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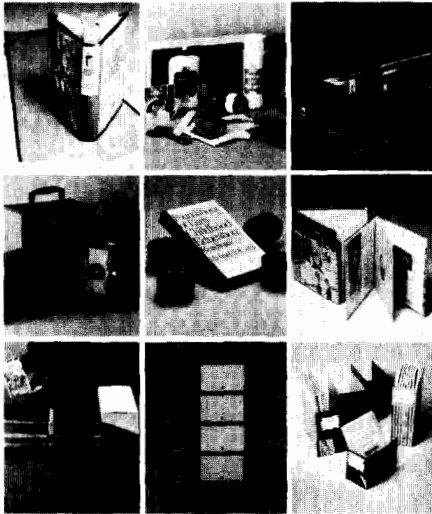
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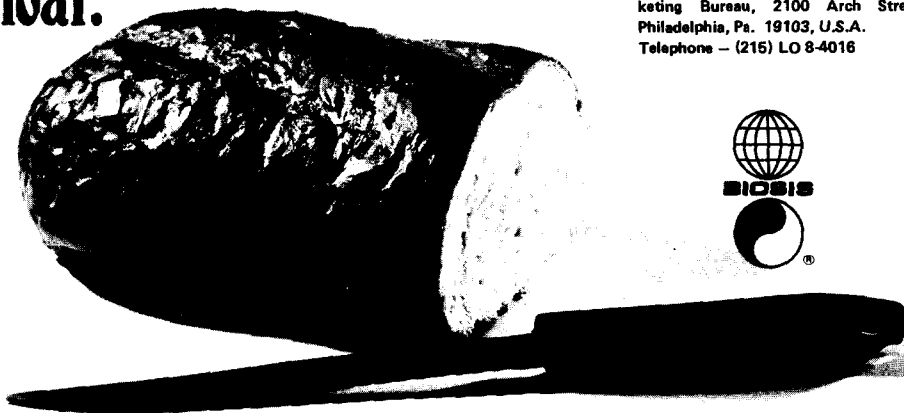
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Indexing the *Hexamer General Surveys*

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■ Until this project was undertaken, an adequate index did not exist for the *Hexamer General Surveys*, a 19th century set of 29 volumes of surveys of selected industrial properties in the Philadelphia area. The mechanics and philosophy of the authors' index are described as well as the often humorous inadequacies of the older indexes.

AS WITH any subject, some familiarity with indexing principles and with the work being indexed is necessary before discussing the indexing of such work. In this august assemblage we can assume familiarity with indexing, but, as the evidence seems to increasingly indicate that the Free Library of Philadelphia possesses a unique set of the *Hexamer General Surveys*, familiarity with that work cannot be assumed. It is fervently hoped that another set exists in some personal or institutional closet somewhere so the missing plates in our set are not lost forever.

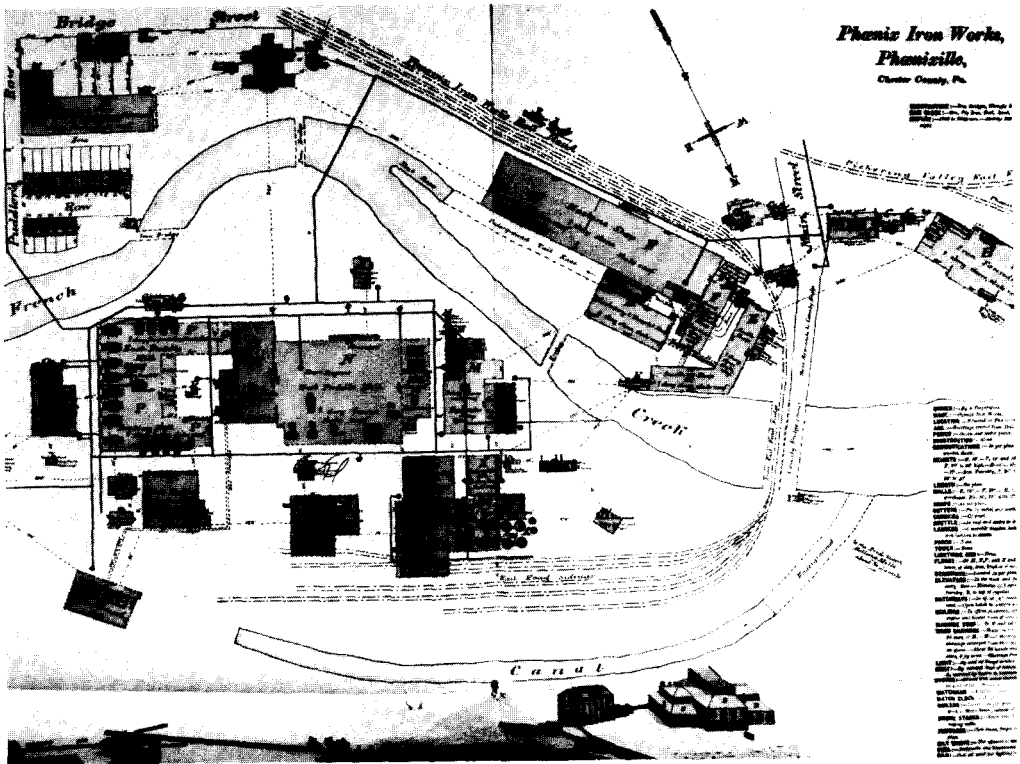
Briefly, the *Hexamer General Surveys*—at least the set at the Free Library—were prepared by Ernest Hexamer & Son (the firm name varies over time) between 1866 and 1896 and consist of 2,855 numbered plates in 29 numbered volumes. There is some evi-

dence—handwritten notes in another volume—to indicate that at least one more volume carrying the plates to 2,955 was issued.

Unlike the more familiar fire insurance atlases (*Hexamer* also issued a set of these for Philadelphia and suburbs) which depict on each plate a relatively small area of several blocks showing streets, property outlines, and building outlines, with building heights and construction material noted, the *General Surveys* concentrate on a single property per plate. At first each plate showed only a schematic of the building(s) indicating construction material (shown by a color code), dimensions, number of floors, location of furnaces and chimney, and other details. A brief statement of business activities on the premises was also included. In volume 7 a change for the better occurred. The schematic was basically unchanged, but the information on activities was expanded and placed in tabular form: names of owners, tenants (with floors occupied), operators, and number of employees (including boys, girls, and women) were noted. Supplementing the schematic is a colored elevation.

We have been unable to determine the criteria for inclusion in the surveys other than general insurance, but why these—and not other properties—remains to be answered by further research. Though primarily showing properties in Philadelphia and immediately adjacent

Figure 1. Plate from the *Hexamer General Surveys*



areas, properties are included from as far away as Erie, Lewisburg, and Steelton in Pennsylvania, Gloucester County in New Jersey, and Richmond, Virginia. The properties are primarily industrial and commercial. Industrial properties include breweries, textile mills, iron and steel works, paper mills and print works, sugar refineries, petroleum yards, dye and chemical works, sawing and planing mills, and meat houses. Commercial properties are large farm estates, freight yards, grain elevators and warehouses, movie theaters and concert halls, office buildings, stores, hotels, and trolley barns. Some other types of properties included are a university, a newspaper building, a race-track, a prison, an insane asylum, a hospital, and an almshouse. By far the overwhelming majority are industrial, and of these, the textile mills predominate. A property may have been surveyed several

times and it is possible to follow the growth of a company with these surveys.

