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Special Libraries, August 1980

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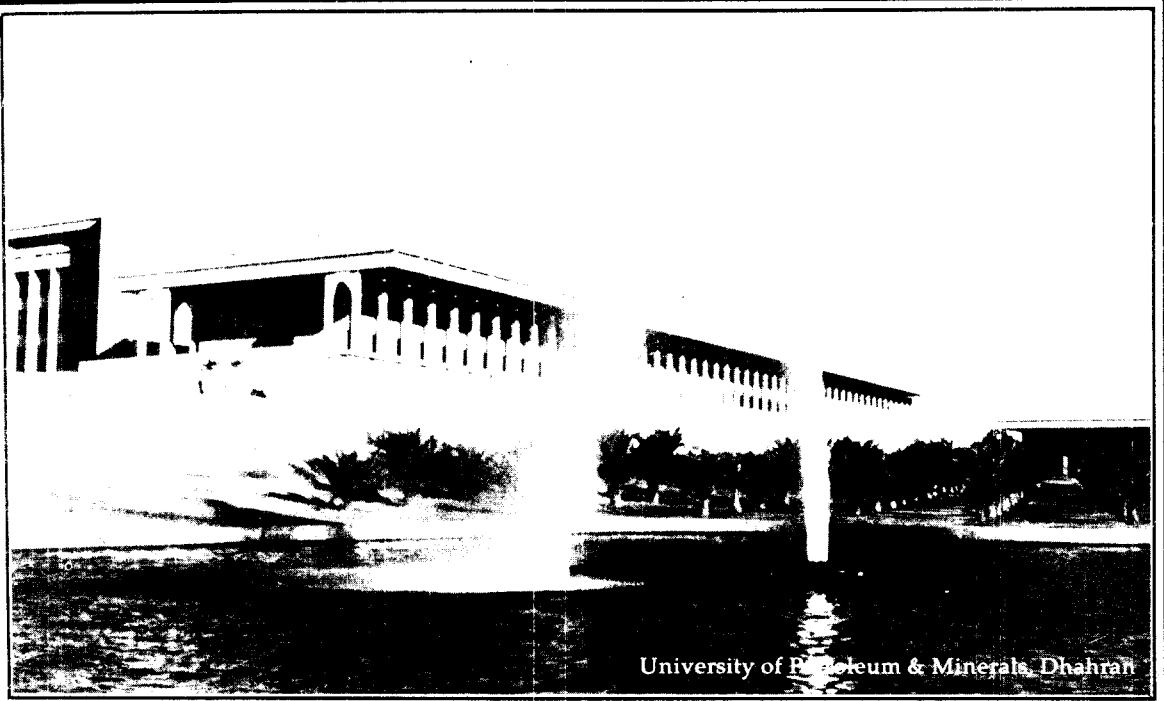
August 1980, vol. 71, no. 8

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SPLBAN 71(8)335-372 (1980)
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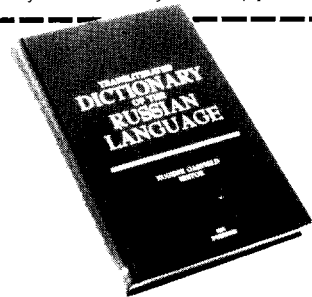
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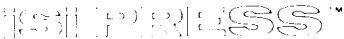
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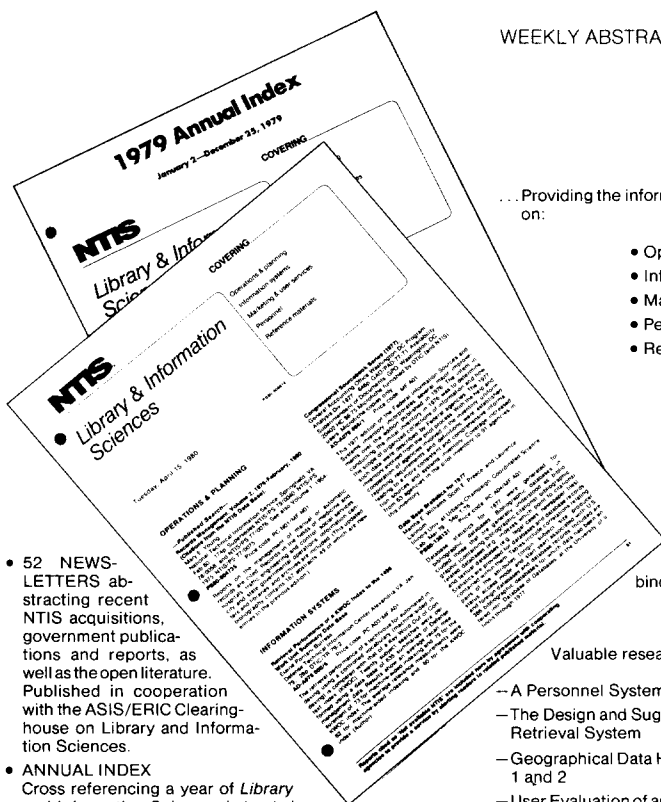
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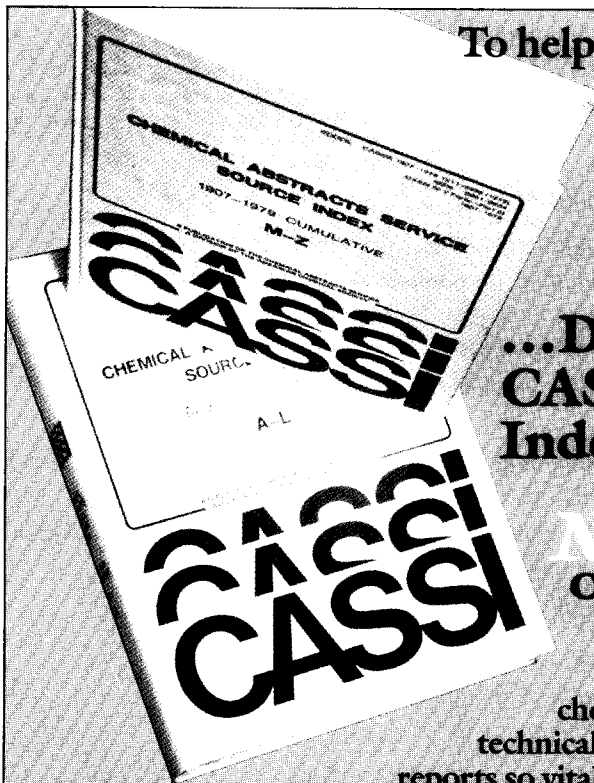


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LETTERS

User Study Analysis

I started reading, "A User Study of the Alberta Alcoholism and Drug Commission Library," [SL 71 (no. 1): 22-29 (Jan 1980)] thinking I would learn about the information needs or information seeking-behavior of users. But, Groves and Davis did not in any way analyze the behavior of the library users. Instead, they based their findings on literature searches performed by a librarian and her three technicians. The generalizations and findings derived in the article are more appropriately assigned to the librarian and her staff rather than to the user groups.

Although the model presented by Groves and Davis is sound, another shortcoming of the study is that the authors fail to provide a theoretical basis for expecting empirical differences between user groups. Why, for example, do the administrator groups' questions require less time, more frequent use of online indexes, and an equal use of books and articles? What types of information are sought by each of the user groups that would lead the researchers to expect certain relationships to occur? The methodology employed by the authors is incapable of answering these important user behavior questions. Groves and Davis used chi square to establish that tested differences were not due to chance alone, but they did not measure the *degree of association* between variables. The calculated chi square value of 10.2 for Table 2 is significant according to the authors, but I calculated a Lambda value of .049 for this table. The weak Lambda value indicates that the type of material to be used cannot be predicted on the basis of the type of user. This measure of association is needed to support the theoretical basis of the empirical relationships.

While I agree with the authors that quantitative analysis should be used in library decision-making, the statistical analysis employed in this article fails to explain user behavior in a meaningful way for library decision-making. In fact, a qualitative analysis of the subject content of questions posed by the special library's clientele would, in my opinion, have revealed far more to a library decision-maker than does the analysis provided by the authors.

Mary M. Howrey
Northern Illinois University Libraries
DeKalb, Ill. 60115

Authors' Reply

We wish to correct Ms. Howrey's impressions, while thanking her for her expression of interest in our work. It seems that instead of evaluating our work on its own merits, she has faulted us for not having conducted the study that she might have wished to perform.

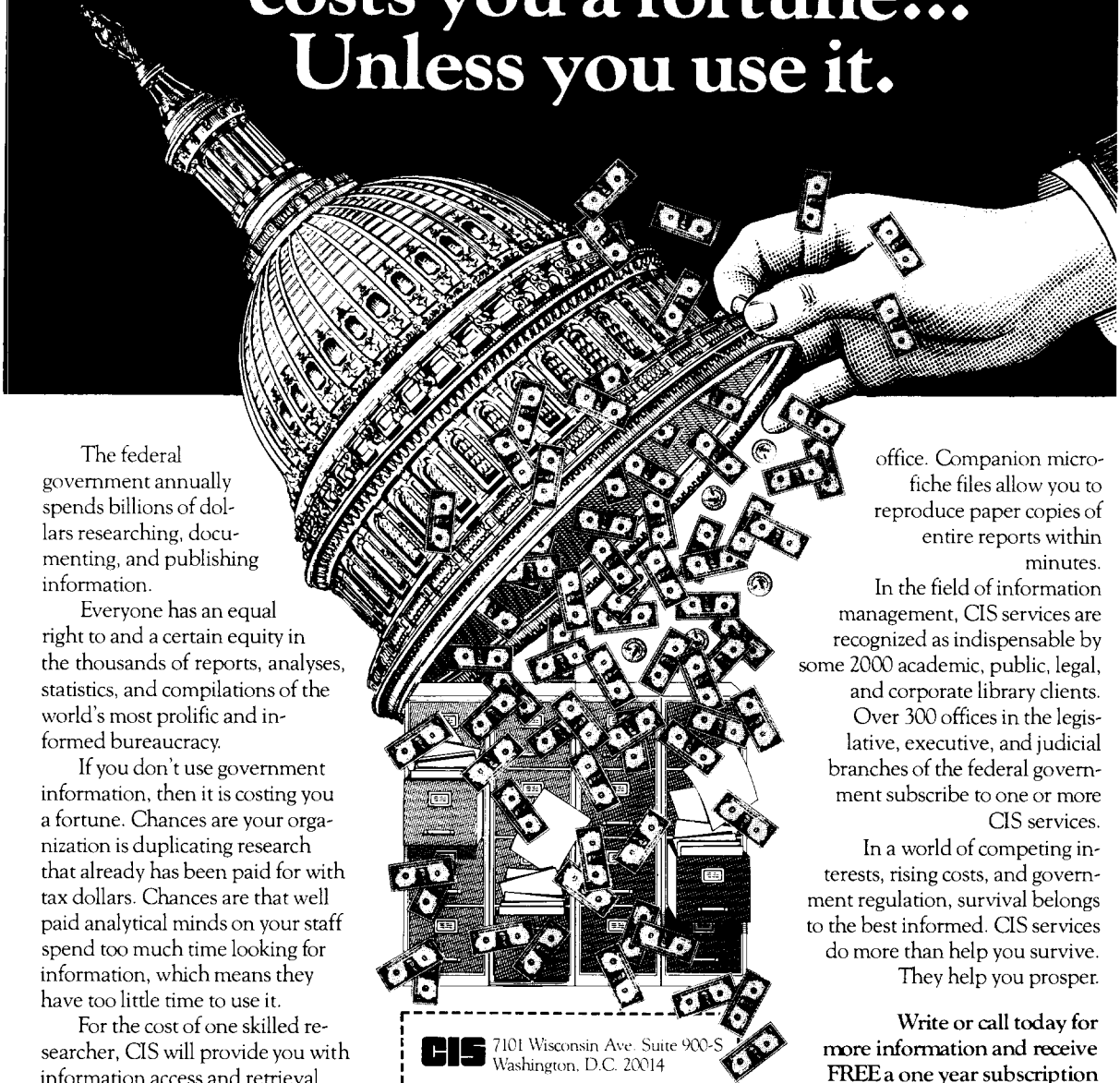
As noted in her letter, the model we present is sound, and represents a straightforward observational study of the AADAC Library's users. We used worksheets prepared by qualified staff members in direct response to users' specific requests for information. Our purpose was not to determine *why* differences might occur between different user groups, but rather to establish *whether* such differences existed and to what extent the differences might be significant.

Qualitative or descriptive analyses, while useful, are insufficient for establishing levels of significance, and the chi square test is entirely appropriate for use in this context. There is also every reason to think that the administrators, counselors, and consultants differ substantially; therefore, the calculation of a Lambda value represents an unnecessary complication. Ms. Howrey forgets the value of professional judgment, which enables librarians to classify their clientele in meaningful ways that do not require "theoretical" justification. If we were unable to make such distinctions, we could, in fact, do very little for anyone. And finally, the suggestion that qualitative analysis alone would have been better than the basic inferential analysis we provided, particularly considering the current state of the library literature, is simply mischievous.

