of special libraries in India do not admit the public because they mainly operate as working libraries for the use of their abstractors and research workers. These libraries aim their services at research organizations, universities, industrial concerns, government departments, scientists, technologists, doctors, etc. On request and at a small charge they provide copies of published scientific and technical papers or reports

and often compile a list of references to recent papers on any specified subject within their operational range. In this way they provide researchers with a means of knowing what has already been published in their field of specialization. The translation into English of scientific papers published in most European languages and Japanese is also done by a few well-equipped libraries which have been able to establish a panel of translators in these languages. It is estimated that, on an average, special libraries in India receive some 3,000 requests a month for all types of services.

Future Problems

It is important to consider the acquisitions of these science and humanities libraries, the majority of which are in English. Few libraries have holdings in Indian languages and the few which have active Indian language acquisition policies are confined to classical literature, linguistic science, art, and culture. Virtually no library in India has any vernacular holdings in engineering, medicine, law, sciences, etc. This is a major drawback for the future because English will eventually be replaced by Hindi as the national language; each of the fourteen regional languages then will be given a secondary status in their respective linguistic areas. Eventually English will be completely superseded and will probably be taught only as an optional language at the collegiate level.

Already a large number of Indian universities have made English an optional subject and an increasing number of students are being admitted to graduate and postgraduate courses in Hindi and regional languages. The time is not far off when most literate Indians will consider English as a totally foreign language. As a result, all aspects of advanced research will, of course, have to be conducted in Hindi or in one of the many regional languages. It is equally probable at some stage that research work conducted in Bengali may not even be known to a researcher in the same field working in Marathi, Tamil,

or Panjabi. Thus there is a serious possibility that Balkanization may occur, and this must be avoided at all costs.

Library Coordination

National coordination of special libraries in India must be achieved by recognizing that unity is essential even in diversity. None of the factors promoting unity must be discarded. But there are real problems being faced by special libraries in India in formulating objectives, standards, performance measures, and ranges of service to meet future needs. Most of these problems are presently being studied. Though there is as yet no comprehensive strategy, special libraries plan to meet India's future needs in the following manner.

Coordination of special libraries situated within the state is necessary to avoid duplication of effort and financial waste. Each library's holdings and further acquisitions will relate to research and development work catering to the needs and program of the state concerned. Thus all special libraries with sources of information on tea will be located in states where tea is grown such as Assam, Himachal Pradesh, Kerala, Tamilnad, and West Bengal. These tea libraries will have mutual coordination and interlibrary loan facilities wherein individual holdings of each of these libraries will form the basis of a master file of all tea literature in all libraries with full bibliographic descriptions. The master file will be kept in Hindi, since this is the national language, and will be updated from time to time. A compilation of bibliographies both retrospective and current in all five regional languages in which the tea libraries are situated will be made in phases using the master file. From these regional language bibliographies information scientists will convert the literature into classified bits. Thus requests from any part of the country can be provided with specific answers to specific questions in the form of bibliographies and photocopies of abstracts. Tea is only an example; such a pattern is envisaged in all subjects.

The future role of Indian special libraries is being planned along these lines in ten areas: evaluation, indexing, storage, retrieval, review, research, communication, and service. These do not need elaboration but a few points are worth mentioning. Serial abstract reviews are included under "review." Under "research" are included the beginning efforts to test the effectiveness of a multilingual approach to bibliographic preparation. Under "communication" is included the output of special information materials and certain special publications such as newsletters and quarterly digests. And under "service" are included activities and output of the library, the librarians and the whole staff of the proposed documentation-information system which is being thought of as the future specialized library.

Plans for the Future

Special librarians are confident that this system of handling so many languages will be effective for all students, scientists, and scholars. Those who seek information will be provided with bibliographies on discrete topics, which will lead to both old and new knowledge from a mix of disciplines and professions, and information abstracts of the most useful literature.

Indian libraries intend to move cautiously into automation. They do not

believe machines can produce abstracts or indexes of adequate quality. This is the work of educated specialists. Computers can take over the mechanical processes of storage, man guided retrieval, and printout. Even so, until computers are nationally available to everybody, the advantages of retaining the old-fashioned abstracting and indexing services seem obvious.

Finally, special libraries in India visualize themselves as re-conceptualized libraries *cum* information centers, combining the capacities to serve both the immediate information needs of specialists and broader educational needs of scholars. Their successful operation depends only secondarily on machinery. Their primary resource is human, the trained staff of educated librarians, informationists, and translators, with a supporting cadre of constantly available consultants in the multi-disciplinary faculty of the universities.

This plan, without doubt, shares the permanent fate of science, scholarship, and education; it is still only a plan and is open to amendment.

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Scientific and Technical Documentation in Brussels

Herman-Karel de Jaeger

National Center for Scientific and Technical Documentation, Brussels, Belgium

■ The National Center for Scientific and Technical Documentation, Brussels is a nonprofit organization. Its services and collections are described.

THE NATIONAL CENTER for Scientific and Technical Documentation (NCSTD), Brussels, founded in 1964, is closely associated with the Albert I Royal Library of Belgium, where it is housed in new and vast functional quarters. The NCSTD benefits from the collections of the Royal Library, which currently has more than three million volumes and well over twenty thousand periodical titles. The center is a nonprofit organization and is financed by state grants. An advisory committee, comprised of representatives from government, industry, and the academic world, co-determines the policy of the NCSTD.

The information scientists of the center are responsible for searches in and the procurement of information material, for compiling bibliographies and for maintaining liaison with individuals and groups that either supply or need these services. The disciplines covered are medicine, physics, chemistry, engineering, agriculture, and information

science. Besides these tasks, the center has a number of particular activities.

A *Belgian and Luxemburg Union Catalog of Foreign Periodicals Currently Being Published* was established in 1965. A new computer produced edition is in preparation. This catalog gives a listing of the serial holdings of some five hundred participating libraries and approximately fifty thousand titles which will be listed in the updated edition.

To propagate the idea of documentation and to coordinate agencies so engaged throughout Belgium, the center compiled *Inventaire des centres belges de recherche disposant d'une bibliothèque ou d'un service de documentation (Directory of Belgian Research Centers Having at Their Disposal a Library or Documentation Center)*. This indexed 350-page guide, in its second edition, lists and describes approximately one thousand organizations.

The Functions of the Center

The center maintains a Translations Department which issues translations and gives information on translations available elsewhere. In addition, it also supplies written or oral translations from Russian into French, and maintains a register of qualified translators.

Through its Educational and Consulting Department, the center advises on the establishment or organization of special libraries and documentation services. Its personnel accepts speaking engagements to describe the work and aims

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of the center's services, and invoke discussions on ways and means of improving its efficiency. Although the NCSTD does not provide extensive training, it does organize short introductory documentation courses for scientists and special librarians.

One of NCSTD's chief functions as a coordinating center for information services is to put the inquirer in touch with the best source of the specific bit of information he happens to be seeking. Often this service brings together scientists who are working in the same field. This necessitates contacts with all sources of information throughout the world. An agency responsible for developing a national information system should conduct research in *user needs*, including experimentation with new information storage, retrieval, and dissemination methods. Lack of knowledge about potential audiences and their needs seriously hampers the efforts of serving the information needs of science, research, and industry.