Frequent users of the Free Library set are fine arts students, industrial archaeologists, and the staff of the Philadelphia Social History Project. In Philadelphia, the past is preserved through historic architecture. Therefore, the set is useful, and any material of this sort needs an index.

Discovery of the Set

Before launching into the details of the actual indexing, a brief history of the unearthing of the set is in order. In 1966 Dr. Anthony Garvin of the University of Pennsylvania's American Studies Program was shown an old, moldering set of the *General Surveys* by one of the authors. Dr. Garvin, whose area of special interest is industrial archaeology, was

very excited by the find. If he sent his students to use the set and wear it out, he also broadcast his discovery to the world. Dr. Richmond Williams of Eleutherian Mills Historical Library, Delaware, felt his institution should have a set and arranged to have Eleutherian Mills bear the cost of microfilming the set. Earlier, an abortive attempt was made by the Free Library to interest the field in cooperative microfilming of the *Hexamer General Surveys*, but it came to naught.

Eleutherian Mills briefly toyed with the idea of selling the microfilm commercially but realized that such a set of six reels would need an index if it was to be useful. The indexes included with the set were worthless. One of the authors was commissioned to compile an index of firms listed in the set, but when the index was nearly finished, the library decided not to go ahead with the venture.

Errors in Indexing

In the actual compiling of the index several difficulties were encountered. As was noted, the indexes done by E. Hexamer & Son were not very useful. There was one per volume (generally 100 plates to the volume). A pseudo-cumulative index exists for the first 23 volumes but that is also next to worthless unless one happens to be an insurance seller in 1888 or thereabouts: it notes the plate number for the most recent survey only. In addition to incompleteness and incor-

rect alphabetization, the individual volume indexes are loaded with outright errors—gross misspellings of names and erroneous plate numbers—and were compiled with little knowledge of indexing principles.

The most glaring error is when the name of a firm begins with “The,” as in “The Harlan & Hollingsworth Co.” Most of the time (there is no consistency one way or another among the individual volume indexes) the only index entry is under “The.” In addition, the plates are listed numerically within each letter.

Another error is the occasional use of the descriptive part of a firm name as an index entry. For example, the plate headed “Edwin H. Fitler & Co., Cordage Co” has an entry under “Cordage” as well as “Fitler.” Then there is the case of “John Wood & Bros., The Water Power Mills” having an entry under “The” as well as “Wood.” In some instances it is difficult to determine whether what appears to be a descriptive part of a name isn’t, in fact, a proper name. Hierarchical placement on a plate frequently affords no clue as in the case of “The Magnesia Sectional Covering Co.” which heads the plate and is followed by “Wissahickon Chemical Works, Keasbey & Mattison.” One is forced to assume it is part of the proper name.

Another favorite, but inconsistent, policy is to put the entry for a firm under the first name of the owner instead of the last. “Hugh French & Bro.” is found

Figure 2. A Section of the Original Index

F		P	
Fitzpatrick & Holt, Canton Woolen Mills.	474	Philadelphia Plaster Works, Smith & Harris,	459
Fitzgerald & Flagg, Union Malleable Iron Works.	484	Providence Mill, S. Yewdall,	492
Fleming Brothers, Atlantic Knitting Mills,	492	Philadelphia Crucible Works, Taylor, Strow & Co.,	471
Fitler & Blichter, Aramingo Mill,	510	Peirce, C. W. & C., Livingston Mills,	476
Flue & Co.'s Fort Washington Mill,	522	Philadelphia Flint Glass Works, Ledner & Bird	479
Fort Washington Mill, Flue & Co.,	522	Plant, A. & Brother, Ashland Woolen Mill,	480
Footst. Israel & Co., Tremont Mills,	525	Powers & Weightman, Manufacturing Chemists,	495
Frankford & Southwark (5th & 6th Sts.) Passenger Rail-	581	do do do	496
way Co.'s Car House and Stables,	550	Pusey, Sweet & Co., Morocco Manufactory,	497
Franklin Oil Works, John L. Stewart,	551	Point Beach Phosphate Works, Watson & Clark,	509
do do do do		Point Pleasant Foundry, Thiers & Bradshaw,	518
		Philadelphia Malleable Iron & Hardware Works, E. Hall	626
		do do do	Ogden,
		Philadelphia Terra Cotta Works, Link & Black,	537
		do do do	538
		Powhattan Mill, No. 2, Shaw & Eacey,	540
		Pusey Jones & Co., Machine Works,	545
		do do do	546
Frankford, James, Union Star Mills,	489		
Greenwood & Bank, Greenwood & Bank,	504		
Greenwood & Bank, Globe Dye Works,	504		
Greenwood & Bank, M. Jr., Cotton Mill,	512		
Greenwood & Bank, Keystone Precision Packing House,	521		
Greenwood & Bank, McCullen, Greese & Stone,	529		

Figure 3. The New Index

William SCHOLLES & Son, Woolen Yarn Mill, John & Joseph Scholes, Owners, 2495
 William SCHOLLENBERGER, Morocco Manufactory & Tallow Works, 520
 William SCHOLLENBERGER & Sons, Morocco Factory, 1335
 William SCHOLLENBERGER, Jr., Agent, Tenant, Schollenberger's Factory, 2731
 SCHOLLENBERGER's Factory, Mrs. Maria Schollenberger, Owner; Charles B. Barton, B. L. Solomon's Sons, A. J. Cameron, Gabriel Printz, Tenants, 1935
 SCHOLLENBERGER's Factory, Mrs. Maria Schollenberger, Owner of real estate; William Schollenberger, Jr., Agent, Columbian Textile Co., Delaware Textile Manufacturing Co., John Smith, R. Blood, F. F. Wolgamuth Sons, S. Vernon, Tenants, 2731
 SCHUYLKILL Copper Works, Chemical Copper Co., 1308, 1309
 SCHUYLKILL Cotton & Woolen Mills, A. Campbell, 130, 325
 SCHUYLKILL Cotton Mills, A. Campbell & Co., 688, 689
 SCHUYLKILL Falls Lager Beer Brewery, Jacob Hohenadel, 468
 SCHUYLKILL Falls Park Brewery, Bergdoll & Psotta, 1098

under "H," not "F," and the "Abram Cox Stove Co." is found only under "A." This may have been done when the official name of the company included the entire name, but there is no excuse for putting the "J. Elwood Lee Co." under "J" only.

Still another thing that is not done in the original indexing is to make an entry for additional names in the firm. For example, "Powers & Weightman, Manufacturing Chemists" has no entry under Weightman. This has been done for all such names in the Post index.

Sometimes the original indexers tried to cut corners with disastrous results. The entry "Schuylkill Lager Beer Breweries" is not a single company but was used for a location containing fifteen separate breweries, none of which has its own entry.