Bette Groves
Charles H. Davis
Graduate School of Library Science
University of Illinois at Urbana-Champaign
Urbana, Ill. 61801

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PRESERVATION OF LIBRARY MATERIALS PROCEEDINGS OF A SEMINAR

Joyce R. Russell, Editor

1980/soft cover/8½" x 11"/ISBN 0-87111-270-1

Presents an overview of bookmaking, maintenance and the preservation techniques that are most effective for those attempting to preserve their collection for tomorrow. Such recognized authorities as Susan Swartzburg, Pamela Darling, Paul Banks, William Spawn, Stephen Roberts, Warner Rebsamen, Gaylord Brynolfson, Peter Johnson, Robert Boak, George Kelley, Jr., Helga Borck, and Ann Russell discuss the use of mass deacidification, lamination and encapsulation of archival materials, and other safeguards.

A Model Automated Resource File for an Information and Referral Center

Loretta K. Mershon

Wake County Department of the Library, Raleigh, N. C.
27601

■ **Library information centers help their clientele understand what community service agencies are available to aid them and how they can get help from those organizations. The primary tool used by these centers is a data file which describes local human service providers. Both automated and manual systems are used to create these files. The advantages of an automated file are discussed. The same type of system used to create an automated catalog of traditional library materials (bibliographic data processing with MARC-type records) can produce a "catalog" of service organizations. A model of such a file is discussed and described.**

FOR GOVERNMENT, business, and the average citizen, accurate information is a must for survival in today's complicated world. Childers and Post have defined information as discrete pieces of meaningful data, the raw material used in making decisions and taking action (1). The soundness of a decision will be affected by the quality of the information on which it is

The author is currently software librarian at Data General Corporation, Research Triangle Park, N.C.

based. However, our society has become so complex that it is often difficult to know where to find the information we need, particularly about community human service agencies.

During the past decade information and referral centers have sprung up in libraries all over the country. These centers provide a variety of services: "The main functions of an information and referral service are a) linking people in need with the agency or service designed to eliminate or alleviate that need, and b) assisting the

community to plan its services by exposing gaps, overlaps, and duplications in existing programs" (2). Childers' article, "The Neighborhood Information Center Project," contains a more detailed discussion of information and referral service (3).

The most important tool used to provide information and referral services is the resource file—an organized, cross-referenced collection of information about the available human service programs in a particular geographic area or for a particular target group of the population (e.g., the elderly) which the information and referral center serves.

Standards

A number of groups, including the Alliance of Information and Referral Services (AIRS) (4), the North Carolina Statewide Information and Referral Project (CARE-LINE) (5), and both InterStudy (6) and the Information Center of Hampton Roads (Virginia) (7), have formulated standards for information and referral services and for the resource files they use. Although the standards and recommendations vary in detail, their overall intent is quite similar.

Federal requirements for resource files state that the file should be relevant to its users' needs and should be updated every six months to maintain accuracy. Information should be classified by the name and nature of the functions of agencies and by the types of services provided; the classification system employed should be one that is common to information and referral services statewide (5, pp. 3-4). The Information Center of Hampton Roads recommends that the information in the file should be "all of the available public information on an agency which is needed to make intelligent referrals" (7, p. 13).

The most detailed standards have been provided by the Alliance of Information and Referral Services (AIRS). It recommends three types of lists of

human service programs: "1) an alphabetical list by name(s) and appropriate cross-referencing of all public, private, and voluntary organizations that provide essential human services and opportunities, 2) a service or problem-category file with extensive cross-references; and 3) a file by area of organization(s) and service(s) in commonly accepted geographical or political subdivisions" (4, p. 7). In addition, AIRS recommends specific items of information about each agency to be included and suggests standards for the classification system used to provide subject access in the file:

[The information center] shall utilize a classification system to standardize service definitions, to facilitate retrieval of service information, to increase the reliability of planning data generated by service deliverers, to make comparison and evaluation processes consistent and reliable and to facilitate national networking (4, p. 8).

AIRS further suggests that a national classification system be used and that variations in it be made only to adapt it to the nature of the community being served rather than to change its basic outline.

Why Automate?

The resource file may be compiled and maintained manually, but there are many reasons to automate the process. Manual maintenance is extremely time-consuming, labor intensive (and therefore expensive), and inflexible, especially when there is a large amount of material to be processed.

No matter which way the resource file is handled, the initial information-assembling will take a great deal of time and painstaking effort. However, once the information is gathered, an automated system can save much future effort and be more responsive to its users' needs than can a manual system. If the system is carefully designed, many types of reports, catalogs, and indexes can be generated with little expenditure of staff time; format can be



varied if necessary; changes can be made to an agency's entry without affecting the entire resource file. Points of access to the information are greatly increased, adding to the file's utility.

While automation takes over the routine tasks of file maintenance, it does not necessarily reduce staff costs, although it does alter staff orientation. Because more business may be generated by an automated system, the same amount of staff will be needed; personnel must also have the expertise to handle higher skilled positions than before.

Bibliographic Processing Systems

A bibliographic processing system is a collection of computer programs designed to process bibliographic records and to create reference tools giving users greater access to a library's collection. Such a system is appropriate for the type of resource file described above.

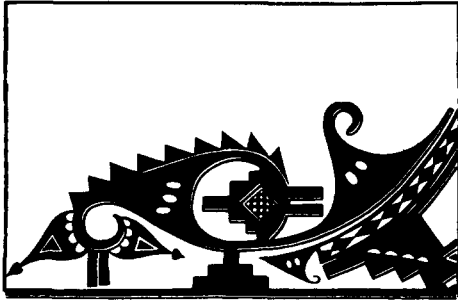
In any cataloging system, facilities must be available to create two things: 1) a uniquely identifiable record of the information necessary to describe each item in the collection (in this case, human service agencies), and 2) some method of providing meaningful access to the resulting collection of records. A bibliographic processing system possesses both of these facilities. It also offers a wide range of ordering and formatting options, making it flexible to deal with many types of collections.

The functions of the system are information storage, rearrangement, and retrieval.

The master file in such a system is a series of records describing the items to be cataloged. A system using a MARC format, in which individual pieces of data about each agency are placed in fields and subfields, allows a great deal of flexibility in the construction of reference tools. It also allows for great variety within the individual records both in the amount of data and its length. This is especially important when dealing with the type of resource file under discussion here, because there is likely to be wide variation in the amount and types of information that are available on different kinds of agencies. Some agencies are fairly small and simple, offering few services or limiting them to a small segment of the population. Others are extremely complex in organizational structure, in the types and number of services offered, and in eligibility requirements for various kinds of aid. This is especially true of government-sponsored agencies, such as departments of social services.

Each record in the master file is analogous to a catalog card in the traditional library card catalog. In the case of an information and referral center resource file, the major differences are 1) that each record is about an agency rather than a book or other standard library material, and 2) that more detailed information is provided about an agency than would be offered about library holdings.

The production of reference tools generally requires the selection of a subset of records from the master file and the reorganization of those records into an order and format meaningful to the file's users. A flexible system must allow the designer of the resource file to specify how records will be chosen and organized within each reference tool. For instance, if a list of all agencies serving a particular geographical area is needed, the computer must be able to select all agency records containing that area as the contents of the "geographic



area served" field. Then records can be placed in alphabetical order by agency name for easy access. Or, agencies may be listed according to the services they provide; in this case, the information would be cross-referenced so that each agency would be listed alphabetically under every service it provided (and services would also be alphabetically arranged).

The record processing system used to create this model resource file was the Bibliographic/MARC Processing System developed for the Technical Information Service Library of the Carolina Population Center, University of North Carolina, Chapel Hill. This system offers a great deal of flexibility in specifying both selection and ordering options.

Another important feature of a bibliographic processing system, such as MARC, is a mechanism for communicating specifications to the computer regarding the print format of the reference tool. A wide variety of print options allows the resource file designer flexibility in formatting the information, as well as adding descriptive headings and title pages as desired.

Cataloging Considerations

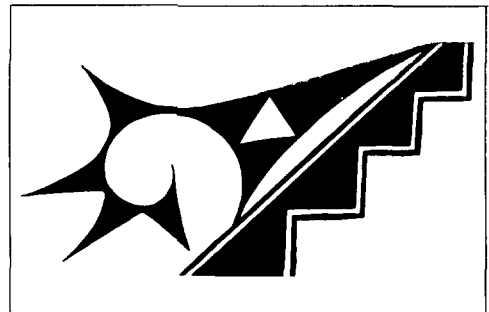
Designing a cataloging system is a circular process. One must decide what kinds of reference tools will be needed by the system's users, what purpose they will serve, and how they will be used. What items of information will need to be included in each tool? By what means will the user be able to retrieve the discrete pieces of data

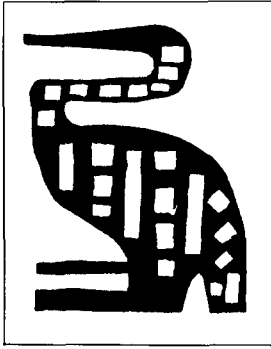
contained in the system? All of these considerations will have a bearing on what goes into the record of each item in the collection; likewise, what is in the record will have a bearing on the type of tools that can be produced. The creator of such a system will need to consider the design of both individual records and reference tools interdependently because they are inextricably intertwined.

The Model Resource File

In order to explore the feasibility of applying a bibliographic processing system to a specific file of non-bibliographic items, a model resource file was developed. This model file was designed for use by the staff of a library's information and referral center. It consists of a collection of information about each member in a sample group of 25 human service providers. The sum of the information about each service provider has been designated as the "record"; thus, the model contains 25 records. Within each record up to 21 items of information conforming to AIRS standards are contained in a standardized format. Each item of information is entered in its particular field in the MARC record format.

Such items as the legal name of the agency, telephone numbers, headquarters, branch, mailing addresses, and hours during which services are provided are given in order to help potential clients locate and contact the agency. Other items, such as eligibility for services, a statement of the organization's purpose, and a list of services





offered, are provided to help a potential client determine the appropriate agency to meet his needs. The unofficial names by which an agency may be known in the community are provided as cross-references to help those who may not be aware of an organization's full name.

Among the more important items of information included about each agency are those which are needed to provide subject access to the resource file: key words from the agency's name, assigned subject headings based on services provided, and numbers corresponding to these subject headings, based on a system of subject access.

Because of the dynamic qualities of language and considerations of semantics and linguistics, subject access has always been and remains a formidable problem to be dealt with in designing any cataloging system. Subject analysis for the purpose of classifying human service agencies is no exception. The terminology of social welfare is notoriously "soft"—vague, overlapping, and ambiguous. In addition, human needs change frequently in relation to society and the terminology used to describe them also changes over time. The classification scheme, therefore, needs to be flexible in order to cope with these problems—room for growth and change must somehow be built in. A comprehensive and controlled vocabulary must be developed in order to deal with this problem. Currently, there is no common language among service providers that is transferrable to local resource files.

The InterStudy report describes six approaches to subject retrieval in this field, some automated and some manual. They include SEARCH, IRMA (Information and Referral Manual), NEXUS (Network Exchange of Urban Services), and UWASIS (United Way of America Services Identification System). The authors give examples and evaluations of each (6).

UWASIS

The United Way of America has made an extensive attempt to develop an effective method of subject access in the social services field. The goal of UWASIS has been to develop a set of "uniform and comparable definitions" (8, p. i) of programs and services dealing with human problems and has described its system as follows:

[UWASIS] is a taxonomical approach to a goal-oriented system for identifying, classifying and defining most existing human service programs (8, p. 5).

Eight fundamental social goals are identified, such as optimal health, optimal environmental quality, and the like. Each identified program is classified under one of these social goals according to its primary purpose and is also given a number designation. The system also includes an AIN (Add If Necessary) category in each section for local modification. The entire system is organized hierarchically, as is demonstrated in the following example:

Goal—Optimal Health
Service System—Health Supportive Services System
Service—Health Advocacy Service
Program—Health Advocacy
Program—Mental Health Advocacy
Program—AIN

The developers of UWASIS urge local information and referral centers to modify the system to meet local needs.

For several reasons, the model resource file designed for this project

uses a modification of UWASIS II developed by CARE-LINE, the North Carolina Statewide Information and Referral Service, to provide subject access. Of the approximately 600 information and referral services in the United States (as listed in the *Directory of Information and Referral Services in the United States and Canada*), 102 use UWASIS or some modification of it for subject access (9). In North Carolina, where this project was designed, UWASIS is also used by all local services which cooperate with CARE-LINE. In addition, the CARE-LINE version is a modification that is appropriate for the services offered in the geographic area for which the model resource file was created, meeting one of the major AIRS guidelines mentioned earlier.

Reference Tools

Reference tools are the interface between a collection and its users. In this case, they are a means of helping information and referral center staff determine the appropriate service agency to deal with a client's problem.

The designer of the data file must regard these tools as a set—a related whole. Taken together, they must meet user needs effectively; they must answer the type of questions most users are likely to put to the system. The ideal, of course, is to design the fewest tools that will do the job well in order to save time and energy, both for the users and for the maintainers of the resource file. In addition, the format of a tool will have an effect on the time it takes to use it and on how well the information is conveyed.

Six reference tools were designed for this model: 1) Administrative Agency List, 2) Key Word Index to Agency Names, 3) Master Record of Human Service Agencies, 4) Subject Index to Agencies, 5) Agency Update Record, and 6) UWASIS Index to Agencies.