The center is engaged in research in documentation problems, including au-

tomation of its own services, as well as those of the Royal Library. The processes for which mechanization routines are used are cataloging, compiling of union lists, accessioning, and the like. Several SDI services, based on INSPEC, and similar data bases are scheduled or are already operational. The hardware used is a Siemens 4004/135 computer (256K). Software is being developed in-house.

The staff of the National Center for Scientific and Technical Documentation consists of approximately fifty subject specialists, information specialists, clerical, and computer personnel. Technical personnel, including members of the reprographic department, are supplied by the parent organization.

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Commentary on

The Special Librarian's Role in the Current Environmental Crisis

THE LIBRARIAN has a significant role to play in the environmental crisis in which the world now finds itself. The influence of the library and the librarian throughout history has been interwoven with the story of the people it has served. Thus the services which the library and the librarian must provide vary with the needs of the people in that particular time.

A world with clean air, land, and water; warmth from the cold, adequate energy resources; and a culturally pleasing environment is the desire of all people. To put it strongly: This is not only the desire but the absolute necessity of the human race. Much interest has been aroused in the area of ecology and environmental quality in this decade. Due to widespread social and economic growth throughout the world, and the uncontrolled exploitation of natural resources, the deterioration of the environment has become an international dilemma. It seems the only solution to the problems we face is to educate individuals on an international level in a way that will influence the habits, activities, and programs of this and future generations in their interactions with our environment. Today there is no more immediate need than for research into and the solving of environmental problems.

It is at this point that the role of both the library and the librarian comes into focus. We must be aware of the abundance of material concerning the energy crisis as well as that dealing with the pollution of the environment. The librarian daily handles refer-

ence tools, textbooks, case studies, journal articles, maps, films, etc., which deal with these topics. Why not compile a bibliography of a specific subject area? Or perhaps compose an acquisitions list which can be sent to urban planners, teachers, government agencies, and conservation groups for their use? Environmentalists, who are working toward a quality reevaluation of our lives, sorely need tools of this sort to pull together titles of others also working toward this goal, so that each may benefit from the work of the other.

The growing importance of geological factors in this period of metropolitan growth and rapid expansion created the necessity for the teaching of environmental geology classes in the Department of Geology at the University of Kentucky. Since there was not one good text for these classes, I began to document titles of possible interest which came across my desk in the geology library in the form of acquisitions, blurbs, reviews, etc. In the spring of 1973, there were 700 completely documented titles in this listing. The list aroused much interest and excitement both on and off campus. Because of this interest there has been a concentrated effort to enlarge the listing and place the titles in subject order. At the present, there are 2,200 titles and plans are being made to submit this listing to a publisher by March 1974.

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SLA HALL OF FAME/1974

President Gilles Frappier has announced the election of two members to the SLA Hall of Fame in 1974 who have made outstanding contributions to the growth and development of the Special Libraries Association at the Association, Chapter and Division levels.

Agnes O. Hanson

Although her first steps into librarianship took her to university and public library work in Minnesota, Wisconsin, and Michigan in the late 1920s and early 1930s, it was 1934 when Agnes O. Hanson turned firmly to her lifelong stride. She joined the General Motors Research Libraries in Detroit and SLA that same year. In 1938 she made her last move: to the Business Information Bureau of the Cleveland Public Library in the great tradition of SLA founder John Cotton Dana and many others who choose to serve the business community at large. Soon after her arrival at the B.I.B. she started her Masters in Library Science at the University of Michigan. Her thesis was on Business Magazines: Present and Desirable Index Coverage, and she received her MSLS in 1941.

She started her SLA work in the Michigan Chapter, doing committee work there in 1936 and 1937. She thereafter contributed her talents throughout her professional career to the Cleveland Chapter. She constantly held committee assignments and various chairmanships there both willingly and outstandingly. As you might expect, these included the Chapter Presidency in 1946/47. The Business and Finance Division also counted her as one of its stalwarts throughout her career in Cleveland. She held various Division committee chairmanships and contributed to the Division Bulletin over the years. And, of course, she was Division Chairman in 1950/51.

At the Association level, Miss Hanson's activities spanned 20 years beginning with her Chairmanship of the Placement Policy Committee 1950/51 and continued on through many other appointments. She was SLA Representative to the Aslib Conference in 1954, Chairman of the Nominating Committee 1956/57, Chairman of the Resolutions Reference Committee 1959/60, and Chairman of



HANSON



KLAHRE

the Academy of Management Book Awards Committee 1967/70. She was elected to the Board of Directors as Secretary 1953/54.

She has written for many publications, almost always to keep people aware of what a business library does and can do for the community. She made an extensive tour and survey in connection with her Aslib representation in 1954. The result was, "Commercial and Technical Library Service in Great Britain" [*Special Libraries* 46 (no.1): 29-38 (Jan 1955)]. This article covered all the major libraries and included Miss Hanson's post-war impressions, details of library operations as well as comparisons of budgets and salaries with American special libraries, a truly international approach which gave readers of that time a great depth of knowledge.

She also produced, "Significant Business Literature, 1957" [*Special Libraries* 49 (no.2): 58-65 (Feb 1958)], from a selection of 122 new reference works of that year. In this article, she highlighted "a new technique" called long-range planning, automation in the office (including data processing), and a new book about the interrelationship of science, business, politics, and morality. Just a sample of her sharp eyes and mind.

Miss Hanson received a Certificate of Recognition from the Cleveland World Trade Association of the Greater Cleveland Growth Association in cooperation with the U.S. Department of Commerce for having instructed an International Trade Workshop Course in 1971. There was further recognition in 1973 when the American Marketing Association, Cleveland Chapter, presented her with a citation for service and contribution to the Northern Ohio Business Community.

Perhaps a key to her success and influence can be found in her article, "Subject Headings on Special Libraries" [*Special Libraries* 37 (no.10): 317-322 (Dec 1946)]. "There are times . . . when one might better be bold, or shall we say sensible. When an event or

term is on the tip of every tongue . . . put it in the file, with *see also* references . . . rather than burying it under general headings."

With her election to the SLA Hall of Fame, the name of Agnes O. Hanson is again happily on the tip of every tongue.

Ethel S. Klahre

Our 1938 Pittsburgh Conference was really a great one if for no other reason than that it was the turning point in the career of Ethel S. Klahre. Following her graduation from the University of Akron in 1927, she entered the School of Library Science at Western Reserve University in Cleveland and received her BS in LS in 1928. She then went on to become circulation librarian at the University of Akron for the next ten years. During this time, her conviction about university librarianship was reinforced by postgraduate courses at Columbia University School of Library Service in 1929, and the University of Chicago Graduate Library School in 1936.

But SLA and Pittsburgh had worked their magic on Miss Klahre who immediately thereafter undertook postgraduate work in special librarianship at the University of Michigan, Department of Library Science and moved immediately to the post of assistant librarian with the Commonwealth Edison Company in Chicago in 1939. In 1942 she became librarian of the Heater Engineering Division of Stewart Warner Corporation in Chicago where she organized the library. In 1943 she joined the Federal Reserve Bank of Cleveland as assistant librarian and the

following year became the librarian. She remained with the "Fed" 23 years, then moved to the final position of her career as assistant librarian for Technical Services at the Cuyahoga County Community College in 1965 where she worked until her retirement in 1970.