Surmounting the Problems

Many of the seeming errors in the index are derived from the plates themselves. When an error in spelling or punctuation, for example, produced a slight variation in the name of a firm appearing more than once in the *Hexamer General Surveys*, the current indexer did no research to determine which name use was correct. Spellings as given on the plate (even when

it was suspected the plate was in error) are used and there are no cross-references between different spellings of what appear to be the same name. For example:

J. & W. Yewdale,
 Worsted Goods Manufactory
 J. & W. Yewdall,
 Worsted Goods Manufactory

Salomon Wild,
 Cotton & Woolen Mill
 Solomon Wild,
 Frankford Woolen Mill

Clark & O'Neill, Weaving Mill
 Clarke & O'Neill, Waverly Mills

In instances where a name appears more than twice and there are variants, all spellings have been changed to the most frequently used spelling—hopefully the correct one.

In many instances, but not all, possessives appearing on the plates have been edited out (e.g., Malaga Glass & Manufacturing Co.'s Works becomes Malaga Glass & Manufacturing Co., Works).

The most difficult problems to decipher are those in which inconsistent punctuation, spelling, capitalization, and ambiguous wording make it impossible to tell if there is an error, a change in name, or

two different companies. For example:

Nepaul Mills, Stead & Miller
N. E. Paul Mills, Stead & Miller
Dennis Anderson & Co.,
Yeadon Mills
Denis, Anderson & Co.,
William B. Bullock's Mills

There are quite a number of names which could either be unusual (at least for the 1970s) first names or last names of the first partner in a firm. The absence or presence of any commas in such names is not significant, since there are many errors of placement or omissions of this sort throughout the set. Some names that were decided to be first and last names of a single person are Tygert Allen, Conyers Button, Andreas Hartel, and Larne Moore.

All major variations in firm names have been retained as separate entries to indicate growth, decline and/or change, rather than having a single consolidated firm entry. An example of this is:

Thomas POTTER, Oil Cloth
Manufactory
Thomas POTTER, Oil Cloth
Works
Thomas POTTER, Son & Co.,
Potter Oil Cloth Works
Thomas POTTER, Son & Co.,
Potter Oil Cloth Works, No. 2
Thomas POTTER, Sons & Co.,
Oil Cloth & Linoleum Works
Thomas POTTER, Sons & Co.,
Potter Oil Cloth Works

The Revised Index

An attempt has been made in this index to list all firm names appearing on the plates. All obvious errors have been corrected, but no research has been undertaken to ascertain the correctness of the plates: the plates are taken as given and this index is to firm names on the plates in the set at the Free Library of Philadelphia. A list of the 105 plates missing from this set is appended to the index. The compiler has been forced to rely on

the individual volume indexes for coverage of these missing plates.

The index does not contain traditional cross-references. When more than one name is connected with a firm, full information is given for each name. To use a hypothetical example: the entry "Smith, Brown & Jones, Consolidated Brothelry, 3572" is the basic entry, but the entries for Brown and Jones would not be "Brown, see Smith, Brown & Jones" but would be "Brown, see Smith, Brown & Jones, Consolidated Brothelry, 3572." Unfortunately, references between different names for the same property are not provided.

It is a word by word Key Word in Context index. Possessives (i.e., Allen's Dye Works), commas and other punctuation, titles (Mrs., General, etc.), and descriptive words (owner, tenant, see, etc.), have been ignored in alphabetizing the entries. When several entries contain the same last name, the policy has been that the individual name precedes the individual name as company, and the individual name precedes that name as a member of a partnership:

E. B. ANDREWS
E. B. ANDREWS Co.
ANDREWS, Agnew & Hibbard
ANDREWS & Adams
ANDREWS, see . . .

When several names are connected with the same firm, the policy has been to alphabetize by the first last name:

ARCOLA Mills, Joseph M. Adams
ARCOLA Mills, Matthews & Woelpper
ARCOLA Mills, J. B. Wimpenny

The order of each basic entry is name, either personal or firm, followed by any descriptive adjectives (owner, tenant, etc.), a semicolon followed by complete tenant information and plate number(s). One of the most fulsome (and horrendous!) examples is:

William JOHNSON & Sons, Owners
& Tenants, Mill; Kuestner &
Fouk (Belmont Carpet Mills),
William Johnson & Sons &

Clark (Lockwood Carpet Mills), William Clapp, Edward Lockhardt, Davenport & Lyster (Lockwood Mills), Edward White, Tenents, 2277

We reiterate that the information on the plates has not been verified in other sources. Such verification, with resulting corrections, as well as subject (type of

company or its product) and geographical indexes are possible future projects. This index to names appearing on the plates of the *Hexamer General Surveys* is just the first key to this set.

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J. B. Post is map librarian, Free Library of Philadelphia, Philadelphia, Pa. Joyce Post, a free-lance librarian, is preparing a 25-year retrospective index to *TV Guide* for Triangle Publications.



Economic Interaction Between Special Libraries and Publishers of Scholarly and Research Journals

Results of an NSF Study

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■ Under NSF auspices, a study was made of the economic interaction between the publishers of 2,459 American research journals and the libraries which attempt, out of constricting budgets, to purchase them. This paper focuses on information gathered in 1969-73 about the growth and pricing trends of research journals,

particularly as these are purchased by special libraries. It examines budget growth and allocation in special libraries, fiscal imbalances created, and what special libraries have done about these problems. Finally, it projects future concerns and difficulties, and touches on some alternatives.

A STUDY undertaken by the Research Center of the Indiana University Graduate Library School and funded by the National Science Foundation* sought to examine the relationship between U.S. publishers of scholarly and research journals (the for-profit sector, professional societies, university presses, not-for-profit organizations, and even individuals), and the libraries (academic, public, and special) which make up the greatest market for these publications. The need for this study was based on mounting evidence that the total economic system governing journal distribution is in difficulty. Publishers' need for revenues to support these publications is simply not sustained by the funding ability of the customer population, largely represented by libraries.

The study also sought to address some assumptions which have been made by publishers and librarians about each other. In large part these assumptions turn out to be misconceptions, because of a lack of information and a lack of communication and trust between the publisher and library groups. Simply stated, the biggest concern on the part of librarians is that price increases are exorbitant, and that librarians are being made victims of publisher attempts to make unreasonable profits. Publishers, on the other hand, are concerned about the impact of networks, of expanded interlibrary loan, and of photocopying on their sales, their revenues, and their economic survival.

It was thus essential that the survey be conducted in a manner which would gain the support, understanding, participation, and trust of both the publishing and library communities. Advisory committees

*NSF Grant GN-41398

and reactor panels including key representatives of all segments of both communities as well as the federal government, were formed, their input needed in the development of both the survey document and the analysis of results.

The survey produced a great deal of valuable information, and broke new ground in exploring the little-understood precarious economic balance which exists. It is not the intent of this paper to summarize a 401 page report containing 112 pages of tabular data. The report is available in its entirety through the National Technical Information Service (1). An edited and condensed book version entitled *Publishers and Libraries: A Study of Scholarly and Research Journals*, will be published by Lexington Books in late 1976.