The Master Record of Human Service Agencies contains the fullest information about each agency in the resource file. The descriptive information contained in this record (enumerated in Table 1) can help the center's staff narrow its search for the agency most

Table 1. Information and Referral Reports

Report	Arrangement by	Contents of Citation
Administrative Agency List	Name of Administrative Agency Name of Administered Agency	Administrative Agency, name and address of Administered Agency
Key Word Index to Agency Names	Key word Name of agency	Key word, name of agency
Agency Update Record	Revision date Name of agency	Revision date, name of agency, document identifier
Master Record of Human Service Agencies	Name of agency Unofficial names of agency	Cross references from unofficial names, legal name, document identifier, all addresses and telephones, hours, director, contact persons, geographic area, eligibility, fees, admission procedures, documents needed, purpose, transportation, services (by UWASIS number), type of agency, revision date, administrative agency; both cross references and full citations are included in a single alphabetical sequence
Subject Index to Agencies	Subject Name of agency	Subject, corresponding UWASIS number, name of agency
UWASIS Index to Agencies	UWASIS number Name of agency	UWASIS number, subject, name of agency

likely to be of help to the client. In addition to full information about each agency, this tool also contains (in the same alphabetical sequence) cross references from all "unofficial" names of the agency to its legal name. For instance, a county department of social services is likely to be known by a variety of appellations—DSS, Food Stamp Office, Public Assistance, and Welfare Department, to name a few. As shown in Example 1, the user of the Master Record is directed to the appropriate listing when checking any of these names as well as the names of programs offered by the agency.

The Administrative Agency List clarifies the relationship between agencies and parts of complicated bureaucratic structures by enumerating agencies administered by other agencies. This list is necessary because of the extreme complexity of the administrative structure of some organizations. Resource file information must be presented in the simplest, clearest manner possible, consistent with accuracy.

What is the smallest part of a bureaucracy that can be considered an agency and, therefore, have its own record in the resource file? If the answer to this question results in entering information about all departments of a complex organization in a single record, each department will be relegated to the status of a branch of the agency and little detail about its services will be included. If, however, each department is considered an agency, more detail about services can appear. Unfortunately, entering each department separately results in scattering information about parts of the larger umbrella organization throughout the file and does not indicate the relationship of the parts to the whole.

In order to resolve these conflicts, it was decided to 1) consider each department a separate agency, 2) include as one field in the record the name of the "parent" agency, and 3) draw all parts of the larger agency together in the Administrative Agency List (see Example 2).

Example 1. Master Record of Human Service Agencies

W. H. TRENTMAN MENTAL HEALTH CENTER		
SEE Wake County Mental Health Center		
WAKE COUNTY ALCOHOLISM SERVICES		SA-6
HEADQUARTERS:	MAILING ADDRESS:	
3000 Falstaff Road	3000 Falstaff Road	
Raleigh, North Carolina 27610	Raleigh, North Carolina 27610	
(Wake County)		
HOURS: Offices: 8:30 a.m.-5:15 p.m., Mon.-Fri.; Treatment Center open 24 hours per day 7 days per week		
TELEPHONE: 919-821-7650		
BRANCHES:		
Wake County Alcoholism Treatment Center, 3000 Falstaff Road, Raleigh, N.C. 27610 919-821-7650		
Wake County Alcoholism Information Center, 3824 Barrett Drive, Suite 103, Raleigh, N.C. 27609 919-821-7515		
Wake County Occupational Health Center, 3824 Barrett Drive, Suite 305, Raleigh, N.C. 27609 919-821-0220		
Franklin W. Ingram, Director		
Jackie Jolly, Volunteer Coordinator		
SERVES: Wake County		
For Wake County residents only; Occupational Health Center for employees of participating businesses. Fees based on cost of provided service; Medicaid covers some Treatment Center costs.		
INITIAL CONTACT: Telephone for an appointment; emergency care available at Treatment Center		
ACCESS: On bus routes; parking available		
PURPOSE: To provide needed health care services in the field of alcoholism at an acceptable level of quality and at the least possible cost; includes detoxification, counseling, education, and crisis intervention.		
SERVICES: 601005, 601010, 601015		
TYPE OF AGENCY: Public—County		
ADMINISTERED BY Area Mental Health for Wake County		
		REVISED June, 1977

Example 2. Administrative Agency List

Area Mental Health for Wake County

Wake County Alcoholism Services
3000 Falstaff Road, Raleigh, N.C. 27610
Wake County Mental Health Center
3010 Falstaff Road, Raleigh, N.C. 27610

Human Resources Department, City of Raleigh

Citizen Involvement Division
224 South Dawson Street,
Raleigh, N.C. 27602
Raleigh Employment and Training Division
507 East Martin Street,
Raleigh, N.C. 27602

North Carolina Department of Human Resources

Wake County Department of Social Services
201 West Davie Street, Raleigh, N.C. 27602

Example 4. Key Word Index to Agency Names

HOME

Children's Home Society of North Carolina, Inc.

Hilltop Home

Methodist Home for Children

INVOLVEMENT

Citizen Involvement Division

LEARNING

Association for Children with Learning Disabilities

Learning Together, Inc.

LEGAL

Wake County Legal Aid Society

PARENTS

Parents Anonymous

The Agency Update Record is primarily for use by the staff responsible for maintaining the accuracy of the resource file. It lists agencies according to the date on which information about each was last revised and serves as a reminder of which agencies need to be contacted for verification or modification of resource file information about them. The agency's name is followed by the document identifier (a unique number assigned to each record as it is input into the computer) for ease in updating. Access to each record in the computer is by means of the document identifier, as shown in Example 3.

The Key Word Index to Agency Names is designed to aid a person who remembers only part of an agency's name. The index provides access to the entire name of an agency from any one of the major words in that name. Since many agency names indicate the type of service performed, this list also serves as a rough subject index (Example 4).

Example 3. Agency Update Record

September, 1977

Wake County Legal Aid Society, SA-23

October, 1977

Family Homes of Wake County, Inc., SA-4
Shelley School Child Development Center,
SA-12

December, 1977

Citizen Involvement Division, SA-15
Haven House, Inc., SA-10

January, 1978

Women's Center of Wake County, SA-1

Two subject indexes complete the set of reference tools for the model. Both are based on CARE-LINE's modification of UWASIS, which consists of three parts. Part 1, "Service Function Codes," is a list in UWASIS number order, showing hierarchical relationships, of all numbers and includes a descriptive phrase associated with each. Part 2, "Definitions for the Modified UWASIS Coding System," is like Part 1 with a short descriptive paragraph added for each number. Part 3, the "Related Term Index," is an alphabetical listing of subjects with their associated UWASIS numbers. Part 3 guides the user to the appropriate UWASIS number, even if he or she is unfamiliar with the terminology used in the subject index.

The Subject Index to Agencies lists each agency under every descriptive term (subject heading) which delineates its services. Using descriptive phrases from "Service Function Codes," the term is created by working from the most specific back to less specific phrases in the hierarchy until a unique term is composed. For example, the term "Mentally Handicapped" is used many times in the list of Service Function Codes. Using it by itself would be misleading; therefore, it must be modified by the next most specific term listed in the hierarchy, e.g., "Special Education," to create 405010, "Special Education for Mentally Handicapped." Each subject (service) is listed alpha-

betically and is followed by the corresponding UWASIS number. Under each subject, agencies offering related services are listed alphabetically as shown in Example 5.

The UWASIS Index to Agencies lists each agency under every UWASIS number that describes its services; the associated descriptive term is listed after each number. This listing is in numerical order. Ordering by number has the advantage of displaying the UWASIS hierarchy; related services are grouped together (see Example 6).

These six reference tools not only provide effective access to information

about community human service organizations but also offer a means of keeping the resource file current. Alternative means of finding the appropriate agency are provided (by name, type of service, parent organization, and unofficial designations) so that information and referral center staff can locate help for their clientele no matter how the request for information is made. Typically, the person who needs the most help is likely to be the least articulate about his needs and to have little knowledge of his own on which to base a search. It is hoped that a resource file structured like this model could serve information and referral center clientele effectively, whatever their needs. A breakdown of the contents of each reference tool and the way it is structured is contained in Table 1.

Conclusion

Bibliographic data processing, originally designed to provide access to information about traditional library materials, can be extended to many kinds of information processing. This model resource file for an information and referral center is only one example of the possibilities open to creative system designers. Because of its flexibility, and judging from the ease with which it was adapted for use in the information and referral field, bibliographic data processing will prove applicable in this and many other areas.

Acknowledgements

I wish to thank the following people, without whose assistance this work could not have been completed: Carol H. Reilly of the Wake County Information and Referral Center at Wake County Department of the Library; Charlie Johnson and Jim Wimbish of CARE-LINE; Martin Dillon, School of Library Science, University of North Carolina at Chapel Hill; and last, but certainly not least, my entire family.

Example 5. Subject Index to Agencies

- Respite Care for Mentally Retarded (641515)**
 Tammy Lynn Center
- Self-Help and Special Interest Groups (532500)**
 Mental Health Association of Wake County
 Parents Anonymous
 Women's Center of Wake County
- Special Education for Educable Mentally Retarded (405011)**
 Frankie Lemmon Memorial Preschool, Inc.
 Shelley School Child Development Center
- Special Education for Gifted and Talented (405040)**
 Learning Together, Inc.
- Special Education for Learning Disabilities (405005)**
 Association for Children with Learning Disabilities
 Tammy Lynn Center
- Special Education for Mentally Handicapped (405010)**
 Learning Together, Inc.

Example 6. UWASIS Index to Agencies

- 520500 Adoption**
 Children's Home Society of North Carolina, Inc.
 Wake County Department of Social Services
- 522000 Big Brother and Big Sister Programs**
 Wake County Mental Health Center
- 524505 Day Care - Children**
 Migrant and Seasonal Farmworkers Association, Inc.
 Wake County Department of Social Services
- 524515 Day Care for Physically, Mentally, and Developmentally Disabled**
 Tammy Lynn Center
- 527500 Family Planning**
 Migrant and Seasonal Farmworkers Association, Inc.
 Wake County Department of Social Services

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A User-Oriented Approach to Setting Priorities for Library Services

W. Davenport Robertson

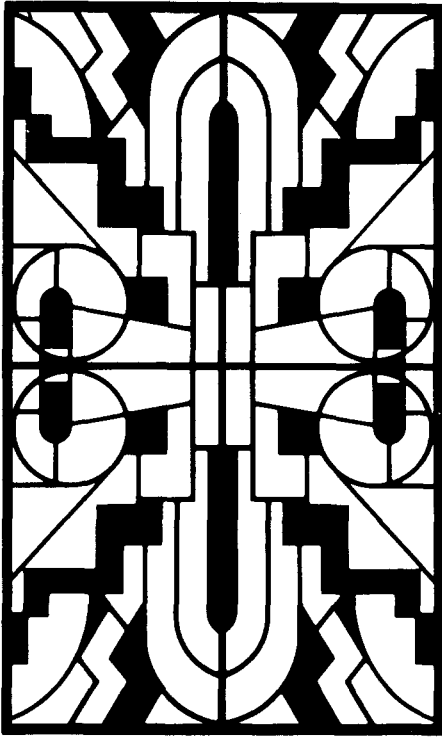
Library and Information Services, National Institute of Environmental Health Sciences, Research Triangle Park, N.C. 27709

■ A user-oriented model for setting priorities for services in the medium size sci/tech research library is described. A survey of the research staffs of three organizations as to their conception of library priorities is compared with the budgets and opinions of the three library directors. The survey results are consistent and show much agreement with the librarians. The model groups eleven aspects of library services into three clusters of importance with journal purchases and computerized literature searching given the highest priority. This model can be used for planning and evaluating special libraries.

IN ORDER FOR A SPECIALIZED library to be successful, the goals of the librarian must coincide with the needs of the clientele. If these needs can be determined and if the clientele are consistent in expressing them, then the librarian should be able to use that expression as a basis for setting priorities. While that may seem obvious, the process for determining user needs is more obscure. Two approaches are to search through the literature and to talk to the clientele; however, the literature provides general descriptions or checklists for the most part (1), and the clien-

tele usually provide specific items not present in the library's collection.

The budget-making process should incorporate some sensible way of establishing user needs and allocating funds. One article that is helpful is Gordon E. Randall's "Budgeting for Libraries," in the January 1976 issue of *Special Libraries* (2). A more recent article by Joseph Talavage reports on a survey of the financial resources industrial companies allocate to their libraries (3). Talavage includes a review of other studies concerned with the financial aspects of special libraries.



The method many libraries use in allocating their resources internally appears to be based on intuition—an intuition nurtured by library school, developed over years of experience, and changed by new inventions but rarely affected by any formal intervention by the users in terms of an expression of their need. With that thought in mind, a survey was taken to determine how the views of librarians compare with the wants of their clientele in regard to resource allocation. The hypothesis was that in a successful specialized library, the views of librarians and research staff coincide. As far as routine library functions go, in research organizations of similar size and scope there should be agreement among the users and librarians from one organization to the next. To the extent that the hypothesis proved true, a model listing priorities for allocating library resources could be devised. This model could be used by librarians in similar situations for budgetary or evaluative purposes.

Population Surveyed

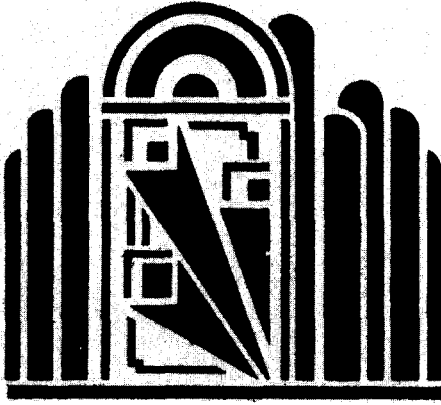
The questionnaire in Appendix 1 was used to find out what the users' views were on resource allocation. It should be emphasized that this was not a survey of user satisfaction, nor was it an evaluation per se of any library's effectiveness. It was a rank ordering of various aspects of a contemporary special library as to the priority which the library *clientele* believes should be used in dividing up the library's resources, both for personnel and nonpersonnel costs. The users were asked to rank 11 aspects of library services with 1 being the highest priority and 11 being the lowest. To emphasize that this was a priority ranking, they were told to use each number from 1 to 11 only once.