Once decided on her career in special librarianship, Ethel Klahre embraced the activities and responsibilities of the Special Libraries Association. In the Cleveland Chapter she was Bulletin Editor, Treasurer, Program Chairman, Vice-President, President 1959/60, and 1960 Convention Executive Committee member. In the Business and Finance Division she was Bulletin Editor, Vice-Chairman, Chairman 1947/48, Co-Chairman of the Convention Program Committee, and Chairman of the Nominating Committee. At the Association level she was First Vice-President and President-Elect in 1961/62 and served as President in 1962/63.

Thus, the enthusiasm of SLA members for their work and their Association, which impressed Miss Klahre so much at the 1938 Conference, came to full fruition as she worked steadily for SLA right through the Presidency. Her advice and counsel were sought after because of her caution, thoughtfulness, and fairness. She believes that librarians contribute best by "never ceasing to be alert to change, by never closing one's eyes and ears to new ideas, by adapting and using what is good." This philosophy stood her in good stead in her work as a special librarian and throughout her efforts for SLA.

In naming her to the SLA Hall of Fame, The Association adds to the recognition of Ethel S. Klahre, one of its real contributors.

MEMBERS IN THE NEWS

Virginia S. Miller . . . retired as librarian, U.S. Army Transportation School.

Florine Oltman, chief, Reader Services Division, Air University Library . . . retired after 30 years of government service.

Idris Smith, formerly business and technical librarian, Kansas City Public Library . . . appointed acting head librarian.

Astrid Steele . . . appointed exchange and gifts librarian, M.I.T. Libraries.

Lucille Jackson Strauss, librarian and head, Chemistry and Physics Branch Library, Pennsylvania State University . . . retired after 35 years of service.

Johanna E. Tallman, previously head, Engineering and Mathematical Sciences Library and coordinator of physical science libraries, UCLA . . . appointed director of libraries, California Institute of Technology.

John A. Timour, formerly director, Library Services, Connecticut Regional Medical Program . . . appointed director, Mid-Eastern Regional Medical Library Service based at the College of Physicians of Philadelphia.

LTP Reports to SLA

Library Technology Reports is now a publication of the American Library Association's Library Administration Division. The LAD Directors and the ALA Executive Board have concurred with the suggestion of the ALA Executive Director that *LTR* be published under the auspices of LAD. The *Reports*, however, will continue to be sold on a subscription basis only and will not be a perquisite of LAD membership. The Executive Committee of LAD's Building and Equipment Section will serve as the advisory committee to *LTR*, replacing the now disbanded LTP Advisory Committee.

By action of the ALA Executive Director, the publication of LTP monographs and the position of LTP Technical Editor have been discontinued, effective Dec 31, 1973. All monographs currently in progress have been turned over to ALA's Publishing Services for final disposition.

Library Technology Reports has completed a series of evaluations of microform readers. The machines tested include, with one exception, all of the lap readers currently marketed for library use. These lap readers are physically similar to the Model PMR/50 developed by DASA several years ago under contract to the U.S. Office of Education. The models tested include the Bell & Howell Briefcase Reader, the Micobra (Micro-Scan) K-100 Escort, and the Real Time Systems Mini-Viewer. The Visidyne Voyager I was not in production when testing was begun and will be evaluated at a future date.

As expected, the lap readers as a group represent certain compromises in design and are not completely satisfactory for prolonged viewing. However, their portability and relatively low cost make them attractive choices for certain library applications.

Other readers evaluated in November 1973 included the Kodak Ektalite 120, the Dietzgen/Gakken 4309, the Micro Design 175 Microlite. These three machines are relatively low priced and compact, but unlike the lap readers, are not specifically designed with portability as a prime consideration. The Ektalite 120, a front projection-type reader,

has a highly reflective screen material which produces a very bright image. The other two readers are conventional readers with features such as a fiche carrier assembly with location grids usually found only on larger, more expensive machines. The Micro Design Microlite 175 is also being marketed by Bell & Howell, Bruning, and GAF under their own brand names.

Reports in January 1974 are on the Dukane Explorer 14, the Dietzgen 4323-20, and the Xerox University Microfilms 2240 series. The Dukane Explorer 14 has an optical system similar to the Xerox University Microfilms 1414, evaluated in January 1971. The Dietzgen 4323-20 is part of a new modular series manufactured by Dietzgen; the series offers a choice of screen sizes, lenses, and fiche holders. The Xerox 2240 series was formerly marketed by Xerox as the 1212. There are two basic readers in the series, one for fiche, and one for roll film.

In the September 1973 issue of *LTR* appeared an evaluation of three microfilm rejuvenation treatment services. This program, funded by the Council on Library Resources, was designed to determine if the treatments had any beneficial effects on the legibility of damaged or soiled microfilm. Since no standardized test procedures exist to measure improvements in legibility of microfilm, a form of panel testing was employed utilizing Foster D. Snell, Inc., a subsidiary of Booz Allen & Hamilton. The services evaluated include those offered by International Film Treat, Permafilm International Corporation, and Rapid Film Technique, Inc. These film treatments are used for microfilm and 16 mm motion picture film.

Featured in the March 1974 issue of *LTR* is William R. Hawken's evaluation of the Xerox Microprinter microform reader/printer. The Microprinter basically consists of a Xerox 720 photocopier to which a microform reading device has been attached. In his report on the Microprinter, Hawken notes that the ambi-polarity feature (the ability to make a positive print from either positive or negative microimages), which was widely an-

nounced by Xerox, is in fact not available. Currently, the Microprinter is available in either of two operating modes, positive prints from positive film or positive prints from negative film, but not both. Hawken also discusses Xerox pricing policies which can be confusing. There are also reports on two plain paper photocopiers: the IBM Copier II and the Addressograph Multigraph 6000, and one coated-paper copier: the 3M VQC. The

report on the IBM Copier II should be of particular interest to libraries with copying volumes of over 50,000 copies per month. Concluding the March issue is a new survey of over 100 single-passenger, free-standing dry study carrels.

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HAVE YOU HEARD ?

American-Scandinavian Foundation Project

A project has been undertaken to identify U.S. and Canadian library collections with strong resources on any aspect of Denmark, Finland, Iceland, Norway, Sweden, and their possessions. Please send information or offers to assist in the project to D. E. Askey, 127 E. 73d St., New York, N.Y. 10021.

Government Documents Librarians' Kit

The Congressional Information Service has compiled the "Ask Your Librarian" Kit. It includes, among other items, posters, advertisements, news releases, special activities, and a campaign planner. All items are designed to help librarians make patrons aware of the information which is available through government documents. The kit is free from CIS, Montgomery Building, Washington, D.C. 20014.

In Its Second Edition

The *Japan English Magazine Directory* 1973-74 edition is now available. It includes all types of periodicals published in Japan in English. All publications listed are available from booksellers in Japan or normal purchasing channels. Price: \$10.00. Write: International Marketing Corp., IPO Box 5056, Tokyo 100-31, Japan.