Methodology

It is the purpose of this presentation to extract data and conclusions specifically impacting special libraries. Nevertheless, some preliminary comments concerning the methodology, inclusiveness, and gaps are appropriate. The report surveyed both publisher and library communities for the years 1969 through 1973 and is, therefore, already in need of updating, particularly in view of the strategic changes and budgetary shifts which have occurred since 1973. Such an effort has been proposed. Further, in dealing with economic data from U.S. publishers who sell to foreign libraries and to individuals as well as to U.S. libraries, and from U.S. libraries which also purchase foreign publications and which frequently deal through the intermediary services of subscriptions agents, gaps and inconsistencies naturally develop.

Despite all of these limitations, massive and important information and conclusions emerged. The survey population of scholarly and research journals was based on 2,459 specifically identified U.S. published journals, and excluding such publications as newsletters, house organs, general, popular, free, and government publications, controlled circulation period-

icals, and in general those not covered by abstracting and indexing services. The library community of academic, public, and special libraries was further subdivided by size. Special libraries, which included company, government, and not-for-profit libraries, as well as law and medical libraries where budgetary responsibility for these was separate from the academic library of the university system, were considered large if their serials budgets exceeded \$50,000/year, otherwise small. It was recognized that this delineation made for a great many small and relatively few large special libraries, but a large point of cut-off was necessary to provide a basis for relating to academic library data. Library responses were not broken down by subject disciplines, although journal data from publishers was.

Survey Results

First, two general reactions are in order. There is no evidence to indicate that publishers of scholarly and research journals are utilizing price strategies designed to make unfair and unreasonable surpluses or profits. While commercial publishers do report an operating profit of close to 14%, such an operating profit, after provision for capital expenditures, debt service, extraordinary expenses, and taxes, leaves a net profit of perhaps something under 6%, a return on investment certainly not considered unreasonable, and not even treated as attractive by financial analysts. Society publishers just about break even operationally, while university presses and the small miscellaneous group of publishers show consistent and growing deficits, and are usually either subsidized by parent institutions or temporarily manage to hide their deficits because of positive cash flow. In fact, there is clear evidence that certain whole disciplines, such as the humanities, present an unviable economic posture, and that the publication of scholarly and research journals in the humanities simply could not be supported from the sales market for these journals without some form of subsidy.

Secondly, there is no evidence in this survey that interlibrary loan and photocopying adversely impact the totality of the scholarly journal/library relationship. This is not intended to suggest that individual publishers and individual journals are not adversely affected by interlibrary loan relationships in which some libraries borrow the same title repeatedly, without making any attempt to purchase it. Newly enacted copyright legislation places limits on this activity. However, even prior to this action it was doubtful that the scholarly publishing community as a whole (and as differentiated from specific individual publishers) was adversely affected by the interlibrary loan process. Funds being expended for scholarly and research journals already so stretch the library budget available for this purpose, and already so force budgetary shifts and cancellations, that the imposition of a further charge to this same budget would simply force further shifts and further entrenchments, without increasing the total dollars furnished to publishers.

Some specific publishers would undoubtedly benefit, but only at the expense of other publishers, and not because of some new, hitherto untapped source of funds for periodicals purchase. Many publishers have come to realize that these increased payments, if royalty or copying charges are to be imposed, must come from the budgets of the users of the services, and not the library budget itself. This is of small consolation to the managers of industrial special libraries, unless they decide to allocate these copying costs and royalty charges to the using departments within the organization, and there are clearly dangers in this practice as well.

Budgetary Considerations

During the years 1969-73 large special libraries increased their total budgets by an average of 13% per year, an increase rate even slightly larger than the rate at which salary costs increased at 12%. The survey did not attempt to determine the

extent to which salary dollar increases were a factor of raises for constant staff, or affected by staff increases or reductions. Salary surveys, including SLA's own, can be used for the professional part of such a correlation, and the Department of Labor statistics can be employed for clerical comparisons. In any case, in increasing their total budgets at a greater rate than their salary budgets, large special libraries were unique. This in turn permitted a greater percentage growth of 14.5% in their materials budgets. Smaller special libraries, whose overall budgets increased by an average annual 10%, were nevertheless still able to cope with average salary budget increases of 8.5%, and therefore able to increase materials budgets by 12.25%.

By contrast, large academic libraries increased their budgets by 8% but their salary budgets by 10%, and were therefore forced to shift materials increase dollars to cover salaries, permitting only a 5% increase in materials expenditures. Public library overall budgets increased by about 10% or 11% per year, a figure greater than had been assumed, and this just about kept pace with the percentage increases in salary budgets. Consequently, non-salary budgets grew at the same rate in public libraries.

Special libraries, particularly large special libraries, were thus better equipped than their academic and public brethren to cope with increases in materials costs.

Spending for Periodicals

Since this survey was concerned with the relationship between scholarly and research journals and the library community, it was necessary to break library materials budgets into their component parts. While differentiation between books and serials was possible, the responding libraries were not able to distinguish in their budgets between periodicals and other serials. Dealing then, with books and serials, some startling changes appear. While at the start of the survey period in 1969 academic libraries were spending twice as much on books as on serials, they



were then forced to transfer funds from the books to the serials budget to maintain their serial collections. By 1973 the ratio had dropped from 2:1 to 1.16:1, and it is probable that by 1974 or at latest 1975 the curves had crossed, and that academic libraries are now spending more for serials than books. The transfer rate must stop at some point, or book purchase by academic libraries will simply dwindle away. Public libraries, which spend less than 2% of their total budgets on serials, and even less on research journals, are not heavily enough involved to be affected substantially by what happens to scholarly and research journals.

Special libraries, particularly large special libraries, which already spend far more on serials than on books, were able to avoid fund transfers from the book to the serials budget. During the same period special libraries reported annual price increases for renewed periodical titles of 12.4%, somewhat larger than academic libraries' 11.3% and public libraries' 8.2%. It is suspected that the greater price increase rate in academic over public, and in special over academic libraries, is caused by the increasing importance in these libraries of foreign titles. The price of foreign periodicals was affected both by double digit inflation throughout most of the rest of the world, and by the weakening of the dollar on international monetary exchanges. A specific study of price changes for non-US titles has been proposed to the National Science Founda-

In a constant environment of publication, at least special libraries would have had enough dollars in 1969-73 to retain existing titles, something certainly not true for academic libraries. However, all libraries must make room for the addition of some new titles, even in the face of decreasing budgets, and this requires cancellation of some existing subscriptions. Here, again, differing patterns emerge.

Subscription Cancellation Policies

Academic libraries, until beset by budgetary pressures, hardly ever cancelled a subscription once placed, and still try their best to avoid it. The cancellation rate in 1969 was a trivial 0.2%, and even by 1973 it had climbed only to 0.7%. Academic libraries showed a clear preference for reducing new titles to the cancellation of existing subscriptions, and were adding only half as many titles in 1973 as in 1969. When they did cancel, reluctantly, preference was given to duplicate subscriptions, with an attempt to hang on to at least one copy of each title, in spite of the implication of Bradford's Law (2). It would appear that collection building is still a high if not the highest priority for academic libraries, and perhaps takes precedence, as Gore has suggested (3), over service responsiveness.