The research staffs of three organizations of similar size were surveyed. The organizations are located in a research center complex ten to fifteen miles from three major universities, and the research staffs are academically oriented. Four hundred questionnaires were mailed out in Organization A, five hundred in Organization B, and three hundred in Organization C, covering the total population of the respective research staffs. All three organizations have modern scientific/technical libraries offering similar services. The size of the collections vary considerably though, with Library A having 1,400 subscriptions, Library B, 500 and Library C, 400. The books and back volumes vary similarly.

In addition to surveying the clientele, the library directors of the three organizations, were also surveyed. The three librarians (the author included) were asked to do the rankings twice: one time according to their own opinions and one time according to the actual budgetary outlay.

Make-Up of the Questionnaire

With the advice of the other two librarians, the library/technical information services were divided into eleven aspects using terminology the users would understand (see Appendix



2). All three libraries offer these services to varying extents. Whether these aspects are services or just functions of a library is a matter of semantics; all aspects of a special library may be called "services." For example, providing a catalog and a classification scheme is a service in that it gives the user access to the books in the collection. "Physical facilities" did not include the building itself, since the need for space was a moot point in all three libraries.

The philosophy behind this approach should be well understood by represen-

tatives from special libraries. One study characterized it as follows:

From the user's point of view, a library is a "black box." What goes on inside the box, that is, how it operates, is not his concern; he is concerned only with its output—the services it can provide (4).

That study goes on to formulate a list of functions "that any user might reasonably expect a library to perform" and which "suggests a simple classification of library services based on what the user receives." Although the eleven aspects used were devised by the author, they would also fit into the general functions which that study lists, such as "providing documents" or "providing answers."

As an examination of this "black box," the survey questioned the researchers to find out which services were the most important to them, not to measure user satisfaction. While the questionnaire was phrased in terms of ranking allocations of resources, it is obvious that the rankings had to be done on a subjective basis. This was the best method available for approaching a literal determination of what services are the most important in a special library.



Table 1. Results of User Survey Arranged by Mean Rankings.

Ranking by Mean	Organization A (N = 157)		Organization B (N = 156)		Organization C (N = 103)		Overall (N = 416)	
	Mean	S.D.*	Mean	S.D.	Mean	S.D.	Mean	S.D.
1. Journal Purchases	2.77	2.40	3.39	2.42	2.80	2.35	3.01	2.41
2. Computerized literature searching	2.88	2.01	3.76	2.95	3.70	2.51	3.41	2.55
3. Interlibrary loan	5.02	2.07	4.06	2.38	3.12	1.85	4.19	2.27
4. Book and technical report purchases	4.39	2.38	4.01	2.27	4.53	2.39	4.28	2.34
5. Other reference and Information service	5.62	2.76	5.85	2.53	6.22	2.71	5.86	2.67
6. Circulation	6.17	2.82	5.94	2.55	7.22	2.23	6.34	2.63
7. Cataloging	6.47	2.19	6.51	2.48	6.67	2.32	6.53	2.33
8. In-house photocopying	6.32	2.57	6.85	3.08	6.43	2.86	6.55	2.85
9. Physical facilities	8.00	2.75	8.36	2.46	7.53	2.63	8.02	2.63
10. Newsletter	8.91	2.12	8.58	2.42	8.32	2.23	8.64	2.27
11. Audiovisual material and equipment purchases	9.45	1.72	8.69	2.14	9.42	2.01	9.16	1.98

*S.D. = standard deviation.

A somewhat similar kind of survey was described by Edward P. Miller under the title "User-Oriented Planning (5)." He divided up operational activities to include such things as lighting and staff attitudes in addition to collection and services. However, he was trying to evaluate library effectiveness in terms of the importance of these aspects to the client whenever he makes the decision to use the library or not.

Four different forms of the questionnaire were prepared, each listing the eleven aspects in a different order. The forms were designed so that each aspect appeared (on the average) in the middle of the questionnaire. This was done so as to eliminate any subtle biases that might otherwise have been introduced by the location of the item within the questionnaire.

Results

The results of the research staff survey are given in Table 1, arranged in order according to the mean rankings by the 416 respondents (representing a 34.7% return rate on 1,200 questionnaires). Every one of the eleven aspects was ranked first at least once, except audiovisuals which never made it higher than second. Journal purchases came out with the highest priority, computerized literature searching was second, and interlibrary loan and book and technical report purchases were a close third and fourth.

Then there was a break and the next four aspects were ranked close together: other reference and information service; circulation; cataloging; and in-house photocopying. With the lowest priority were physical facilities, newsletter, and audiovisual material and equipment purchases.

When the rankings by organization are examined, several interesting exceptions are noted. A chi-square test indicated a highly significant difference ($p < .01$) between the rankings of interlibrary loan by Organizations A and C with A ranking it fourth and C ranking it second. Only one out of 157 respondents in Organization A gave this aspect the highest priority, while 17 out of 103 respondents in Organization C ranked it highest. Moreover, in Organization A only 21.7% of the respondents (34/157) ranked interlibrary loan in the top three levels, compared with 63.1% (65/103) in Organization C and 51.3% (80/156) in Organization B. This probably is a function of the size of the book and journal collections of the three libraries, since the Organization A library has a more extensive collection. Circulation was given a considerably lower priority at Organization C than at the other two; this might also be a result of the weaker, less-used collection at Library C.

The standard deviation gives a measure of the variability of response within each organization and in the overall averages. Overall, the lowest

Table 2. Frequency of User Rankings for Journal Purchases.

Rank	Frequency	%
1	169	40.6
2	61	14.7
3	51	12.3
4	37	8.9
5	28	6.7
6	25	6.0
7	18	4.3
8	8	1.9
9	13	3.1
10	3	.7
11	3	.7

Table 3. Frequency of User Rankings for Computerized Literature Searching.

Rank	Frequency	%
1	124	29.8
2	68	16.3
3	71	17.1
4	36	8.7
5	44	10.6
6	19	4.6
7	11	2.6
8	17	4.1
9	10	2.4
10	11	2.6
11	5	1.2

Table 4. Frequency of User Rankings for Interlibrary Loan.

Rank	Frequency	%
1	36	8.7
2	76	18.3
3	67	16.1
4	80	19.2
5	47	11.3
6	48	11.5
7	23	5.5
8	17	4.1
9	9	2.2
10	10	2.4
11	3	0.7

Table 5. Frequency of User Rankings for Book & Technical Report Purchases.

Rank	Frequency	%
1	35	8.4
2	89	21.4
3	54	13.0
4	64	15.4
5	52	12.5
6	43	10.3
7	32	7.7
8	25	6.0
9	14	3.4
10	5	1.2
11	3	0.7

• •

standard deviation (1.98), implying the most agreement, was on audiovisuals, while the highest standard deviation, or most disagreement, was on in-house photocopying (2.85). There was a fair amount of agreement also on newsletter and interlibrary loan (both having standard deviations of 2.27).

The amount of agreement within each organization showed differences from the overall averages. Organization C, for instance, was most consistent on interlibrary loans (standard deviation 1.85), and Organization A was least consistent on circulation (standard deviation 2.82). The greatest standard deviation (3.08), indicating the most disagreement, was in Organization B on in-house photocopying.

Another method for judging the amount of agreement among the clientele is to look at the frequency with which an aspect was ranked at a certain

level. Tables 2 through 12 show the number of times each aspect was ranked at each level. Also given is the equivalent percentage for each frequency. Just over 40% of the respondents ranked journal purchases number 1, and two-thirds of the respondents ranked it in the top three (Table 2). On the other hand, audiovisual purchases was ranked last by 31.5% and in the bottom four by over 80% (Table 12). Computerized literature searching was ranked first by 29.8% of the respondents and in the top three by over 60% (Table 3). Supporting the variability shown by the standard deviation, the ranking of in-house photocopying was pretty evenly divided with about 10% of the vote for each level, except number 1 (Table 9). Circulation was another aspect on which there was considerable disagreement (Table 7).

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Table 6. Frequency of User Rankings for Other Reference & Tech. Information.

Rank	Frequency	%
1	10	2.4
2	33	7.9
3	53	12.7
4	51	12.3
5	50	12.0
6	56	13.5
7	41	9.9
8	42	10.1
9	33	7.9
10	25	6.0
11	22	5.3

Table 7. Frequency of User Rankings for Circulation.

Rank	Frequency	%
1	17	4.1
2	25	6.0
3	26	6.3
4	39	9.4
5	43	10.3
6	51	12.3
7	63	15.1
8	62	14.9
9	40	9.6
10	30	7.2
11	20	4.8

Table 8. Frequency of User Rankings for Cataloging.

Rank	Frequency	%
1	7	1.7
2	15	3.6
3	31	7.5
4	35	8.4
5	44	10.6
6	55	13.2
7	72	17.3
8	64	15.4
9	56	13.5
10	29	7.0
11	8	1.9

Table 9. Frequency of User Rankings for In-house Photocopying.

Rank	Frequency	%
1	6	1.4
2	35	8.4
3	38	9.1
4	36	8.7
5	40	9.6
6	45	10.8
7	50	12.0
8	44	10.6
9	46	11.1
10	32	7.7
11	44	10.6

In summary, there was a great amount of agreement on the rankings among users overall, and a close correlation among rankings by users at the different organizations.

Table 10. Frequency of User Rankings for Physical Facilities.

Rank	Frequency	%
1	7	1.7
2	10	2.4
3	15	3.6
4	20	4.8
5	28	6.7
6	25	6.0
7	45	10.8
8	47	11.3
9	64	15.4
10	78	18.8
11	77	18.5

Librarians' Rankings

The rankings of the same eleven aspects by the three librarians are given in Table 13. They are arranged in order according to the rankings of the means from the users' survey in Table 1. For each librarian there are two rankings: one according to opinion and one according to the actual breakdown of the budgets of the respective libraries. For the most part, the librarians' opinions are in agreement with their budgets. However, Library A exhibits some differences. In the opinion of its librarian, both computerized literature searching and other reference and information service should be ranked higher than in the rankings at the other libraries. These differences are probably a reflection of the very extensive reference service (including indexing) provided at Library A. Another discrepancy is the lower ranking of interlibrary loan by Librarian A, which is probably related to the more extensive collection at Library A: with a more complete collection, the need for interlibrary loan decreases. One other exception noted in the budget for Library A is the higher ranking for circulation, which may be accounted for by the journal routing service offered there.

As for other differences, the librarian at Library B ranked book and technical report purchases second, probably because of the heavy reliance on technical reports in that organization. The librarian at Library C ranked physical facilities higher than the other librarians did, probably expressing more of a need for shelving, carrels, and so forth.

Comparing the rankings by the librarians in Table 13 with the rankings by clientele in Table 1, one finds them to be in close agreement on most of the aspects. The exceptions were noted earlier: the librarian at Library A ranked other reference and technical information service much higher and interlibrary loan much lower. While the librarians ranked circulation about eighth, the users ranked it sixth on the average. Among the users there was a virtual tie between circulation, cataloging, and in-house photocopying.

Table 11. Frequency of User Rankings for Newsletter.

Rank	Frequency	%
1	5	1.2
2	1	0.2
3	6	1.4
4	10	2.4
5	26	6.3
6	28	6.7
7	38	9.1
8	48	11.5
9	57	13.7
10	98	23.6
11	99	23.8

Table 12. Frequency of User Rankings for Audiovisual Materials & Equipment.

Rank	Frequency	%
1	0	0.0
2	3	0.7
3	4	1.0
4	7	1.7
5	14	3.4
6	22	5.3
7	24	5.8
8	42	10.1
9	74	17.8
10	95	22.8
11	131	31.5

Conclusion

As evidenced by the similarity between the users' conception of the priorities and the librarians' conception and budgetary rankings one can derive a model of the priorities for allocating resources in the small- to medium-size special library in a research organization. In this survey, the user rankings did turn out to be consistent and close to the librarians' rankings, and the user rankings showed high correlation from one organization to another. However, the model (shown in Appendix 2) cannot be taken too literally, but must be viewed as including clusters of importance. In the top priority cluster are journal purchases, computerized literature searching, interlibrary loan,

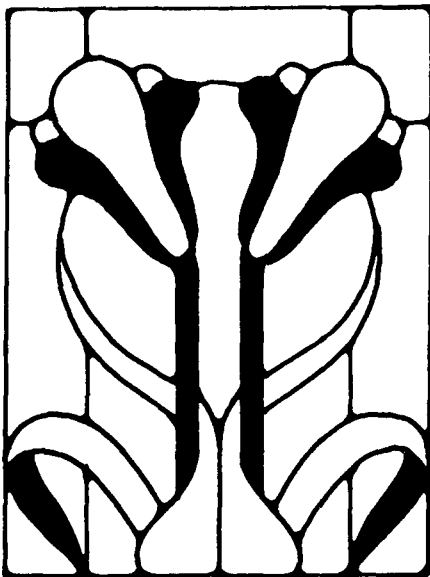
and book and technical report purchases. The fact that computerized literature searching placed so high indicates its great importance to the users of a modern library. The middle priority cluster includes other reference and technical information service, circulation, cataloging, and in-house photocopying. At the bottom with the lowest priority is the cluster of physical facilities, newsletter, and audiovisual material and equipment purchases.