NCLIS Recommendations for LC

First priority was given to the expansion of lending and lending management functions to establish LC as a full national lending library. Among the other recommendations: the expansion and fulfillment of the National Program for Acquisitions and Cataloging; the expansion of machine-readable cataloging (MARC) to include cataloging in substantially all languages of current mono-

graphic serials and other significant materials; development and expansion of the General Reference Program; expansion of present serials services; improved access to state and local publications; and distribute on-line bibliographic data.

1974 Goode Award

The American Federation of Information Processing Societies will present its Harry Goode Memorial Award to Professor Dr. Edsger W. Dijkstra, research fellow of Burroughs Corp., Nuenen, The Netherlands, for his outstanding contributions to the theory and practice of programming and to its development as a science.

Temple U. Paley Library Notes

Dr. C. H. Sterling is promoting his "Mass Media Booknotes." Now in its fifth year, "Booknotes" reviews publications on all aspects of mass communications. Each issue includes about 40 titles with comments, ordering information, price, and length. There are two special issues each year on film books and U.S. Government media related publications.

Reference Collections from France

Microéditions Hachette has appointed Clearwater Publishing Company, 792 Columbus Ave., New York, N.Y., its representative in the U.S. and Canada. More than 500 titles have been published to date.

Standardized

The International Organization for Standardization has published a new standard for microfiche, *Transparent A6 Size Microfiche of Uniform Division-Image Arrangements No. 1 and No. 2*. COM is not included

in this standard. Copies (ISO 2707) are available at \$3.70 from ANSI, Sales Dept., 1430 Broadway, New York, N.Y. 10018.

Chemistry Collected

Harper and Row now has an encyclopedia of *Chemical Technology* in eight volumes. For information write: Harper and Row, Publishers, Inc., 10 East 53d St., New York, N.Y. 10022.

Research Group Founded

The libraries of Harvard, Yale, and Columbia Universities and the research libraries of the New York Public Library have formed a separate corporation to be known as the Research Libraries Group (RLG). It plans to promote economic development of collections, preservation and conservation techniques, and more flexible reciprocal access to resource material and computer-based catalog information. A bibliographic information center is to be established at Yale to collect and disseminate information on the holdings of the four libraries.

Updated

Orth's 1968 *Dictionary of Alaska Place Names* has been updated by Alan E. Schorr. The 34-page publication, *Alaska Place Names*, is available for \$2.00 from Betty Arnold, Administrative Secretary, Elmer E. Rasmuson Library, University of Alaska, Fairbanks, Alas. 99701.

Energy Information List

Florida Technological University has compiled a highly selective nine-page list of articles dealing with the energy conservation problem. Copies are available from the Florida Technological University Libraries, Box 25000, Orlando, Fla. 32816.

OAS Offers Course

A 16-month multinational course on National Library and Documentation Systems for Development at the Graduate School of Librarianship, University of Denver, Colorado. The course will begin Jun 17, 1974. The purpose of the course is to train national and regional teams of experts in the techniques and technology of information management. For information write: Mrs. Marietta Daniel Shepard, Library and Archives Development Program, Organization of American States, 17th St. and Constitution Ave., N.W., Washington, D.C. 20006.

Forecast 1974

The Graduate School of Management, University of California, Los Angeles, has published the "UCLA Business Forecast for the Nation and California in 1974." This monograph contains the proceedings of the 22nd Annual Business Forecasting Conference held Dec 6, 1973. Copies \$12.50 from UCLA Business Forecast, Graduate School of Management, Room 6249C, University of California, Los Angeles, Calif. 90024.

Literature Searching in the Social Sciences

A large-scale computerized search service is now being offered in the social sciences by ISI. Two plans are available. In one, subscribers select topics from a list supplied by the institute. In more specialized cases, a custom search profile is developed. Weekly bibliographies are provided. For more information write to the Institute for Scientific Information, 325 Chestnut Street, Philadelphia, Pa. 19106.

IFLA 1974

The 40th General Council Meeting of IFLA will take place Nov 17-23, 1974, in Washington, D.C. Theme: National and International Library Planning. The Special Libraries Section welcomes selected papers dealing with special library technical organization and planning, their role in setting up and functioning of large-scale information systems and other current problems connected with the national and international library planning. June 1, 1974, is the announced deadline for submitting the papers (in one of the official IFLA languages and not exceeding 10 pages), but later submissions will probably be considered because the announcement was received so late in the U.S. A written summary (not more than 100 words) should be submitted to the IFLA General Secretary not later than Oct 1, 1974 or if this is absolutely impossible, then at the General Council Meeting. Address: c/o ALA Conference Office, 50 East Huron Street, Chicago, Ill. 60611. Copies to: IFLA General Secretariat, P.O.B. 9128, The Hague, Netherlands, and to: Mrs. Elena Savova, Chairman, IFLA Special Libraries Section, 149, Rakovski St., Sofia, Bulgaria.

Pergamon Trade Distributor

The J. A. Majors Company has begun distributing Pergamon Press books. Arkansas, Kansas, Louisiana, Mississippi, Nebraska, Oklahoma, and Texas accounts should order from 8911 Directors Row, Dallas, Tex. 75247. Accounts in Alabama, Florida, Georgia, Kentucky, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia should order from 3770 Zip Industrial Blvd., Atlanta, Ga. 30354.

New Dictionary

The *Hearing Aid Journal* has published a *Comprehensive Dictionary of Audiology* by James Delk. The dictionary is a compiled and expanded form of the column in the *Hearing Aid Journal* and includes standard word lists for speech testing, foreign word lists, abbreviations, and many illustrations. Available for \$7.95 from the *Hearing Aid Journal*, 305 Benson Building, Sioux City, Iowa 51101.

Bibliography on Copper Smelting

This book is now available from its compiler Subhash Malhotra, Metallurgical Research Dept., White Pine Copper Co., White Pine, Mich. 49971. It contains items from worldwide periodical literature covering the last 34 years under 800 subject titles. Price: \$29.95.

Directory of Chicago Libraries

A volume containing detailed descriptions of over 300 libraries and information centers in the Chicago area has been edited by Beth Hamilton and Eva Brown. *Libraires and Information Centers in the Chicago*

Metropolitan Area, 499p., hardbound, is available from the *Illinois Regional Library Council*, 125 Tower Drive, Hinsdale, Ill. 60521. \$10.00.

Merger

ERIC Clearinghouse on Library and Information Service (ERIC/CLIS) was merged with that of the ERIC Clearinghouse on Educational Media and Technology. The new name for these two is the ERIC Clearinghouse on Information Resources (ERIC/IR). All inquiries should be addressed to: ERIC Clearinghouse on Information Resources, Center for Research and Development in Teaching, School of Education, Stanford University, Stanford, Calif. 94304.

Law Reference Book

Computers and Law—A Reference Work has been published by Roy N. Freed, lecturer on law at Boston University Law School. This volume deals with the computer in practical legal questions and in the legal process. Cost: \$25.00. Write: Roy N. Freed, Esq., c/o Peabody, Brown, Rowley & Stone, One Boston Place, Boston, Mass. 02108.

Soviet Journals

The Technical Information Library (TIB), German Federal Republic, has published the second edition of the *Register of Soviet Journals and Periodicals*. This paper-bound document includes 1,900 titles of Journals regularly available from TIB. The register is available for \$2.00 from Universitätsbibliothek und TIB, Dezernat Ost-sprachen-literatur, 3 Hannover 1, Welfengarten 1B, West Germany.