By contrast, special libraries, which even during happier budget days cancelled subscriptions at more than three times the academic rate (presumably because of continuing evaluation), increased this cancellation rate to 2%, in order to protect a steady 5% rate of new title acquisition, a rate which did not change substantially during the period. Clearly, special librarians are not as concerned about maintaining the continuity of the collection as academic librarians. In their cancellation patterns, special librarians were also drawn toward the elimination of duplicates, but to nowhere near the same extent. In addition, there was a heavy toll of foreign language publications. Twenty-six percent of large special libraries also reported dropping sole copies of subscriptions, including domestic titles.

While the price of the subscription is a factor in the determination of which subscription to retain and which to cancel, it cannot be considered a predominant factor. Rather, an evaluation of the entire collection seems to occur, and it is therefore possible that a periodical which did not increase its price can be dropped to make room for the price increase of an important title. Nevertheless, price appears a more important factor in special than in academic libraries. While the average price of cancelled academic subscriptions was only 13.6% greater than that of retained ones, for large special libraries the percentage was 47.3%, for small special libraries 78.9%, so that cancelled titles were almost twice as expensive as retained ones.

Borrowing and Lending Periodicals

As stated earlier, there was no evidence that increases in interlibrary loan have impacted the totality of dollars spent for research journals, at least by U.S. libraries. Nevertheless, special libraries report substantial growth in interlibrary loan activity. During the period 1969-73 borrowing by large special libraries increased by 20%, and to an even greater percentage by small special libraries. Practically all of this borrowing, as in academic libraries, is for periodicals. There is virtually no interlibrary loan activity for books among responding special libraries. By contrast, public libraries borrow and lend almost exclusively books, and have very little traffic in periodicals.

Even more startling than the growth in borrowing by special libraries is the growth of the rate at which they lend. Large special libraries report a doubling in their loans during the period 1969-73, at the same time that their borrowing increased 20%. Special libraries have long been accused of taking advantage of one-way relationships in their dealings with academic and public libraries by borrowing in large quantities, while refusing or being unable to lend. While there is no evidence that special libraries have substantially increased their lending to

other types of libraries, they do appear to be lending more to one another. Special libraries may, to an increasing extent, be turning to other special libraries rather than to the major academic library collections in their geographic areas or their subject fields.

While several interpretations as to why this has happened are possible, the investigators surmise that there is more of an effort to operate within the special library community itself, perhaps in part because of improved communications, networks, and union lists. It may also be in part because many academic libraries are substantially increasing the loan transaction fee charged to commercial special libraries.

Summary and Conclusions

In summary, the survey shows, quite disturbingly, an unhealthy economic model, and one which has undoubtedly worsened since 1973. Neither librarians nor publishers demonstrate any real ability to cope with the funding imbalance through innovative or cooperative techniques. Publishers, to a greater and greater extent, pass their own cost increases along to customers in the form of price increases, and since this practice causes cancellations among individual subscribers to an even greater degree than libraries, the pressure on libraries is increased. Libraries also have come up with little in the way of innovative solutions. There is some elimination of binding and substitution of microform, but not enough to make a financial impact.

The greatest area of potential cost reduction is in cooperative technical processing, but even here, at least through 1973, verbal commitment has exceeded dollar impact. A fair amount of cost reduction is claimed in the area of automation, but, interestingly enough, about half the respondents report cost reductions through automation, while the others claim cost reduction through the elimination of automation.

It is apparent, particularly in view of what has continued to happen after 1973,

that the economic model is not viable and that, unless we are willing to endure a laissez-faire environment in which entire subject area publications could disappear, the system requires subsidy by the federal government. The extent of that subsidy, steps for minimizing it, and the areas of most meaningful application (author, publisher, library, user) still require further study.

Literature Cited

1. Fry, Bernard M. and Herbert S. White / *Economics and Interaction of the Publisher-Library Relationship in the Production and Use of Scholarly and Research Journals.*

Bloomington, In, Indiana University Graduate Library School, November 1975. (Available NTIS. PB 249108.) hard copy \$11.00, microfiche \$2.25.

2. Goffman, W. / Bradford's Law Applied to the Maintenance of Library Collections. In Saracevic, T. / *Introduction to Information Science.* New York, Bowker, 1970.
3. Gore, D. / The View from the Tower of Babel. *Library Journal* 100:1601-1604 (Sept 15, 1975).

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Geographic Arrangement of Topographic Maps

Sheila Grant Johnson

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■ USGS topographic index maps make an alphabetical arrangement by sheet name mandatory and prevent adjacent areas being filed together. By adopting a simplified form of the Texas Code Index

System, the index maps can be altered so that the sheets may be filed in a geographical arrangement which provides more efficient, easier access to the topographic maps.

THE IDEA of arranging topographic maps geographically by using their coordinates is certainly not new and the author did not devise the method described herein but rather simplified a scheme already in existence. In the course of looking for information on arranging topographic map series, it was learned that most writers thought a geographical arrangement preferable; however, no details were provided as to how to effect such an arrangement. The aim therefore of this presentation is to alert other librarians to a more useful arrangement of their topographic maps—especially those of their own state.

The map collection of Texas A&M University's Sterling C. Evans Library numbers approximately 45,000 maps. It is a depository for the United States Geological Survey's (USGS) topographic maps for the states of Texas, New Mexico, Colorado, Oklahoma, Arkansas, and Louisiana. The largest set comprising 3,300+ maps is that of Texas which is filed in 17 map case drawers. Quite naturally in the Evans Library collection this set receives the heaviest use. Formerly when USGS maps were received they were arranged by state, entered on the appro-

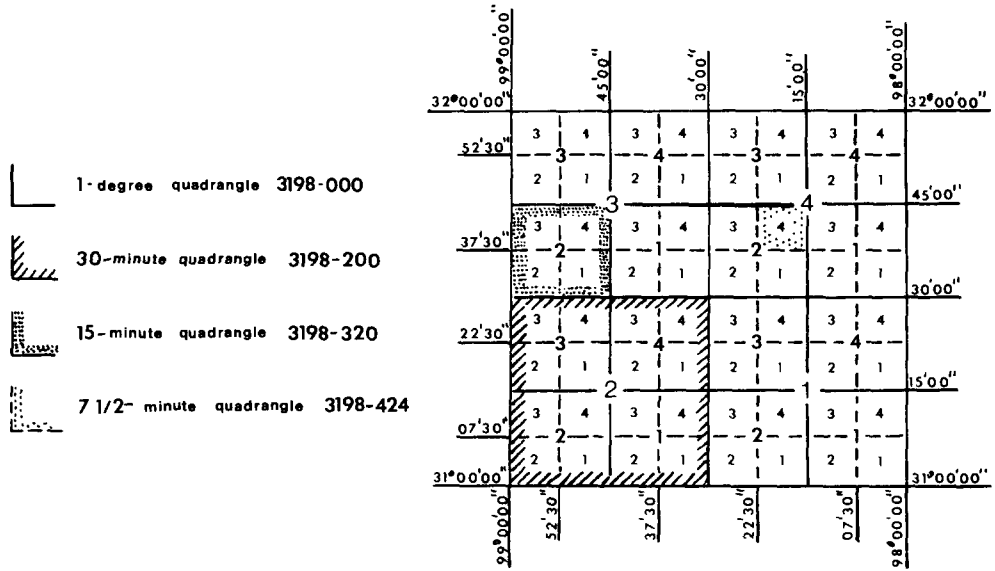
priate index map, and then filed alphabetically by their quadrangle name.