In attempting to apply this model to other special libraries, several assumptions would have to be made. First, one would have to assume that the results would not be significantly different if the organizations are of different sizes and scope. A note of caution is in order regarding interlibrary loan: the more

Table 13. Rankings by Librarians According to Opinion and to Budget.

Services in Order of User Rankings	Librarian A		Librarian B		Librarian C	
	Opinion	Budget	Opinion	Budget	Opinion	Budget
1. Journal purchases	3	1	1	1	1	1
2. Computerized literature searching	1	2	3	2	2	2
3. Interlibrary loan	7	6	4	3	3	3
4. Book and technical report purchases	4	4	2	4	4	4
5. Other reference and information service	2	3	6	5	5	5
6. Circulation	8	5	8	8	9	8
7. Cataloging	5	7	5	6	6	6
8. In-house photocopying	6	8	7	7	8	7
9. Physical facilities	9	9	10	10	7	9
10. Newsletter	10	10	9	9	10	10
11. Audiovisual material and equipment purchases	11	11	11	11	11	11

complete the collection (usually associated with the size of the library), the lower the priority for interlibrary loan. The second assumption concerns the validity of dividing up services into the aspects ranked here, even with the realization that all of them are interrelated and that a competent library would provide them all. A particular example of this would be physical facilities which includes shelving. Obviously, enough shelving is required to hold the library materials; however, getting more shelving than is absolutely necessary is not a wise move unless the higher-rated aspects of library service have been sufficiently supplied. This also points out the third assumption which is that the model rankings do not necessarily reflect the relationship of the cost



of one aspect to another. Instead, they reflect the relative importance of providing those services to a given level of competency—and that level may differ from one library to another, depending on the demands of the clientele.

To use this model of priorities as an aid in planning or evaluating a special library, one should begin at the top of the list and provide those services in the top cluster and then work down the list. Within the top cluster, journal

purchases and computerized literature searching should be the most important services. In the middle cluster, the priority of the services is not so obvious and vary more from one organization to the next. Finally, library resources should not be devoted to services in the bottom cluster unless the higher ones have been taken care of first.

Acknowledgement

My thanks go to Dr. Joseph K. Haseman, Biometry Branch, NIEHS for his assistance in computerizing the survey results and performing the statistical analysis.

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Appendix 1. Library/Technical Information Services Survey.

Please complete this survey of user opinions and return to the Library by December 13.

I. Using *all* the numbers from 1 to 11, rank these services in the order which you think the Library should follow in allocating its personnel and fiscal resources. Do *not* use the same number more than once.

1 = the top priority 11 = the lowest priority

- _____ Audiovisual material & equipment purchases
- _____ Book and Technical Report purchases
- _____ Cataloging (card catalogs, automated catalogs, etc.)
- _____ Circulation (book check-out, security, journal routing)
- _____ Computerized literature searching (retrospective & updating searches)
- _____ In-house photocopying
- _____ Interlibrary loan (books & photocopies from other libraries)
- _____ Journal purchases
- _____ Newsletter (lists of new acquisitions and services)
- _____ Other Reference and Information service (abstracting & indexing sources, verification of references for articles, etc.)
- _____ Physical facilities (study desks, carrels, shelving)

II. General Comments? _____

Appendix 2. Model for Service Priorities (Special Libraries in Sci/Tech Research Organizations).

High-Priority Cluster	{ Journal purchases Computerized literature searching Interlibrary Loan Book and technical report purchases
Middle-Priority Cluster	{ Other reference and information service Circulation Cataloging In-house photocopying
Low-Priority Cluster	{ Physical facilities Newsletter Audiovisual material and equipment purchases

Management of Vendor Services

How to Choose an Online Vendor

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THE CHOICE of what information services should be integrated into library operations may seem frighteningly complex today. In the past, selection of materials and services for libraries has been limited primarily to print and audiovisual media. In addition, many "selection aids" are available to facilitate these choices, usually complete with critical evaluations prepared by colleagues. However, as we enter the age of comprehensive online information services virtually all libraries are thinking about enhancing reference service with online resources.

In a tightening economic environment library decision making has become even more critical. With an understanding of this difficulty, it is the objective of this paper to provide a systematic guideline for evaluation and selection of an online service vendor. What, if any, selection aids are available for online services? What criteria should be used in evaluating an online service vendor? This paper will answer these questions as well as provide a

step-by-step approach for the initial stages of vendor selection.

The first step in the selection of an online vendor is to decide if online services are needed or desired in your organization. Many organizations have discovered that online resources have expanded and enhanced reference service in a cost effective manner. Often, the time saving and improved access aspects of online searching have enabled organizations to dramatically improve service to their clientele. A careful needs assessment, based on reference staff and user input, should be performed. Once the decision has been made to go online, this input can be utilized to determine what subject areas should be covered by the online service. The library staff must now consider the full range of available databases in relation to the perceived needs.

There are a number of directories now available which list databases and indicate subject coverage and vendor. (See references at end of article for a selective listing.) These directories are certainly useful for obtaining overview information on the availability of

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online files. Generally, these directories do not qualify as traditional selection aids since critical evaluations are not offered. An alternative to reviewing these directories is simply to request information packages from all of the online vendors under consideration. These packages typically contain descriptive materials on all aspects of the vendor's service and are, therefore, primary sources of information when going through the selection process for an online vendor. It should be remembered, however, that these packages are marketing tools and do not eliminate the need for careful analysis and cross-checking by the library staff.

upon should offer the library the service level required at the minimum net price.

Let's consider now the service itself. Online service must be reliable with a minimum of downtime. Is there a backup computer should the main computer fail? Billing accuracy is also important. Does the service provide an online estimate of the cost of the search? This can be significant when passing the cost of a search onto the user. Consultation with colleagues and reviewing the literature would be appropriate at this point. Periodicals such as *Database, Online*, and *Online Review* often publish articles that would

Online service must be reliable with a minimum of downtime. Is there a backup computer should the main computer fail? ... Does the service provide an online estimate of the cost of the search?

The first point of concern is database availability. Do available databases match up with needs as assessed? Is there a wide range of database choices from one vendor which would allow one-stop shopping? In addition, will the pattern of vendor's database acquisition match up with projected needs?

After the determination as to the content relevance of the vendor(s) is made, the next question is one of cost. Consideration of the flexibility of contract options (e.g., no minimum, no commitment contracts vs. guaranteed level of use, discount options) should be made. This step requires a critical analysis to determine the actual database use price per hour (i.e., net price) as the pricing policies of the vendors vary. For example, some vendors integrate the royalty payment to the database producer in the online connect charge, while other vendors separate the royalty payment into a distinct line item. Further, are discounts for high volume usage available? Are group service options with multiple passwords and billing flexibility available? The contract option that is decided

be useful in this regard. How accessible is the service in terms of time and technical considerations? What hours are available for searching? In an emergency, evening and/or Saturday hours could be important. Consider terminal equipment flexibility. Does one need a special terminal, as with some computer services? Can one use 1200 Baud (120 characters per second) equipment? Is the service accessible via the full range of communications approaches—Telenet, Tymnet, In-wats? How does the vendor handle maintaining confidentiality of user searches? It can be seen that convenient access to the service is as important as the content of the databases that the vendor offers.

As important as the service are the system search capabilities. Has the vendor refined software and introduced programs to match perceived user requirements? Are files treated in a consistent manner in terms of field labels, parsing of similar fields, and output formats? Are the maximum number of years available online at all times? How often are databases updated? Consider the power and flexibil-



ity of the search system. Is full-text searching available? Can a search strategy be saved? Can a search be executed easily in a multi-database search? Does the service provide the capability of displaying the index and selecting terms without re-keying? In addition to online display of output, does the vendor provide high quality offline printing? Are offline prints efficient in use of space and formatted on standard size (8½" x 11") paper for easy storage and handling of search results? Is upper/lower case printing utilized rather than all upper case "telegraphic" formatting? Does the print format allow for natural, catalog-like entry? Overall, the service should be relatively easy to use and to learn, while at the same time providing the power and flexibility to do the demanding searches that are part of reference work.

Training is a significant variable affecting an organization's use of online services. Essentially, do the training services of the vendor satisfy the organization's needs? Is access to basic and advanced training convenient? Do the basic training sessions provide online access as part of the session? Are onsite seminars available to organizations that require this level of training? Does the vendor follow-up

on formal training by making online practice time available? The availability of online training and practice files, plus the provision of free search time on new databases should be relevant to training follow-up. One would also want to consider what vendor service has trained the largest number of searchers. This could have obvious impact on acquisition and replacement of staff. To choose a search system that is unfamiliar to most reference staff members would not be wise. In addition, one would want to know if the graduate library schools are including training in searching a particular system as part of the curriculum. Finally, are additional training opportunities such as user meetings and programs at professional conferences available?

Closely allied to training is file documentation. Documentation must be complete and current. Regular updates and revisions must be done as necessary, plus the user must be made aware of changes in documentation as required. Additional communication between user and vendor is essential for refining the use of the online service.

Consider the power and flexibility of the search system. Is full-text searching available? Can a search strategy be saved?

One of the most important channels of vendor-user communication is 800 phone line access to customer service personnel who can answer questions and provide assistance in file usage. A regularly issued newsletter with reference value is also desirable. Finally, does the vendor utilize user input in determining policy and in making other decisions?

Online vendors are beginning to offer a range of complimentary services including SDI's; online document ordering; private file service; and daily update, "current awareness," files. Evaluation of these additional services in terms of the needs of the organiza-

tion must also be done. For example, if your library is in a remote geographic location without convenient access to a large resource library, and is presently making considerable use of interlibrary loan, the online document ordering service might be significant. One may also consider the "name recognition" of the vendor because it may have an effect on obtaining organizational and management support for the service.

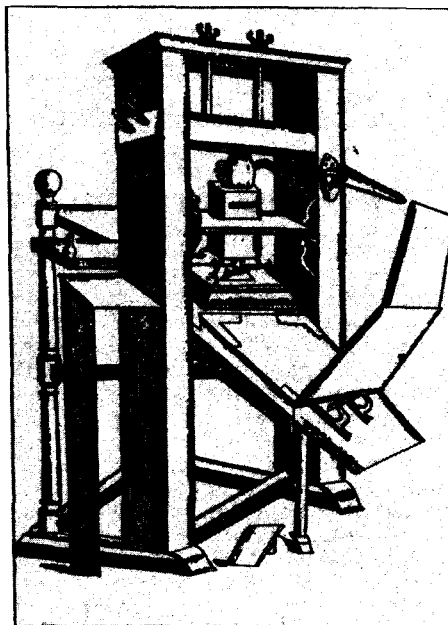
Another resource to consider is the marketing departments of the various vendors. The marketing staff deals with people and organizations who are considering or actually starting up online service on a day-to-day basis. It is their job to answer the questions you have regarding the service.

The issues and considerations are many; the final decision is yours. There is no easy alternative to reading the brochures, directories, or professional articles; listening to colleagues and vendor representatives; and evaluating the information. Be assured, however, that many of your colleagues and thousands of professionals throughout the world have already made the decision to "go online" and are finding that it increases the effectiveness and productivity of their organizations.

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Special Libraries of the Kingdom of Saudi Arabia

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THE KINGDOM of Saudi Arabia is the largest country on the Arabian Peninsula. It is an arid land of which only 3% supports farms and forest. But beneath its surface lies almost 25% of the world's known petroleum reserves which have brought to the Kingdom unprecedented wealth (1). The infusion of enormous sums of money has ushered in an age of Promethean change and technological advancement which has catapulted the Kingdom's population of seven million Moslems and its monarchical, church-state government from the Middle Ages into the twentieth century. All sectors of the country have experienced this change and new prosperity, including the libraries. This is especially so of the special libraries and university libraries and less so of the public libraries.

Three years ago the University of Riyadh Library had only 6,000 volumes. Today it has over 380,000 monographs and 4,500 serials which, in the not too distant future, will be housed in a new building, once construction of the University's five billion dollar campus is complete.

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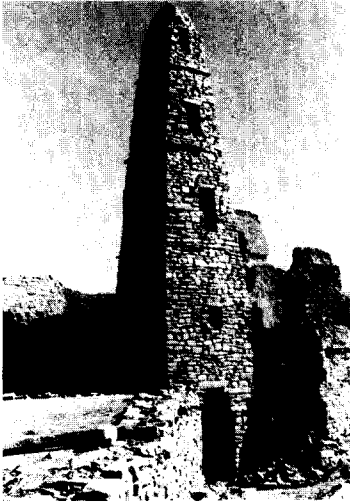
Public Libraries

Progress for public libraries has been slower. The Riyadh Public Library, which is the Kingdom's National Library and is responsible for acquisitions for the country's 42 public libraries, has in the course of the past 15 years developed a collection of only 60,000 Arabic titles, 4,000 English titles, and about 30 serials and has yet to establish such a fundamental tool as a subject catalog. The principal problem: a lack of professional librarians.