Special Collections Room Dedicated

To honor Safford Harris on the occasion of her retirement this spring, the Georgia Tech Library in Atlanta will designate a floor of the Price Gilbert Memorial Library as the Safford Harris Special Collections Room.

Miss Harris is retiring after nearly twenty-eight years at Georgia Tech. She joined the library staff on Oct 1, 1946,

as documents and serials assistant. As the library's first designated government documents librarian, she made significant contributions to the development of government oriented collections. In recent years, she held the positions of map librarian, patents librarian, and special collections librarian with the rank of associate professor.

COMING EVENTS

May 23-24. New York State Government Document Task Force, workshop . . . at State University College at Oswego. Topic: U.S. and State publications. For information: David Parish, Documents Librarian, Milne Library, SUC Geneseo, N.Y. 14454.

May 23-25. University of Toronto Institutes . . . Faculty of Library Science, University of Toronto. Seminars on: "Classification in the 1970's," and "The People's University: Old and New Roles for the Public Library." For information: Continuing Education Committee, Faculty of Library Science, University of Toronto, 40 St. George St., Toronto M5S 1A1, Canada.

Jun 5-7. National Federation of Abstracting and Indexing Services-ALA seminar . . . at the University of Toronto. Information available from NFAIS, 3401 Market Street, Philadelphia, Pa. 19104.

Jun 9-13. Special Libraries Association 65th Annual Meeting . . . at the Four Seasons-Sheraton, Toronto, Ont., Canada. Theme: Problem Solving in Libraries in the '70s. For information: Special Libraries Association, 235 Park Ave. So., New York, N.Y. 10003.

Jun 15-21. Executive Development Program for Library Administrators . . . School of Business Administration, Miami University. Contact Robert H. Myers, School of Business Administration, Miami University, Oxford, Ohio 45056.

Jun 17-19. Communications, IEEE International Conference . . . at Leamington Hotel, Minneapolis, Minn. Contact: E. D. McDonald, Institute of Electrical and Electronics Engineers, 345 E. 47th Street, New York, N.Y. 10017.

Jun 17-20. American Theological Library Association Annual Conference . . . at Iliff School of Theology, Denver, Colo. Write: Jerry Campbell, Iliff School of Theology, 2233 South University Blvd., Denver, Colo. 80210.

Jun 17-21. Computer Micrographics Technology forum . . . at the Internationale Hotel, Atlanta, Ga. For details: Al Aron, COMtec, 3448 Meridian Ave., San Diego, Calif. 92115.

Jun 19-20. Information Management Symposium . . . at the Sheraton Inn, Greater Pittsburgh International Airport. Sponsor: University of Pittsburgh, Office of Continuing Education. For information: Director of Continuing Education, 418 Cathedral of Learning, Univ. of Pittsburgh, Pittsburgh, Pa. 15260.

Jun 23-25. National Conference for Church and Synagogue Libraries . . . Simmons College, Boston. Purpose: To offer practical guidance for volunteers organizing and operating such libraries. Write: Church and Synagogue Library Association, P.O. Box 530, Bryn Mawr, Pa. 19010.

Jun 23-26. American Association of Law Libraries, annual meeting . . . at the Hilton Hotel, St. Paul, Minn.

Jun 23-26. Association of Jewish Libraries, 9th Annual Convention . . . at the Pick Congress Hotel, Chicago. For information: Samuel M. Aksler, Convention Chairman, Asher Library, Spertus College of Judaica, 72 East Eleventh Street, Chicago, Ill. 60605.

Jun 23-26. College Art Association of America, annual meeting . . . in Detroit and Ann Arbor, Mich. Theme: Visual Documentation. Contact: The College Art Association of America, 432 Park Avenue South, New York, N.Y. 10016.

Jun 24-29. Program Planning and Budgeting for School Library Media Programs Workshop . . . at University of Maryland, College Park. For information: Dr. James W. Liesener, College of Library and Information Sciences, University of Maryland, College Park, Md. 20742.

Jun 26-Jul 5. Scandinavian Summer Seminar 1974 . . . Copenhagen. Topic: Public Libraries in Scandinavia. Write: Det Danske Selskab, 2, Kultorvet, Dk-1175, Copenhagen, Denmark.

Jul 1-Aug 6. Law Librarianship, seminars . . . University of North Carolina, Chapel Hill. Topics: Law Librarianship and Legal Bibliography. Registration deadline May 10. Write: Ms. Jean Freeman, Assistant to the Dean, School of Library Science, University of North Carolina, Chapel Hill, N.C. 27514.

Jul 5-6. American Library Association-Library of Congress workshop . . . in Washington, D.C. Intended primarily for serials librarians. Pre-registration June 1. Application forms from H. Linville, Serials Section, RTSD, University of California Library, Santa Barbara, Calif. 93106.

Jul 7-13. Library Automation Workshop . . . New York. Sponsor: Richard Abel. Write: Abel Workshop Director, Richard Abel & Co., Inc., P.O. Box 4245, Portland, Ore. 97208.

Jul 9-11. Computer Simulation Conference . . . Hyatt Regency Hotel, Houston, Texas. Topic: Simulation in Perspective. Write: Dr. R. L. Motard, Department of Chemical Engineering, University of Houston, Houston, Texas 77004.

Jul 10. "Government Publications in Machine-Readable Form: A New Tool for the Reference Librarian," panel discussion . . . New York. A part of ALA's 1974 New York Conference. For information: Judith Rowe, Princeton University Computer Center, 87 Prospect Ave., Princeton, N.J. 08540.

Jul 15-17. Conference on Computer Graphics and Interactive Techniques . . . University of Colorado, Boulder, Colo. Write: R. L. Schiffman, Computing Center, University of Colorado, Boulder, Colo. 80302.

Jul 15-19. Gordon Research Conference on Scientific Information Problems in Research . . . at Colby College, New Hampshire. For information: Dr. Alexander M. Cruikshank, Pastore Chemical Laboratory, University of Rhode Island, Kingston, R. I. 02881.

Jul 15-19. Institution of Electrical Engineers . . . London, England. Topic: Frontiers in Education. Write: The Conference Department, Institution of Electrical Engineers, Savoy Place, London, England WC2R 0BL.

Jul 28-Aug 9. Library Administration Development Program . . . College of Library and Information Services, University of Maryland. Write: Mrs. E. T. Knight, Administrative Assistant, Library Administrators Development Program, College of Library and Information Services, University of Maryland, College Park, Md. 20742.

Jul 29-Aug 1. Jerusalem Conference on Information Technology . . . in Jerusalem. Theme: Computers for Social and Economic Development. Sponsor: Jerusalem Economic Conference. Contact: Dr. Herbert Maisel, Director Academic Computation Center, Georgetown University, Washington, D.C. 20007.

Jul 29-Aug 23. Eighth Annual Archives Institute . . . Atlanta, Ga. Sponsored by Division of Librarianship, Emory University, and Georgia Department of Archives and History. For information write: Archives Institute, Georgia Department of Archives and History, Atlanta, Ga. 30334.