As the new map librarian, it did not take long to realize the disadvantages of the alphabetical arrangement which the USGS index maps fostered. Invariably one map would not be sufficient to meet the patron's needs; the one just east or southeast was also needed. This meant pulling open several different drawers in order to find all the maps required. (The one just east of "Carson" was seldom "Carter" and therefore in the same drawer, or even "Danforth" in the drawer below. It was more likely to be "Wellington," eleven drawers away in the next section!)

The disadvantages of the alphabetical system were most apparent when the request was made for the 17 maps required for complete coverage of Brazos County or the maps showing the course of a river. The straw which finally broke the camel's back (literally and figuratively) was the graduate student who needed 75 different maps of 12 research areas in the state. That ordeal produced the resolve to find another way to arrange the Texas topographic maps.

Figure 1. Diagrammatic Explanation of the Texas Code Index System

All quadrant designations include the latitude and longitude coordinates of the southeast corner of the 1-degree quadrangle.



After examining a copy of the Texas Code Index System used by the Texas Water Development Board to arrange the topographic maps of Texas, it was decided that with simplification this was just what the university's collection needed.

Texas Code Index System

The Texas Code Index groups the topographic maps into 1-degree quadrants and then uses the coordinates of the southeast corner to identify each area. The following explanation is from the Texas Water Development Board's paper *Texas Code Index System*:

The Texas Code Index Number is assigned by utilizing the whole-degree designation of first the latitude and then the longitude of the southeast corner of the 1-degree area in which any map may lie. The 1-degree quadrangle is then sectioned into four 30-minute quadrangles that are numbered in a clockwise fashion, from 1 to 4, beginning with the southeast quadrant. The 30-minute quadrants are then quartered to form four 15-minute quadrangles which are likewise numbered in a clockwise fashion, beginning in the southeast quadrant. Lastly, the 15-

minute quadrangles are then divided into 7 1/2-minute quadrangles, designated in the same clockwise fashion beginning with number 1 for the southeast quadrangle. A 1-degree quadrangle is thus subdivided into 64 parts which are easily and quickly identified by assigning the numbers as prescribed (Figure 1).

In order to simplify the code we took each 1-degree quadrant, designated it by the coordinates of its southeast corner (latitude 30, longitude 96 = code 3096) and then numbered (always in the same order) each 7 1/2-minute quadrangle within the area from 1 to 64. If the 1-degree quadrant was not completely mapped, the numbers were reserved so that map 55, for example, would always be the same section of the quadrant. If a 15-minute map existed, it was assigned the number of its southeast quarter and an "a" was affixed (3096-55a). A few other scales encountered were given subsequent letters. The combination of the 1-degree quadrant number and the individual map number provided a unique identification number for each map (3096-24, 3194-16). This unique number is the code number. For

areas west of the 99th longitude, the last two numbers were used (latitude 32, longitude 101 = code 3201).

Although it was felt that this system was workable, it was decided to try it with the New Mexico USGS topographic maps since a smaller number of maps were involved and the use was less. When the rearrangement of the New Mexico quadrangles was completed, it was clear that the code worked very well and that the patrons had no trouble in learning how to use it. The next step was to rearrange the Texas maps.

Coding Procedure

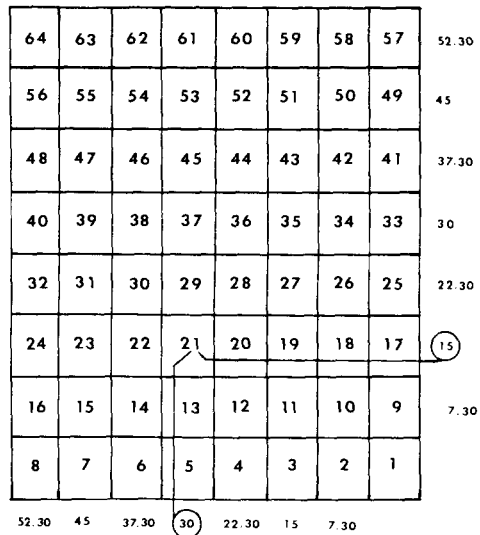
The procedure used was the same for both states. Taking two copies of the latest index map for Texas, the 1-degree quadrangles were outlined in red ink. These were then numbered according to the coordinates of their southeast corner (3096). Next, the 7 1/2- and 15-minute quadrangles within the 1-degree area were numbered according to a set pattern (Figure 2). To help in determining the correct number when gaps in the mapping occurred, the pattern was placed on tracing paper so that it could be superimposed on the index map; this made it very easy to determine the correct number of each quadrangle.

After the index maps were prepared, the next task was to pencil the code number in the lower right-hand corner of each map. With the help of the pattern on which every 7 1/2-minutes were ticked off along the latitudinal and longitudinal lines, this was done without referring to the index maps. In order to minimize confusion, the coding was done drawer by drawer and the maps replaced in alphabetical order until all had been assigned a code number. They were then arranged according to the code.

All the maps of a 1-degree quadrangle were arranged in numerical order and placed in a map folder. On the outside of the folder a label was typed which indicated the 1-degree quadrangle number (e.g., 3096, 3194, 3295). One of the index maps was cut into the different 1-degree

Figure 2. Pattern of Quadrangles within a 1-Degree Section

The minutes are ticked off in steps of 7.5' along the latitude and longitude lines. If the SE coordinates of a map are 30 15' and 96 30' then it is designated map 21 of folder 3096.



areas, each taped to the front of the appropriate folder. The other index map was placed on the wall for consultation.

Now if a patron needs all 17 maps which cover Brazos County, he checks the index on the wall to find that Brazos County is in the 3096 folder. Going to the drawer, he pulls out folder 3096, checks the index on the front of the folder and pulls out the appropriate maps.

Advantages

Empirical data collected proves without a doubt that this method does save time. Before starting the rearrangement, three members of the library staff who had little or no experience using maps were asked to locate the maps covering Brazos County and to pull them. Each one worked alone and was given the usual explanation of how to use the topographic index map. They were requested to work at their normal speed and refrain from "racing"

the clock. They averaged approximately 15 minutes.

Their techniques varied from writing the quadrangle names down before pulling the maps to going back and forth between the cases and the index map on the wall. After completing the rearrangement of the Texas maps, the three staff members were shown how to use the altered index map, and again working alone, were asked to pull the maps for Brazos County. The time used was considerably less—they averaged 2 1/2 minutes. Each one saved at least 10 minutes.