The Jetta Public Library enjoys a new building and an energetic director, Mohamed Khodary, but despite his efforts, progress comes hard, for again professional librarians, especially Saudi librarians, are scarce. This, however, should surprise no one who is familiar with the Kingdom's library education programs since there are only two universities—King Abdul Aziz University and King Ibn Saud University—which offer library science degrees.

This staffing problem is further compounded by the near exclusion of the female population from the work force. In keeping with the Moslem proscription against integrating the sexes, all public libraries and most special libraries are for men only. This is also true of most university libraries. While some women's schools do have li-

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libraries, those large universities that offer segregated programs for women generally have only a single branch library open to them.

But despite this substantial problem, significant advances have been made in the Kingdom's libraries and particularly in the special libraries. As is evidenced by the following survey of special libraries, many have new buildings or are in the process of planning or constructing new buildings, and all of them have imported professional librarians, often from the Middle East area, to compensate for the inadequate supply of Saudi librarians.

Special Libraries

Library of the Institute of Public Administration

One of the Kingdom's finest special libraries, the library of the Institute of Public Administration (IPA), is in Riyadh, the royal capital. Founded in 1962, it has a very substantial collection of business management and administration material which includes over 20,000 books and 175 serials. On the first floor are the reading room and reference areas as well as the circulation desk, current periodicals, and the English and Arabic card catalogs, which are arranged by author, title, and subject. The documents and microform room is also on this floor along with technical services and administrative offices. The ground floor is

essentially an open stack area where the monographs and bound periodicals are shelved. Both Arabic and English monographs are here, arranged alternately on double-face stacks in such a fashion that the English language titles on one side face the equivalent Dewey Decimal numbered Arabic titles on the other side.

The library is staffed by 22 Pakistanis, Egyptians, and Saudis, including 6 professionals. All are well trained, due at least in part to IPA course offerings in library science. They do their own classification and cataloging using LC subject headings. They also take care of cataloging and acquisition services for two annex IPA libraries, one in Jetta and the other in Dammam. Within the next two years, the main library will move to new quarters, currently under construction next to the present building, which will include a computer, have microform capabilities, and will double the shelving capacity.

Saudi Arabian Consulting House Library

The Saudi Arabian Consulting House is under the auspices of the Ministry of Industry. Formerly known as the Industrial Studies and Development Center, the Saudi Consulting House occupies a new building which includes a comfortable and well-lighted library that looks on to a small courtyard and reflecting pool. Though the building is only two years old the collection, which was formerly housed in the Ministry of Commerce, is over a decade old.

The library's formal title is the Industrial Information and Documentation Department. It includes a collection of 15,000 books, 110 English and 30 Arabic serials, and some 30,000 documents. The principal focus is on industrial standards, planning, and development and feasibility studies. It is classified according to the Dewey Decimal system and is staffed by two Pakistanis who, in addition to the card catalog, have produced, without the assistance of a computer, a three-volume, book-form catalog.

Saudi Arabian Industries Corporation Library

A similar collection is housed in the small library at the Saudi Arabian Industries Corporation (SABIC). It, too, is principally concerned with industrial standards, marketing research, and feasibility studies. The

collection—700 books, 80 serials, and numerous studies, reports, and standards—currently occupies five separate rooms, but SABIC has a new building in the works which will provide the library with a more contiguous shelving arrangement. The core of the monograph collection was established, complete with Dewey card sets, by a Washington, D.C. agency which also provides SABIC with a newsclipping service. Subsequent acquisition and cataloging efforts, however, are being done more and more by the Pakistani librarian and his Saudi assistant.

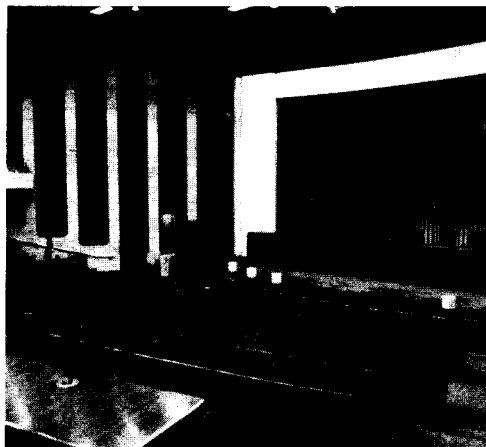
Library of the Ministry of Planning

Not far from SABIC is the library of the Ministry of Planning. The library was founded 17 years ago but the building in which it is now housed is only three years old. The user approaches the library across the first floor foyer which flashes with the bright colors and chrome of modern furniture. The library is not quite so vivid but is nonetheless one of the most comfortable and stylish libraries in the Kingdom, complete with swivel chairs for the user and a T.V. camera and monitors for security. The collection, which provides information for the Ministry staff, focuses on planning, development, and economic information. It contains 6,000 English titles, 2,000 Arabic titles, and 350 serials plus microform material. Classified according to the Dewey system, the Arabic and English card catalogs are separate with the latter being divided by author, title, and subject. There is also a separate catalog for U.N. publications. Just off the main reading room and stack area is a special glass-walled room for documents. Staffed by a Jordanian librarian and a Pakistani assistant, the library is the pride of the Minister of Planning who often brings visiting dignitaries to see it.

Saudi Arabia Monetary Agency Library

The Saudi Arabian Monetary Agency (SAMA) has its offices in two buildings that are frequently referred to as the SAMA towers, though in fact the buildings belong to the Pension Fund. SAMA moved in about a year ago when it shifted its base of operations from Jetta to Riyadh. The library is on the second floor of the north building and contains 11,000 volumes and 200 serials. The collection is seven years old and is maintained by two Saudis and two Egyptians.

King Faysal Conference Hall, Riyadh.



William Jarr

They obtain some cataloging and classification—which is Dewey—from the Library of Congress but, to increase expediency, do most of the cataloging themselves. New quarters and a new library are in the planning stages.

Library of the Ministry of Finance and National Economy

On the same street, south of SAMA, is the Ministry of Finance and National Economy which is developing what gives every indication of becoming the most advanced information center in the Kingdom. Currently, its holdings are divided between offices on the fourth floor of the main Ministry building and a one-story prefabricated building which is in the front of the Ministry. In the immediate future, however, the collection will be united in the spacious annex attached to the west side of the main building. This new location, which has been completely refurbished, will have a total capacity of about 30,000 volumes. The collection of mainly English and Arabic, economic and financial titles will be classified according to the Library of Congress system. Reference, technical services, and business offices will skirt the peripheral walls and a large indoor water fountain will be located at the north end, just inside the main entrance. From the open mezzanine above, ministerial offices will overlook the fountain and main library area. The professional staff, made up of one Egyptian and four Americans, and the non-professional staff of Pakistanis, Somalis, and Saudis will expand in the future as will efforts to fully

automate the center. For the past year the center has been accessing online, principal U.S. databases. High technology will also be exhibited in the new media building which will connect the north end; it will include a television studio, conference room, and auditorium with translation booths.

Saudia Airlines Library

The library is located in Jetta, which is probably the most cosmopolitan city in the Kingdom. The original Saudia Corporate library opened in 1971 in Saudia's main building. It specialized in aviation affairs, air transportation, and allied subjects and served the Saudia staff and students of the Saudia training program. The library supplied the various departments of Saudia with technical publications as well as with its monthly Library Bulletin and Subjects Lists. It also presented educational films and, occasionally, promoted art and science exhibits.

In 1977, however, the library relocated to the Saudia club to make room for other Saudia functions at the main building. The new location was smaller and library services were substantially reduced. But in June of 1979, the collection was again relocated, this time to the Saudia Training Center in the Ruways district. Here it occupies six rooms on the ground floor of what was formerly an apartment building and serves some 400 students who are being trained in ground support, aviation activities. The collection, classified according to the Dewey Decimal system, is comprised of some 2,500 English and Arabic monographs and 300 serials and is staffed by one Sudanese professional and two assistants—one Pakistani, the other Egyptian. Though the full range of services offered three years ago is not currently available, it is the staff's ambition to provide them in the future. Toward that end they soon hope to develop additional space for a reading area.

Islamic Development Bank Library

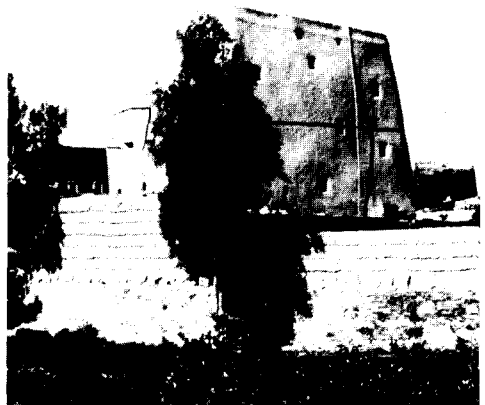
Also in Jetta is the library of the Islamic Development Bank. The collection is two buildings a year ago. The collection is two years old and contains 750 English titles, 500 Arabic titles, 40 serials, and a few hundred documents. The latter are principally from African and Arabic banks and international organizations, such as the World Bank, IMF, and FAO, and the former are mainly

concerned with finance and economics. The librarian, a Tunisian, and his two Somali assistants have classified the collection according to the Dewey Decimal system and have completed bibliographic descriptions for all titles. A card catalog has yet to be established, but a mimeograph listing of the library's holdings has been produced.

King Abdul-Aziz University Libraries

On the other side of the city is King Abdul-Aziz University. Its central library is housed in a two-story, prefabricated building which was constructed in 1977 and contains 250,000 English titles, 170,000 Arabic titles and 3,000 serials. The University system also includes a half-dozen branch libraries which specialize in areas relevant to the curriculum they support. Generally, these are small collections of about 1,000 volumes in various stages of development with the Earth Science Library and the Medical Library being the most advanced. The former is seven years old and is said to be the only one of its kind in the Middle East. Its holdings number 6,000 books and 200 serials. The Medical Library is three years old and contains 5,000 books and 150 serials. All of the libraries are classified according to the Dewey Decimal system and are gradually depending more and more on automation. Currently, the University's computer center produces a union list of serials. Within the next year, it is the aim of the central library to automate circulation as well as serials inventory.

Abha.



Ministry of Information, Saudi Arabia

King Faysal Medical City, Riyadh.



Ministry of Information of Saudi Arabia

King Faisal University Medical Library

The Medical Library of King Faisal University is located on the University's main campus in Dammam. It is housed in a one-story, prefabricated building. These temporary quarters will be replaced by a permanent structure as the University's ambitious construction program develops through the 1980s. The Medical Library contains 7,500 books and 450 serials. A few of these titles are Arabic, but English language titles unquestionably predominate. All are classified and cataloged according to the Library of Congress system at the central library which handles all technical services. Also available in the Medical Library is a book-form catalog of the University's entire holdings, prepared by Blackwell North America.

The collection is principally oriented around the student user rather than the researcher and, as such, primarily contains basic reference works and multiple copies of titles in heavy demand. The women's Medical Library is housed in a separate building. It presently contains about 3,000 books and 80 serials, but an equal acquisitions policy has been instituted in order to balance the two collections.

The King Faisal University library system also includes the Library of Agricultural Sciences and Foods in Al Hufuf—which houses 8,000 English language books, 2,000 Arabic titles, and 400 serials—and the central library, which at this time is only slightly larger than the Medical Library.

Medical Library of the King Faisal Specialist Hospital

This library's holdings include approximately 5,000 volumes, primarily in English, and over 425 journals. The library has access to MEDLAR and interlibrary loan service through the British Lending Library and is able to acquire journal reprints from the world's medical literature within a relatively short period of time. The decor is lovely—California red oak paneling highlighted by a ceiling covered with gold leaf. Another of the library's assets is the particularly capable leadership provided by the librarian.

Library of the University of Petroleum and Minerals

In Dhahran, south of Dammam, is the University of Petroleum and Minerals. It tops a hill of dusty rock and rises up with clean perpendicular lines. The buildings have the design of a modern-day acropolis with columns running along both sides of the rectangular buildings to form tall galleries with pointed arches. The texture though is not of smooth marble as is its Athenian model but is instead stony and of the same dry sandy color as the hill. The entire design is understated yet stunning.

The library is a four-story building which houses 122,000 volumes, mainly English language titles, plus an Arabic collection of 10,000 volumes and journal subscriptions that number over 2,600. The collection includes a certain percentage of titles in the humanities and, while containing the Kingdom's best collection of petroleum and mineral literature, is probably more accurately and broadly described as a science and technology library.

Like the Medical Library at King Faisal University, the University of Petroleum and Minerals Library uses LC classification, but unlike the former which segregates its Arabic and non-Arabic holdings, the library integrates all publications regardless of their language. "The rationale behind this," according to the library's handbook, "has been a belief that Arabic is a research language as much as English, French, or German and just as French or German textbooks are not separated from other library holdings, Arabic books should stand side by side with non-Arabic ones in the same field and assume their role in advancing research and human knowledge" (2).

The library has an impressive collection of microfilm, microfiche (including NTIS and ERIC publications plus official Middle Eastern documents), and 16mm films and cassettes. It also has the capability to do online searches. Future plans call for automated bibliographic control utilizing DOBIS which will produce a microfiche catalog. The library has an international staff of Saudis, Americans, Pakistanis, and Indians and boasts an annual book budget of SR 5,000,000—approximately 1.5 million U.S. dollars.