Aug 4-24. Society of American Archivists, International Archival Affairs Committee, Study Tour: Archives of South America . . . Lima, Santiago, Buenos Aires, Sao Paulo, Rio de Janeiro, and Caracas. Write: SAA International Archival Affairs Committee, Frank B. Evans, National Archives Building, Room 5E, Washington, D.C. 20408.

Aug 5-6. 37th Annual Conference of the University of Chicago Graduate Library School . . . at the Center for Continuing Education, University of Chicago campus. Topic: Differentiating Media. Write either Lester Asheim or Sara Fenwick, Graduate Library School, University of Chicago, 1100 East 57th Street, Chicago, Ill. 60637.

Aug 5-10. International Federation for Information Processing, Congress 74 . . . Stockholm, Sweden. For information: IFIP Congress 74, Box 426, New Canaan, Conn. 06840.

Aug 5-10. World Conference on Medical Informatics (MEDINFO) . . . in Stockholm. Write Prof. F. Grimy, Centre de Calcul et de Statistique, 91 Boulevard de l' Hôpital, F75634 Paris 13, France.

Aug 12-14. International Conference on Computer Communications . . . Stockholm, Sweden. Write: E. E. Boyer, 1860 Wiehle Ave., Reston, Va. 22090.

Sep 22-28, 1974. Aslib, 48th Annual Conference and 50th Anniversary Celebration . . . at Churchill College, University of Cambridge. Reservations due Aug 1, 1974. Theme: Tools, Techniques and Sources. Write: Conference Organiser, 3 Belgrave Sq., London SW1X 8PL, England.

Sep 29–Oct 2. Pennsylvania Library Association, Conference . . . at Host Farm Resort, Lancaster, Pa. Theme: Public Relations—A Library Tool.

Oct 13–17. American Society for Information Science, 37th Annual Meeting . . . in Atlanta, Ga. Write: ASIS, 1140 Connecticut Ave., N.W., Washington, D.C. 20036.

Oct 16–Nov 18. General Conference of Unesco, 18th session . . . Paris.

Nov 16–23. IFLA, 40th General Council Meeting . . . Washington, D.C. Theme: National and International Planning for Libraries. Write: K. M. Stokes, Association of Research Libraries, 1527 New Hampshire Ave., Washington, D.C. 20036 by July 1, 1974.

REVIEWS

Annual Review of Information Science and Technology, Volume 8, 1973, C. A. Cuadra and A. W. Luke, eds. Washington, D.C., American Society for Information Science, 1973. 411p. \$22.50.

Each year, Dr. Cuadra is able to produce an excellent book covering the year's activities in information science. The contributors to this year's volume have all done a fine job and deserve commendation.

If anyone is interested in learning what has taken place through the year in information science, this book is a must. For anyone who is very active in librarianship, the ARIST volumes are a fast way to keep up with the latest work in the field. There is no other publication in the field that can match it. I am pleased to find that each year the same high level of writing and reporting continues.

I was most impressed with the review written by Edwin Parker entitled "Information and Society." Perhaps this is due to my interest in forecasting the future. All the elements that are possible for the near future are outlined in Parker's contribution. He bases his contribution on the assumption that three factors are responsible primarily for the quality of life: matter, energy, and information. And Parker goes on with this thread of thought, concluding that it is in the area of information where the greatest gains for society will be made. Also Parker examines four currently changing facets of communication technology which he defines as communication satellites, video recording, computer services and cable television. Our society will indeed be changed by the further sophistication of these four areas of human activity.

I can recommend ARIST-8 without qualification. For those librarians doing any research, it is essential. For the librarians who want to know what is going on, here is a single source which reviews many areas.

Masse Bloomfield
Hughes Aircraft Corporation
Culver City, Calif. 90230

Cost Reduction for Special Libraries and Information Centers, edited by Frank Slater. Washington, D.C., American Society for Information Science, 1973. 187p. \$10.75.

The aim of this book is to try to define in general terms "cost reduction in libraries and information centers." This quote comes from the "Introduction." The title suggests special libraries are a major subject in this book. However, the "Introduction" defines the book more generally and more correctly.

The book is divided into two sections. The first section attempts to define cost reduction policies in general terms. The second portion of the book gives particular case studies. I was disappointed with the second section. When talking about cost reduction in general terms, there can be little to argue about for it is almost like being for God and Motherhood. No one can go wrong on these kinds of subjects.

However, when it came to particular situations, there was a good bit of trouble in clarifying how the cost reduction was achieved. For all the cases I could find none which would translate into economy for my own library. One of my objectives in reading this book was to find some technique whereby I could reduce costs in my own library. I think I am as cost conscious as the next librarian. But this set of papers didn't provide me with a clue.

The papers in this book were given at a conference held in Dayton, Ohio, May 1972. There were probably helpful discussions at the conference and, therefore, people who attended might say it was a good conference. The translation of the conference into print cannot evoke a similar impression from me.

Masse Bloomfield
Hughes Aircraft Corporation
Culver City, Calif. 90230

* *

PUBS

(74-043) **Worldwide Directory of Computer Companies, 1973-1974.** Waters, Marie B., ed. Orange, N.J., Academic Media, 1973. viii,633p. \$39.50 LC 77-114301 ISBN 0-87876-33-4 CIP

Revision of the *World Directory of Computer Companies* (Computer Publs., 1970). Includes private and public firms supplying hardware, software, time sharing, optics, leasing and other products and services. Each listing provides address, key company personnel, product information, and financial profile. Geographic, personnel, major activity and business sector indexes.

(74-044) **A Guide to Selected Microform Series and Their Indexes.** Olevnik, Peter. Champaign, Grad. Sch. of Libr. Sci., Univ. of Ill., May 1973. (Occasional Papers, no.106) 63p. ISSN 0073-5310. Single copy free.

Reflects the holdings of the Milner Library, Ill. State Univ. Annotated and indexed.

(74-045) **Of, By, and For Librarians, 2d Series.** Marshall, John David, comp. Hamden, Conn., Shoe String Press, 1974. (Contributions to Library Literature, 10) x,242p. \$8.00 LC 73-16428 ISBN 0-208-01333-4 CIP

Two dozen articles from a variety of sources originally published between 1954 and 1972. Includes Charlotte Georgi's "This Librarian's Credo" (1966).

(74-046) **Directory of Spoken-Voice Audio-Cassettes.** McKee, Gerald, ed. Los Angeles, Cassette Information Services (Box 17727, Los Angeles 90057), 1974. 106p. Apply. LC 73-19090

Adult and college level material arranged by producer with title and subject index. Each entry includes price and ordering information with brief description of contents.

(74-047) **The 1974 International Businessman's Guide to Official Washington: Whom to See, Where to Go, What to Do.** Joyner, Nelson T. Jr., comp. Rockville, Md., Rockville Consulting Group (P.O. Box 1364), 1973. loose-leaf \$150.00

Limited first edition of 500 copies. Price includes update service.

(74-048) **British Official Publications, 2d ed.** Pemberton, John E. Elmsford, N.Y., Pergamon Press, 1973. xiv,328p. \$9.00 LC 73-16231 ISBN 0-08-017797-2 CIP

Updates and revises the 1971 edition including a new chapter on non-HMSO publications. A guide rather than a directory, it describes the publications within the context of the governmental process from which they are issued. Essential for those involved with official British publications.