After using both an alphabetical and geographical arrangement, the author would definitely urge anyone maintaining USGS topographic maps to arrange them in a geographic manner. They would further be urged to consider adopting the Texas Code Index in some form. The initial arrangement does take some time; however, the advantages are apparent. Not only does it save the patron's searching time, it also saves considerable refiling time. Once the code system is established

there is little extra work involved in maintaining it. New maps are handled as before, except that instead of their name being added to the index map, they are assigned a code number which is added to the index map on the wall and to the one on the folder.

The crucial test, of course, is whether the patron can understand and use with ease any innovations made within a library. The response from Evans Library patrons has been positive. They can now pull out one folder and examine the maps of a particular area without going from drawer to drawer, and they no longer have to remember several different quadrangle names but just the folder number which covers their area of interest.

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A Selected List of Government Documents on Extraterrestrial Life

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■ Increased interest in recent years in the possibility of life on other planets prompted a search to determine what government documents have been published on the subject of extraterrestrial life. The result was an extensive unannotated bibliography of about 130

items. Thirty of these, relatively non-technical in nature, are presented for possible acquisition by public or college libraries. Different aspects of the subject are represented, and most of the items listed are currently available from the G.P.O., issuing agency or corporation.

THERE has been, in the last few years, an increased interest in the subject of life on other planets. This is evidenced by the exploding popularity of science fiction and of such popular books as Carl Sagan's *The Cosmic Connection*. Some of the early interest was certainly due in part to the series of manned space flights in the 1960s which climaxed in the landing of men on the moon. Much of the recent interest is probably due to the spectacular successes of several unmanned space probes, especially Pioneers 10 and 11, and the recent Viking Mars landings. These latter two probes are specifically designed to look for life on Mars.

Intrigued by the growing interest in the subject, and spurred on by the increasing number of journal articles and books, the author decided to determine what, if anything, had been published by the government on the subject of extraterrestrial life. The result was an extensive list of 130 documents, research reports, translations, and other publications of NASA, the Smithsonian Institution, the

Soviet Academy of Sciences, and dozens of public and private institutions under contract to the U.S. government. The 30 documents listed here are excerpted from this more extensive bibliography of material.

This is a list of government documents intended for the public or college library, chosen mainly for their relative non-technicality. While most of the 130 documents in the larger list are highly technical, including many research and engineering reports, the 30 items in this list are more general in nature. There are several essays on the overall topic of life on other planets (e.g., 3, 9, 13); several items dealing specifically with the possible origin of alien life-forms (8, 12); life on Mars (1, 7, 23, 29); and communication with intelligent civilizations in other solar systems (19, 21, 25, 30).

The 30 items in this list are arranged chronologically by publication date. The following information is given for each item: title, individual author, corporate author and/or publisher, date, number of

pages, translation information, and agency/institution report number. In cases where the item is excerpted from a larger body of work, the original source is given, with author if available, after the individual author of the item and before the publication date. If the item is available in a second source, such as a later publication in a journal, that second source is listed in parentheses after the pagination and before the report number.

Prices for these documents are not given for two reasons. First, a few of the older ones may not be currently available from the Government Printing Office, or from the corporate publishers. Second, those that are available may have undergone price changes since the compilation of the list. As most documents librarians know, the GPO has been raising prices considerably in the last 18 months or so.

It is hoped that both public and college libraries will be able to acquire most of the thirty items here listed, since they all make fascinating reading. Though some of the older documents may be difficult to acquire, the more recent ones should still be available from NASA, the GPO, and the various corporations that have produced them. Librarians should be cautious, though—the Viking Mars probes could very well make everything on this list obsolete!

Bibliography

1. Schiaparelli's Latest Views Regarding Mars, by W. H. Pickering. In *Annual Report of the Board of Regents of the Smithsonian Institution*, Smithsonian Institution, 1894. p. 113–128. Serial Set No. 3341. Congressional Document No. 90, 53d Congress, 2d Session.
2. Is There Life in Other Worlds?, by H. Spencer Jones. In *Annual Report of the Board of Regents of the Smithsonian Institution*, Smithsonian Institution, 1940. n.p. Serial Set No. 10422. House Document No. 490, Pt. I, 76th Congress, 2d Session.
3. Is There Life on the Other Worlds?, by Sir James Jeans. In *Annual Report of the Board of Regents of the Smithsonian Institution*, Smithsonian Institution, 1943. n.p.

- Serial Set No. 10829. House Document No. 13, Pt. I, 78th Congress, 1st Session.
4. Color Changes on Mars, by Seymour L. Hess. In *The Study of Planetary Atmospheres*, Flagstaff, Arizona, Lowell Observatory, Sept 30, 1952. p. 42–46. N63-84183.
5. The Ecosphere of the Sun, by H. Strughold. In *Epitome of Space Medicine*, Randolph AFB, Texas, School of Aviation Medicine, 1958. p. 323–328, Article No. 27. Report No. n.a.
6. *Experiments in Interplanetary Biomigration and Space Contamination*, by I. Cooper and A. G. Wilson. Santa Monica, California, RAND Corporation, Jun 16, 1958. 13 p. P-1406.
7. *Natural Environment of the Planet Mars*. Technical Note No. 1, by J. H. Shaw. Columbus, Ohio, Research Foundation, Ohio State University, Feb 1959. 60 p. AD-242175.
8. *Origin of Life on Earth and Elsewhere*, by Melvin Calvin. Berkeley, Calif., Lawrence Radiation Laboratory, University of California, Dec 1959. 46 p. UCRL-9005.
9. *Is There Life on Other Planets?*, by A. I. Oparin. Arlington, Va., Joint Publications Research Service, Aug 31, 1961. 11 p. (Translated into English from Russian). JPRS-10034.
10. *The Search For Extraterrestrial Life*. National Aeronautics and Space Administration, Washington, D.C., 1963. 20 p. NASA-SP-10.
11. *Extraterrestrial Life, A Bibliography. Part I: Report Literature*. National Aeronautics and Space Administration, Washington, D.C., Sep 1964. 76 p. NASA-SP-7015.
12. *The Origin of Life in the Universe*, by C. Ponnampertuma. Moffett Field, Calif., National Aeronautics and Space Administration, Ames Research Center, 1964. 38 p. NASA-TM-X-51753.
13. *Extraterrestrial Life*, by W. Boyd Smith. Massachusetts Institute of Technology, Lexington Lincoln Laboratory, Massachusetts. Sep 6, 1966. 2 p. (Published in *Science*, CLV, 3764 (Feb 17, 1967), 852.) JA-2987.
14. *The Book of Mars*, by Samuel Glasstone. Washington, D.C., National Aeronautics and Space Administration, 1968. 315 p. NASA-SP-179.
15. *Life in Space*, by Willard F. Libby. Los Angeles, University of California, Department of Chemistry, Jun 1968. 10 p. (Published in *Space Life Sciences*, v. I,