Aramco Library

Next to the University of Petroleum and Minerals is the Aramco compound, secured by a tall, chainlink fence and guards at all entrances and exits. The Aramco Headquarters library is located in the administration building and houses an estimated 30,000 volumes and some 750 serials. It contains a significant collection of petroleum literature, though this subject is probably more extensively covered by the University of Petroleum and Minerals. What is unique about the Aramco library, however, is its Arabian and Middle Eastern collection which includes the personal library of St. John Philby, the British Arabist, explorer, and advisor to King Ibn Saud. It contains a number of exquisite leather-bound first editions. Additions are continually made to this part of the collection as well as to the technical part which supports a routing service of technical journals to provide the Aramco staff with up-to-date information. The library also includes a selection of major newspapers, microfilmed documents, Aramco publications, and statistical surveys and annual reports from government agencies and ministries.

British Consul Libraries

Mention should also be made of the two British Consul libraries. The smaller of the two is in Jetta. Classified according to the Dewey Decimal system, its holdings include some 1,000 English language and literature books written by British authors. The library supports cultural exchange between England and Saudi Arabia and, consequently, includes a lot of reference tools to help Saudi students apply to schools in England. The library also includes a number of films and records. These resources are available to subscribers at a cost of 40SR (approximately

\$US 12) per year. Recently, however, a moratorium has been placed on new subscriptions and book acquisitions have been suspended due to budgetary problems.

The larger of the two British Consul libraries is in Riyadh. It, too, is a subscription library though the rates are somewhat higher, 60 SR (approximately \$US 18) per year for a single subscription to borrow books and 90SR (approximately \$US 27) per year for a family subscription. An additional 50SR (approximately \$US 15) per year is required to borrow records. The collection contains about 6,000 books by British authors with current collection development efforts emphasizing children's books and books on the Middle East, Saudi Arabia, and the Gulf. The library also subscribes to some 40 periodicals and has holdings of 300 records of classical music and dramatic readings of the works of Shakespeare. The collection is classified according to the Dewey Decimal system. There is an author catalog but no subject or title catalogs; however, the subject list is available to patrons to use as a subject catalog. The library is in the same building as the English Language Teaching Institute and provides support to the Institute's programs which are attended by Saudi government civil servants and teachers.

International Communication Agency Libraries

The United States' counterpart to the British Consul libraries are the libraries of the International Communication Agency (ICA). There are three in the Kingdom—one in Jetta, one in Riyadh, and one in Dhahran. These are relatively small libraries of a few hundred titles by American authors plus a small number of videotapes, periodicals, and audio recordings. Like the British libraries, the ICA libraries are mainly concerned with facilitating cultural exchange and assisting Saudi students who are interested in studying in the United States.

Conclusion

As the above summary indicates, many of the Kingdom's libraries have new facilities while others are in the course of planning and constructing new facilities. Considerable sums of money have been made available for construction, and some book budgets are enviable by anyone's standards. But even with these assets and the exhilarat-

ing introduction of technology and automation, the Kingdom's libraries have some major obstacles before them. Library science education must be dramatically expanded. If not, future development will suffer in a way not readily obvious to administrators and government officials.

It is clear to any observer that there are no where near enough Saudi professionals. But the solution to date—to bring in librarians from neighboring countries—is only a temporary solution and one which is creating a more odious problem. When a professional librarian comes into the Kingdom from Pakistan or India, for instance, he is either paid a salary relative to his country of origin or he is paid according to a standard civil service schedule. Though these salaries are certainly higher than what a professional could earn in Pakistan or India, they are invariably low relative to the Kingdom's

economy. The overall consequence of this has been to keep librarians' salaries down, and so long as they are down no Saudi with the slightest entrepreneurial instinct will approach the library field. There is simply too much money to be made elsewhere. While in many respects the future is bright for the Kingdom's libraries, the problem of library science education and staffing could forestall future progress.

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MEMBERS IN THE NEWS

Carol B. Alfred . . . appointed Assistant Librarian for Public Services, Underwood Law Library, Southern Methodist University, Dallas, Tex.

Pauline C. Beinbrech . . . promoted to librarian, Research Department, Tretolite Division of Petrolite Corp., St. Louis, Mo.

Tine Brouwer, was with NASA Industrial Applications Center . . . now at UCLA Graduate School of Management.

William S. Buddington . . . appointed member of the Library Advisory Committee for the Museum of Science and Industry Library, Chicago, Ill.

Marcia Cappeto, formerly with the Foundation Center Library, . . . is now with the Columbia Presbyterian Medical Center Fund in New York.

George M. Collins, formerly librarian, *The Boston Globe* . . . promoted to assistant to the business manager.

Pamela M. Corley . . . appointed reference librarian at Norris Medical Library, University of Southern California.

Joan G. Crisp, formerly librarian, Pharmaceutical Manufacturers Association, Washington, D.C. . . . now chief, Technical Operations Branch, FDA Bureau of Drugs, Rockville, Md.

Lorna M. Daniells, formerly head, Reference Department, Baker Library, Harvard Business School . . . named business bibliographer.

Renee Evans . . . now information research specialist at Lockheed-California Company.

Virginia S. Grayon . . . named librarian, AMAX, Inc., Greenwich, Conn.

Duane M. Helgeson . . . appointed physical sciences librarian, California Institute of Technology, Pasadena, Calif.

Carole Hernandez . . . now at Aviation Electric Limited Engineering Library, St. Laurent, Que.

Shirley Loo, formerly, head, Subject Specialization Section, Library Services Division, Congressional Research Service, Library of Congress . . . appointed Specialist in Information Control and Automated Systems.

Jean K. Martin, formerly at the VA Medical Center, Des Moines, Iowa . . . now library manager, Molycorp, Inc. a subsidiary of Union Oil of California, Los Angeles.

Beth O'Mahoney . . . appointed library head, Goldman Sachs & Co., New York.

Dorothea M. Rice, formerly librarian, AMAX, Inc., Greenwich, Conn. . . . retired.

Linda Scheiber, formerly with New York Life Insurance Co. . . . has joined United Nations staff.

Sandra Sutliff . . . hired as chief librarian, Doyle, Dane & Bernbach, New York.

Margot Walker . . . named development manager, Sales Division, Imperial Tobacco Ltd., Montreal. She is also the incoming (and first) president of the Canadian Society for Training and Development.

Sarah Warner . . . appointed head librarian, Parsons, Brinckerhoff, Quade & Douglas, New York.

Mary Winkels . . . named director, Research Library, Brookhaven National Laboratory, New York.

Diane Wolfenden . . . appointed corporate librarian, Corporate Library/Information Centre, Canadian Pacific Ltd., Montreal.

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ADDENDUM

The Vistas article, "Resolutions Voted on by Delegates to the White House Conference on Library and Information Services," in the Feb issue of *Special Libraries* failed to indicate the outcome of the voting on two key resolutions: Intellectual Freedom and Library Skills Instruction. Both resolutions passed.

COMING EVENTS

Aug 18-23. IFLA Conference . . . Manila. This new date reflects a change from the previous date, Aug 25-31, listed in *Special Libraries* 70(no. 9): 455(Sep 1979).

Sep 2-5. Fourth International Congress on Medical Librarianship . . . SAVAR CENTAR, Belgrade, Yugoslavia. Organized by the Institute for the Continuing Education of Health Workers and SAVAR CENTAR in collaboration with the Union of Medical Societies and the Federation of Library Associations of Yugoslavia.

Sep 4-5. Institute on Automated Serials Control . . . Pfister Hotel, Milwaukee, Wisc. Sponsored by the Library and Information Technology Association, a division of the American Library Association. Contact LITA/ALA, 50 E. Huron, Chicago, Ill. (312/944-6780, ext. 302).

Sep 8-10. Second Annual Government Micrographics Conference and Exposition . . . Sheraton Hotel, Washington, D.C. Theme: "Information Management for the 80s." Information management sessions will be offered on Sep 8; the main conference program takes place Sep 9 and 10. CEUs will be given for workshops presented by The Graduate School, U.S.D.A. For information, contact: Bob Harar, National Trade Productions, Inc., 9301 Annapolis Rd., Suite 206, Lanham, Md. 20801 (301/459-1815).

Sep 13-15. Meeting-Workshop of the Mental Health Librarians and the Bibliography Roundtable, allied groups of the Hospital and Community Psychiatry Institute . . . Boston Sheraton, Boston, Mass. Theme: "The Patient Where? The Role of the Librarian in Patient Education." Registration open for separate or for all sessions. Contact: Lucille S. Stark, director, WPIC Library, 3811 O'Hara St., Pittsburgh, Pa. 15261 (421/624-2378).

Sep 15-19. International Micrographics Congress . . . Hong Kong. Theme: "Microfilm for Everybody." Full delegate fee: \$US 350.00. The fee for a special one-day program titled "Fundamentals of Microfilm" is \$US 53.00. Contact: Information Technology Services Pty. Ltd., P.O. Box 1239, North Sydney, NWS, 2060, Australia.

Sep 15-19. Conference and Exhibition on the Nationwide Provision and Use of Information . . . City Hall, Sheffield, England. Jointly sponsored by Aslib, the Institute of Information Scientists, and the Library Association. For information write to: Elizabeth Lowry-Corry, Joint Conference Organizer, c/o Aslib, 3 Belgrave Square, London SW1X 8PL, England.

Sep 25-27. Library Public Relations: A Total Commitment, Workshop . . . Graduate School of Librarianship and Information Management, University of Denver. Guest speakers: Gloria Glaser, public relations director, Nassau Library System, and Sally Brickman, library editor/publicist, Case Western Reserve University.

Oct 5-10. ASIS 43rd Annual Meeting . . . Anaheim, Calif. Theme: "Communicating Information." Presentations will include poster sessions, platform sessions, and panel discussions.

Oct 6-9, 14-17. Eighth World Computer Conference . . . held jointly in Tokyo (Oct 6-9) and in Melbourne (Oct 14-17). Sponsored by the International Federation for Information Processing. U.S. participants are now being sought for the technical program. Potential authors are asked to contact AFIPS, 210 Summit Ave., Montvale, N.J. 17645 (201/391-9810) to receive a copy of the official "Call for Papers" brochure.

The Columbia Conference on the Two-Year Master's Programs, March 13-14, 1980

A Summary

Approximately 90 individuals attended this two-day conference held at Columbia University on March 13 and 14, 1980. Among those invited to attend the meeting, made possible by a grant from the H. W. Wilson Foundation, were the deans of the accredited programs in the United States and Canada and members of the Committee on Accreditation of the American Library Association, as well as representatives from both the library press and professional associations.

A Conference Call

The speakers were assembled in response to a paper prepared by Dean Richard L. Darling (Columbia) which both outlined the reasons for the conference and provided a brief, historical introduction to education for librarianship. With nearly 10% of the accredited graduate schools in the United States and Canada offering or planning two-year master's programs, Darling noted, a conference and the publication of its proceedings and discussions would provide a focus for those in library education and those in practice.

Keynote: President Elliott

The keynote speaker, Lloyd H. Elliott, President of George Washington University, began by observing that every profession with which he was familiar was studying itself the way that library education was being examined at this conference. Elliott maintains that higher education lost the confidence of the public in the 1960s because the universities were not prepared to deal with student unrest. He was not optimistic about the restoration of public confidence in the short term but did note that the professional schools had suffered the least since they were not specific targets of the unrest.

President Elliott noted 1) the need for a deeper and broader undergraduate liberal arts preparation as the professions grow more specialized; 2) that education for the professions would take place first at the entry level with specialization to follow; 3)

that foreign languages, computer skills, and a stronger research component of life-long learning after entry to insure that the results or research are put into practice; and 4) the necessity for the schools to assemble the financial resources at a level appropriate to the profession.

Elliott introduced two concepts in this address which, while not central points, were very interesting. The first was that the level of damage or risk between client and the practicing professional may be the key factor in determining the length of the professional education. He also asked, in an effort to meet rising educational costs, if the student charges had to be in the form of tuition. Elliott wondered if some of the educational costs could be borne by the student performing a service to the institution in lieu of tuition payment.

Toronto

Dean Katherine H. Packer described the situation in Canada generally, where all of the schools offer two-year degree programs, and provided specifics on the program at the University of Toronto. During the first two semesters, students in her program enroll in all the basic courses. In the second year, the student takes a program of electives to prepare for the specialization of his/her choice.

Packer noted that the old BLS degree was sufficient for the entry-level positions but that in the former one-year program there was not enough preparation for the future career of the student. In the current two-year program, the student defines career goals in the first year and has an extra year to prepare to meet the demands of that particular career path.

Dean Packer did acknowledge, in subsequent questioning, that the two-year program did not accommodate part-time students.

UCLA

Dean Hayes described the development of the two-year master's programs at UCLA and noted that the following trends played

an important role: 1) the MSIS program developed and became a parallel degree to the MLS—the relationship between the two programs established the need for the two-year master's; 2) several of the programs at UCLA already required more than one year to complete: for example the Program in Biomedical Communication required a year of course work as well as an internship; and 3) a one-year program seemed inadequate for professional preparation. The faculty of the School, instead, saw the need for fewer, better qualified librarians. In 1971-72, the School switched to the two-year degree using this year as the transitional stage to allow those enrolled to complete the program in one year or use this year as the first of the two-year program.

UCLA requires college-level statistics, a programming language, and either two years of one language or one year each of languages for admission. If these are not met at the point of admission, they must be taken as a part of the first year of the master's program. The program is two academic years in length, in which the first year involves taking the nine required courses (three courses in each of three quarters). The second year has four components: 1) courses outside the school; 2) the development of a specialization paper or the taking of a research methods course; 3) an optional internship under faculty supervision, and; 4) an apprentice teaching assistantship or research assistantship in the school.