(74-049) **International Directory of Programmed Instruction.** Paris, UNESCO, 1973. 191p. \$6.50 LC 73-79981 ISBN 92-3-001102-9 (Order: Unipub, Box 433, N.Y. 10016)

Arranged by country, each listing includes the country's organizations and activities, publications, and research and applications. Compiled under the direction of the Institut National pour la Formation des Adultes, Paris.

(74-050) **Information Science and the Theatre.** Valeriu, Moldoveanu. *Probleme de Informare Si Documentare* 7(no.12): 1004-1039 (Dec 1973).

This article includes a section on the Automated National Documentation and Record System in the Field of Culture and Arts, Romania.

(74-051) **British Library Resources: A Bibliographical Guide.** Downs, Robert B. Chicago, Amer. Libr. Assn., 1973. xvi,332p. \$25.00 LC 73-1598 ISBN 0-8389-0150-6 CIP

Attempts to record all published library catalogs, checklists of and descriptive articles on library collections, union lists and library guides to the resources of the United Kingdom and Eire. This guide is a companion to the author's *American Library Resources* (1962, Suppl. 1972).

(74-052) **Archives Procedural Manual.** St. Louis, Washington University, School of Medicine Library, 1974. 118p. \$5.00 ISBN 0-912260-07-6

Although the archives described deal with scientific manuscripts, the principles can apply to other types of manuscript collections. Includes several job descriptions and flow charts of operations.

(74-053) **Periodical Holdings of the Weizmann Institute of Science Libraries, 5th ed.** Rehovot, Israel, The Wix Library (P.O.B. 26), Dec 1972. 258p. Apply.

In English.

(74-054) **Directory of Associations in Canada.** Land, Brian, ed. Toronto, Univ. of Toronto Press, 1974. xlii,393p. \$35.00 LC 73-85085 ISBN 0-8020-4503-0

English and French listings with subject index.

(74-055) **The Literature of Geography: A Guide to Its Organisation and Use.** Brewer, J. Gordon. Hamden, Conn., Linnet Books, 1974. 208p. \$10.50 LC 73-10088 ISBN 0-208-01196-X CIP

Introduction to the bibliographic structure and classification of geographical literature. Describes and assesses the usefulness of many guides, bibliographies and reference works.

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POLLUTION DETECTION AND MONITORING HANDBOOK by M. Sittig: Contains directions for sampling in air or water, followed by such qualitative and quantitative analytical methods as are suitable for identification and determination of pollution levels. Also gives measurement techniques for repeated or continuous monitoring. ISBN: 0-8155-0529-9; 401 pp.; \$36

TABLET MANUFACTURE by J.C. Johnson: About half of the methods given involve excipients, matrix materials and binders, also coating materials and lubricants. Others cover tablet structures and manufacturing processes. The preparation of non-medicinal tablets is also described. ISBN: 0-8155-0530-2; 270 pp.; \$36

FOOD ACID MANUFACTURE—RECENT DEVELOPMENTS by A.A. Lawrence: Covers a wide range of processes for the economical preparation of acidulant food acids by chemical and microbial fermentation methods. Also shows how substantial savings may be effected in the manufacture of carbonated beverages, fruit drinks and confections by judicious use of the proper acid. ISBN: 0-8155-0531-0; 302 pp.; \$36

MICROBIAL ENZYME PRODUCTION by S.J. Gutcho: Written for industrial microbiologists, enzymologists, biochemists, food technologists and others who are interested in the economical production and efficient application of microbial enzymes. ISBN: 0-8155-0532-9; 272 pp.; \$36

PRINTING AND DYEING OF FABRICS AND PLASTICS by R.W. James: Gives specific pretreatments, dyeing and printing ink formulations, fixation agents and processing technology consistent with the modern high speed, low cost needs of this vast industry. ISBN: 0-8155-0533-7; 275 pp.; \$36

SAUSAGE CASING TECHNOLOGY by E. Karmas: Traditionally prepared casings from animal intestines have given way to palatable synthetics. Regenerated cellulose and reconstituted collagen are used for the major portion of sausages sold today, including fresh pork sausage and the popular frankfurter. 124 processes. ISBN: 0-8155-0534-5; 367 pp.; \$36

CARIBBEAN INVESTMENT HANDBOOK by C.M. Jonnard: Designed as a reference manual of business procedures and conditions and as a management tool for reaching meaningful conclusions before making critical investment decisions. Offers a comprehensive analysis of all the major Caribbean and West Indian countries, emphasizing the impact of political events upon commerce and industry. ISBN: 0-8155-0535-3; 307 pp.; \$24

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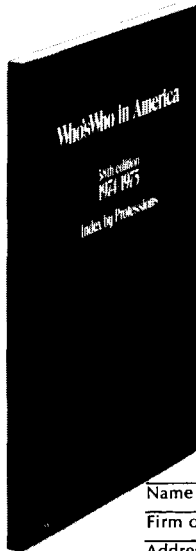
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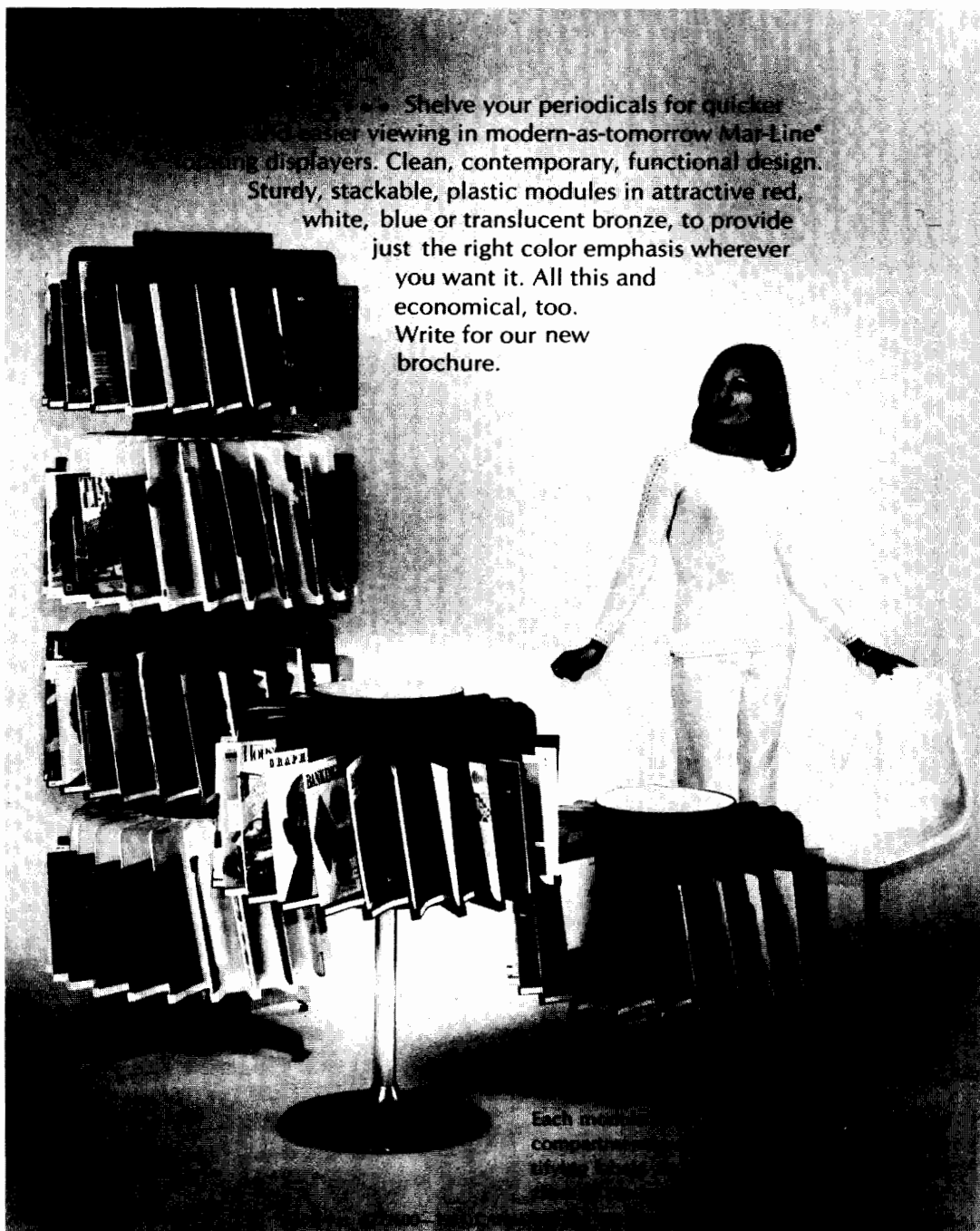


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Administration and Systems Librarian—MALS, MA, BS. 12 years innovative science, systems, micromedia, and educational experience. Seeking admin., information specialist (reference, tech. servs., systems) position. Box E-215.

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Bell Laboratories has a new opening for a Technical Reference Librarian at its Naperville, Illinois location. Responsibilities include providing technical information and literature searching services for a professional, scientific community.

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Agriculture-Forestry Librarian—Responsible for public service to faculty and students; assists in development of collections in fisheries, wildlife, agriculture, forestry and related biological sciences; involves some classroom and library lectures. Qualifications: MLS, MS in plant sciences, agriculture, forestry, fisheries or related biological science; minimum, seven years as professional librarian, with minimum, five years experience providing reference service in subject areas listed, preferably academic library. Public service background essential. Faculty status, salary range \$13,500-\$16,000 depending upon education and experience. Send resume to Rodney K. Waldron, Director of Libraries, Oregon State University, Corvallis, Ore. 97331. Closing date, Jul 1, 1974. Equal Employment Opportunity/Affirmative Action Employer.

Chemical Engineering Librarian

Requires fifth year degree from accredited library school with B.S. in Chemistry or Ch.E. or equivalent experience. Will be responsible for acquisitions, reference and information retrieval in fields of fuels (including coal), air pollution, waste management, sodium technology, nuclear reactor fuels, liquid metals and other applied research. Will work with Chemical Engineering collection of 100 journals, 4,000 books and 4,500 reports—one of eight subject-oriented branches in this special library system—and will be supported by centralized technical services. Must have facility with computer terminal operation in the searching of several machine-readable data bases. Will also maintain profiles in broad SDI system. Salary from \$10,000 depending upon experience. Work will be enhanced by the exceptional facilities at our suburban Chicago location.

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The National Enquirer—(Located in Lantana, Fla., outside Palm Beach) Seeks Head for the Research Department. Experience in newspaper or magazine research required. Prefer someone with management background. Minimum starting salary \$15,000 per year. Contact Miss Trachtenberg, The National Enquirer, 600 Southeast Coast Avenue, Lantana, Fla. 33462.

POSITIONS OPEN

Reference Librarian—To work in the Research Department of a large progressive union concerned with a variety of social, economic and political issues affecting labor. A background in economics, library qualifications and sympathy with the aims and objectives of the labor movement are desirable. Salary up to \$12,500 per annum depending on experience and qualifications. 35-hour workweek with regular hours. Blue Cross, severance and pension provisions. UAW, Timothy E. Nulty, Director, Research Department, Solidarity House, 8000 East Jefferson Ave., Detroit, Mich. 48214.

Supervisor, Information Research—An attractive opportunity exists in our Technical Library for a supervising information specialist capable of executing in-depth engineer/scientific literature searches, utilizing both manual and computerized techniques. A bachelor's degree in science is desirable. An MLS in library science plus a minimum of three years of supervisory experience in the field of technical reference or literature searching are required. Hughes is an equal opportunity M/F employer. U.S. citizenship required. Please apply in person or forward your resume to: Mr. Carey M. Baker, Hughes Aircraft Company, Aerospace Engineering Divisions, 11940 W. Jefferson Blvd., Culver City, CA 90230.

POSITIONS OPEN

Marine Science Librarian—Position requires a BS in one of the natural sciences as well as a MLS. Significant experience in a Science Library required; experience in a Marine Science Library is preferred. The successful applicant will take charge of an expanding marine science library facility, and be completely responsible for meeting the reference needs of over 300 faculty, research staff, and students. Experience in squeezing blood from turnips and the ability to leap tall buildings in a single bound would be of inestimable value. The position will be available after June 1, 1974. Rank and Salary are open. Send resume and names of three references to: Librarian Search Committee, c/o Dr. James S. Mattson, Rosenstiel School of Marine and Atmospheric Science, University of Miami, 10 Rickenbacker Causeway, Miami, Florida 33149. The University of Miami is an equal opportunity/affirmative action employer.

Australian Institute of Marine Science—has been established as a Statutory Authority by Act of the Australian Parliament. Under its Act, the Institute will perform research in marine science and cooperate with other institutions performing research in marine science. The Institute will be located at Cape Ferguson, south-east of Townsville and will have as its principal early objective the study of the Great Barrier Reef and neighbouring waters.

Scientific Services Officer—Information Officer/Librarian. To establish, acquire and administer a specialized marine science library and a current awareness service for a senior scientific staff of about 25.

Qualifications: A recognized library qualification is necessary. A degree in a natural science and some understanding of the technology applicable to library and information services are desired.

Salary: Appointment will be made within the salary range of Scientific Services Officer \$A9,397–\$A12,364 p.a. An outstanding applicant may be offered appointment at a higher level.

Tenure. The position is permanent and carries the superannuation benefits provided for permanent officers of the Australian Government, unless otherwise negotiated between the Institute and a successful applicant. Fixed term appointments are possible. Reasonable relocation expenses will be met by the Institute.

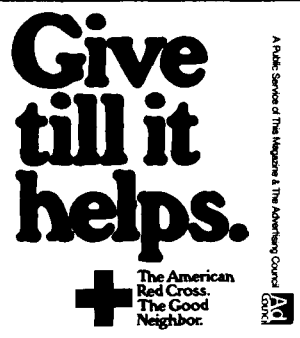
Applications, giving details of qualifications, experience and personal particulars, and the names of three professional referees are invited for the position described. They should be addressed to the Secretary, The Australian Institute of Marine Science, P.O. Box 119, Woden, A.C.T. 2606, Australia. Closing Date: 30 June 1974.

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