Hayes argues that this program allows faculty to teach a large number of specialized courses, provides a reduction in the number of students in each class, offers the student greater options in specialization, and provides an opportunity for students to work with faculty on their research. Hayes is quick to point out that the UCLA program is limited in enrollment by the University directive to 150 students and that the rewards to the faculty and the school come as a result of research and publication. The aspect the students like most about the two-year program, according to Hayes, is the "real internship experience."

University of North Carolina

The programmatic portion at UNC is very much like that of UCLA, reports Dean Edward G. Holley, but the process by which the faculty of the University of North Carolina reached its decision involved many

hours at retreats and in faculty meetings. Once again, Holley noted that UNC was limited in enrollment by University directive and that at UNC the rewards are for research and publication.

In response to questions from the attendees at the conference, it became increasingly clear that none of the programs are two full years. Indeed, each program is two academic years with the summer either off for the student or a time for internship. Many of the present MLS programs are 36 semester hours and these programs add an additional 12 semester hours or the equivalent in quarter hours. The two-year program at UNC will begin in the fall of 1980.

Financial Implications

Dean Russell Bidlack of the University of Michigan pointed out that the two-year program would require a larger faculty, more financial aid, increased tuition and living costs, and added administrative burdens. Part-time students, he noted, could not be accommodated; faculty would lose the opportunity to teach summer session and students would lose this period for classes.

Concentrating on Michigan, Bidlack announced that the out-of-state tuition for students in the School of Library Science would be \$2,850. From 1926 to 1948, Dean Bidlack reminded the audience, Michigan offered a two-year program. At the end of the first year, the student received the ABLS degree and, at the conclusion of the second year, the degree of AMLS was awarded. The present program at UCLA and the proposed program at UNC would mark a return to the two-year, four-semester, no summer session programs.

In a survey of the Deans, Bidlack said that four of his respondents—Kentucky, Drexel, UNC, and Illinois—were normally positive toward implementing the two-year degree in the near future. Bidlack felt, however, that two-year programs would result in less wages for faculty and fewer students for the schools.

Accreditation Standards

Charles Churchwell, Dean of Library Service at Washington University and Chairman of the Committee of Accreditation, reviewed accreditation for library education from 1924 to the present *Standards for Accreditation of 1972*. Dr. Churchwell

noted that the two-year master's program would not require a change in the present standards.

On the national level, Dr. Churchwell drew attention to the changing role of accrediting agencies, especially at the level of the Council on Post-secondary Accreditation (COPA) and its relationship to the



federal government. COPA, the agency which accredits the accrediting bodies in the United States, has a direct relationship to the U. S. Office of Education. Churchwell sees a growth in federal interest in an effort to increase educational opportunities for citizens, including formal federal recognition to protect the public interest.

The Commissioner of Education, notes Churchwell, could increase the intensiveness of federal oversight to protect both student rights and the many tax dollars invested in higher education. The balance of federal oversight as opposed to federal control will require close scrutiny by all.

The Employers React

David Palmer, Assistant State Librarian (NJ), Beverly P. Lynch, Director of the University of Illinois Chicago Circle Library, Elfrieda McCauley, Media Services Coordinator for the Greenwich (CT) Public Schools, and Glen A. Zimmerman, Director of Personnel & Labor Relations at the Library of Congress reacted to the two-year degree and its implications for the job market.

None of the participants felt that the two-year degree would lead to higher starting salaries while Palmer noted he was pleased with the present graduates. He did see the second master's degree as an increasing need as well as specific academic preparation in law, history, and other specialities.

Lynch said that 15% of the ARL libraries require publication for promotion and tenure. She was seeking candidates for entry level positions who wanted to be department head in two to three years.

McCauley opposed the two-year degree, because it promised to reduce the number of graduates, and noted the need for additional school media personnel.

While Zimmerman observed that the two-year degree would have a negative impact on minority and low-income students, he saw a larger need for individuals with people skills who seek middle management positions after several years of practice.

Summary

Professor Jane Anne Hannigan (Columbia) summarized the Conference by raising a series of questions which she felt were not fully addressed:

1. Are the two-year programs the best possible programs?
2. Does the expansion of time to complete the degree in itself equal educational excellence?
3. If one or a few schools opt for the two-year master's degree program, *should there be a domino effect among all of the accredited schools?*
4. What are the economic realities of the two-year degree in terms of support for education, cost to the student, and salaries for faculty.
5. Should an accredited degree automatically mean conformity in program?
6. What is the best investment for the student in terms of time and money?
7. If the two-year degree represents an increase of 12 credits over the one-year degree, might not the new degree be more properly described as an "extended program"?

Hannigan raised additional questions over a wide area which she felt needed more attention. These include: the use and misuse of students as research and/or teaching assistants; the content of the two-year programs and the extent to which these programs have been altered in the shift from a one-year program; if courses have been added, what has been removed from the curriculum; and will whole groups of students—part-time, minority, and low-income—be eliminated from the extended programs because of the increased burdens of cost and time.

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Graduate School of Library
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Simmons College, Boston, Mass. 02115

REVIEWS

Guide to Information Science, by Charles H. Davis and James E. Rush. Westport, Conn., Greenwood Press, 1979. 305p. \$25.00 LC 78-75240; ISBN 0-313-20982-0.

Special librarians will find this book well worth their time to read, particularly if they have not read the authors' former book, *Information Retrieval and Documentation in Chemistry*. Even those who are familiar with this former book will want to acquire the new one for the new information it contains.

This conservatively designed black book contains a very clear presentation of certain fundamental concepts of information science—concepts which special librarians should have in their repertoire of tools to deal with information systems and solutions to information transfer problems. The first six chapters are revised and expanded versions of the earlier book. Some of the statistics have been toned down to appeal to nonscientific disciplines such as the arts and humanities. But certainly this book is not a mere first text for an information science course, unless it is to be supplemented with other readings, some of which could come from the citations in the bibliographies following each chapter.

The book contains two new chapters not included in the authors' former work: "History and Fundamentals of Computing" and "Data Structures and File Organization."

Local Government Records: An Introduction to Their Management, Preservation and Use, by H. G. Jones, Nashville, Tenn., American Association for State and Local History, 1980.

It is always a pleasure to review a book that is both interestingly written and critically needed in the field of records management at the local government level. This book is not technical and contains specific instructions for establishing a records management program. While designed primarily for dealing with local records, parts of it can be used by anyone involved in records management work. The author provides an eloquent and colorful approach to local records and their archival significance. He is sympathetic to the plight of the

The latter is the longest of all the chapters and is clearly an intermediate-level presentation of the topic. The "History" chapter is interesting reading but does not add significantly to the main content and purpose of the book in the sense of information science principles. However, it is a valuable and concise history for those who are not familiar with computing history. The authors also give just recognition to women who have made contributions in the field: to Lady Lovelace, i.e., Ada, who was Charles Babbage's collaborator and supporter and for whom one of the latest programming languages (ADA) is named.

The quality of writing is excellent, and the authors show expert command of their subject. The production quality of the book is high. It is certainly worth the asking price for libraries and for individuals in the library and information science fields. Only one typographic error on page 111 was discovered, and only one minor misstatement occurs on page 163 in relation to power consumption of computers.

Special librarians will find this book useful for teaching fundamentals courses, for their personal libraries, and for introducing nonlibrarians or noninformation specialists to basic concepts of our field.

Audrey N. Grosch
University of Minnesota Libraries
Library System Department

records manager and archivist due to the generally low priority given to the preservation of records by local governments. He exhorts historians and researchers to agitate officials so that more attention will be paid to this valuable resource area.

The text is divided into two main parts: a) management and preservation and, b) use of local government records. The first part begins with an historical background on the development of records management, followed by a "how to" section describing the creation of a records management program from a records inventory to retention/disposition schedules. A sample inventory worksheet is included in this section.

Several important areas of records management are covered next, such as records storage centers, microfilming, and the role

of the State in the creation of a municipal archives. Charts are also provided for figuring costs for storage and microfilming.

Part one closes with an "it can be done" chapter, containing case studies of existing records management programs in other local governments. For jurisdictions with an ongoing records management program, this part provides a yardstick against which to compare one's own program of progress in the field.

Part two begins with a description of the diversity and complexity of American local government records, and the role of county court records. It concludes with a description of fifteen broad types of local records such as vital statistics records, tax records, election records, school records, and so on, that are useful to researchers. This information is valuable for any archivist and records management officer in determining what kinds of records are "important to save."

Finally there are two appendixes. The first is a list of "Local Records Services of State Agencies" arranged alphabetically by state. The second, "Selected Sources of

Information and Archives and Records Management," includes names and addresses of organizations and associations in the records management field. The assistance and advice which can be provided by state archives agencies, historical societies and professional associations should never be ignored.

Throughout the text the author provides a generous bibliography of readings to expand one's knowledge of specific topics, from fire protection to genealogy.

This book is highly recommended for any local government official and department contemplating establishing a records management program. A new employee in records management or archives should be required to read this book to acquire a perspective and appreciation for the work he/she will be doing.

Jean T. Kadooka-Mardfin
Municipal Reference & Records Center
City Hall Annex
Honolulu, Hawaii

PUBS

(80-048) **The White House Conference on Library and Information Services, 1979: The Final Report/Summary.** NCLIS. Washington, D.C., National Commission on Libraries and Information Science, 1980. 101p.

The Summary was part of a multimedia final report presented to the President Mar 21, 1980, which included audiotape, microfiche, and videotape materials. This, the written document, included summaries of the proposed National Library and Information Services Act, legislative and administrative initiatives for a national library program, and the resolutions presented at the Conference. Available from NCLIS.

(80-049) **Microform Review** 8 (no. 4) (Fall 1979).

Issue is devoted to government documents, with articles on reference material in microformat; Canadian government document microfilming programs; social reform and microformat; and state and local publications in microform. Available from: Microform Review, P.O. Box 405 Saugatuck Sta., Westport, Conn. 06880.

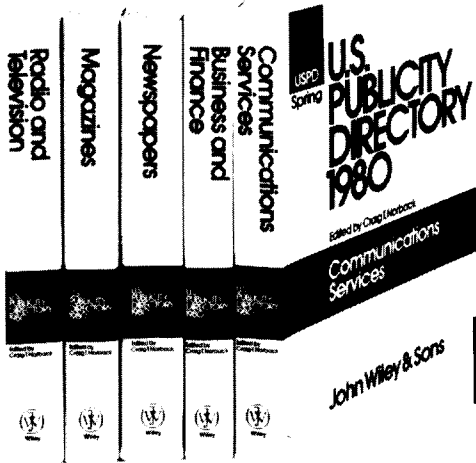
(80-050) **New Copyright U.S.A.: A Guide for Teachers and Librarians.** Tseng, Henry P. Columbus, Ohio, AMCO International, Inc. 1979. xviii, 434p. \$23.00. LC 78-75114; ISBN 0-9602406-0-8.

A handbook on the legal and technical complexities of the 1976 Copyright Act. Presents an overview of the development and history of copyright legislation and a clarification of the doctrine of fair use, including a review of cases involving the application of the doctrine.

(80-051) **ALA World Encyclopedia of Library and Information Services.** Wedgeworth, Robert, ed. Chicago, American Library Association, 1980. xxii, 601p. ISBN 0-8389-0305-3.

Part 1, *Libraries in Society*, contains 162 articles on the history of libraries from ancient times up to the present. Part 2, *The Library as an Institution*, is made up of 9 articles on the principle types of libraries and archives, with emphasis on North America. Part 3, *Theory and Practice of Librarianship*, contains 25 articles examining the principles and practice of librarianship and information management. Part 4, *Education and Research*, contains 11 articles on curriculum content, librarianship, and archival management. Part 5, *International Library Information and Bibliographical Organizations*, consists of 28 articles on the growth and development of key international organizations. Each section includes statistical and bibliographical information.

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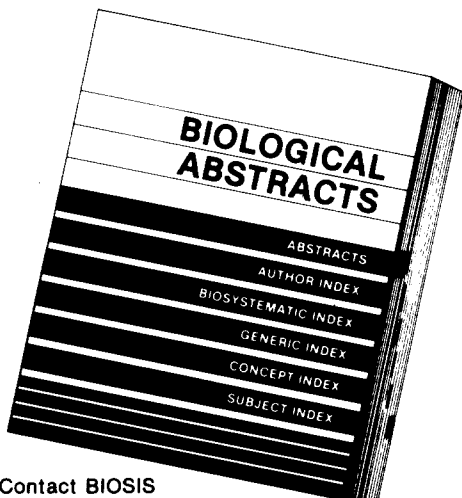
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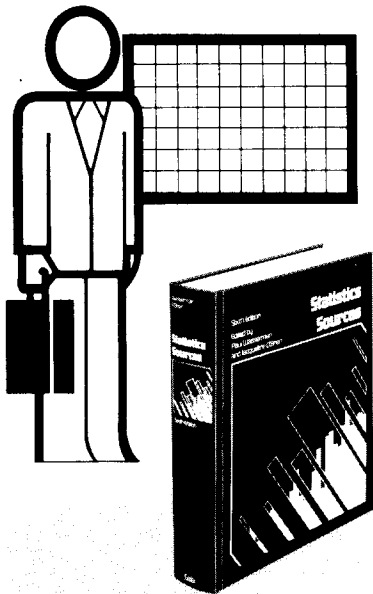
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