1968. p. 5-9.) AFOSR-68-1251.
16. *LDEs, Hoaxes, and the Cosmic Repeater Hypothesis*, by O. G. Villard, Jr., A. C. Fraser-Smith, and R. P. Cassam. California, Stanford University Electronics Laboratory, May 1971. 13 p. SU-SEL-71-030.
 17. *The Planets and Life*, by Richard J. Young. In *Boston College Environmental Center Summer Institute on Surtsey and Iceland*, Washington D.C. National Aeronautics and Space Administration, Feb 1971. p. 32-34. NASA-TM-X-62009.
 18. *Problem of Extraterrestrial Civilizations and its Philosophical Aspects*, by I. S. Shklovskii. Arlington, Va., Joint Publications Research Service, Apr 19, 1971. 28 p. (Transl. into English from Russian). JPRS-58791.
 19. *Project Cyclops: A Design Study of a System for Detecting Extraterrestrial Intelligent Life*. Stanford University, Calif., 1972. 253 p. NASA-CR-114445.
 20. *Life Beyond Earth and the Mind of Man: Proceedings of a Symposium Held at Boston University, Boston, Massachusetts, November 20, 1972*. Richard Berendzen, ed. Washington D.C., National Aeronautics and Space Administration, 1973. 106 p. NASA-SP-328.
 21. *Two Objects Suggested in Search for Extraterrestrial Populations*, by G. I. Pokrovskiy. Arlington, Va., Joint Publications Research Service, 1973. 3 p. (Translated into English from Russian). JPRS-60251.
 22. *In the Search For Extraterrestrial Life*, by C. Ponnampuruma. Redwood City, Calif., Kanner Associates, Aug 1974. 20 p. (Translated into English from Indian). NASA-TT-F-15856.
 23. *The Viking Mission to Mars*. National Aeronautics and Space Administration, Langley Research Center, Langley Station, Va., 1974. 82 p. NASA-SP-334.
 24. *Viking Project*. U.S. House of Representatives, Science and Technology Committee, Hearings. U.S. Government Printing Office, Washington, D.C. 1974. 298 p. Committee Serial No. 21, 93d Congress, 2d Session.
 25. *Will There Be a Meeting With Other Intelligent Beings?*, by D. Bolshov, L. M. Gindilis, and B. N. Panovin. Redwood City, Calif., Kanner Associates, Jan 1974. 16 p. (Translated into English from Russian). NASA-TT-F-15279.
 26. *Life in the Universe and Man in Space*, by N. Dubinin and O. Gzenko. Washington, D.C., Transemantics, Inc., Sep 1975. 13 p. (Translated into English from Russian). NASA-TT-F-16563.
 27. *Possibility of Intelligent Life Elsewhere in the Universe*, by M. Smith. A Committee Print for the U.S. House of Representatives, Science and Technology Committee. Library of Congress. Congressional Research Service, Science Policy Research Division, Washington, D.C. Nov 1975. 76 p. Committee Serial No. R, 94th Congress, 1st Session.
 28. *Search For and Investigation of Extraterrestrial Forms of Life*, by A. B. Rubin. In *Foundations of Space Biology and Medicine, v. 1*, by M. Calvin and O. G. Gzenko, National Aeronautics and Space Administration, Washington, D.C., 1975. p. 368-402. NASA-SP-374.
 29. *The Prospects for Life on Mars: A Pre-Viking Assessment*, by C. Sagan and J. Lederberg. Ithaca, N.Y., Cornell University, Center for Radiophysics and Space Research, Jan 1976. 25 p. NASA-CR-146352.
 30. *Searches for Extraterrestrial Civilizations*, by V. S. Troitskiy. Woodland Hills, Calif., Agnew Tech-Tran, Inc., Apr 1976. 16 p. (Translated into English from Russian). NASA-TT-F-16990.

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Hospital Libraries in Nigeria

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■ A survey shows that there is great need for library services in non-university teaching hospitals in Nigeria. At present, most hospitals enjoy no hospital library services whatsoever. Hospital libraries, where they exist at all, are generally grossly inadequate. The development of hospital libraries faces some problems,

chief of which are lack of funds, the government's non-realization of the importance of hospital libraries, and the lack of initiative for development. Medical librarians should take the initiative and provide guidance for hospital library development.

IN NIGERIA, while university teaching hospitals have the benefit of library services provided by the libraries of the medical schools to which these teaching hospitals are attached, the vast majority of other hospitals (government, missionary, private) do not appear to enjoy any library or information services.

What really is the state of hospital library service, if any, in Nigeria? Do health care workers in the non-university teaching hospitals need information for their work? What steps need be taken to stimulate and improve the development of hospital library service in the country?

To find answers to these and other related questions, a survey of information/library needs of Nigerian hospitals and of the adequacy of existing hospital library services in the country was undertaken. The findings of this survey as well as conclusions based on the findings are the subject of this paper.

Methodology

The survey itself took the form of a questionnaire, interviews, and personal visits to hospitals. It must be mentioned that the survey was limited to hospital library service to staff. Service to patients will be the subject of another study.

Cumming's guidelines (1) on the conduct of hospital library surveys were helpful in the planning and execution of the present survey. In the absence of any previous study of hospital libraries in Nigeria, this first survey was designed to be a broad, general one, with particular attention paid to clarity and simplicity in the formulation of questions. Copies of the two-part questionnaire were sent out in February 1976 to 160 randomly selected hospitals spread over all nineteen states of the Federation of Nigeria.

Part one of the questionnaire was to be completed by the hospital administrator, while part two was for the individual

health care worker (doctor, nurse, radiographer, laboratory technologist, etc.). Part one was designed to elicit information about the official completing the questionnaire and about details (such as age, type, capacity, and staff) of the hospital, while part two sought information about the professional details of the health care worker (such as title, rank, and address). Both parts of the questionnaire contained questions relating to staff need for information, the type of information, the purpose for which information was required, and the supply or lack of information. Specific questions were asked as to whether or not a library already existed in a hospital, if not, why, and if the hospital staff would benefit from the provision of a library service.

Personal visits were paid to hospitals in ten states plus the federal territory of Lagos, and collections of materials (books and journals) claimed to be libraries were inspected. Interviews were held with hospital administrators and/or with individual health workers in the hospital. Information obtained included such factors as the presence or lack of a professionally qualified librarian, the size and quality of any existing collections (in terms of up-to-dateness, relevance, adequacy, and accommodation), the availability and source of funds, and finally, any remarks regarding the hospital's expectations of a library service.

Findings

Table 1 summarizes the response to the questionnaire. Of the total number of questionnaires sent out, 88 (or 55%) were duly completed and returned, and at least one questionnaire was received from each of eighteen states. Of the 88 responding hospitals, 60 were government hospitals, 24 were voluntary agency (or mission) hospitals, and four were private hospitals. Given Nigeria's dilatory and inefficient postal services and the well-known low priority that public authorities place on library matters, the comparatively low response did not come as a surprise. The

questionnaire response, however, taken together with the personal visits and interviews in hospitals in ten states, provided a comprehensive enough picture of the state of hospital libraries in Nigeria.

The survey revealed that hospital staff of various categories (doctors, nurses, radiographers, and laboratory technologists, for example) have a crying need for information—for general education, for keeping up-to-date in their respective fields, and for the improvement of skills. They require books, journals, and audiovisual materials. Ninety-nine percent of hospitals responding expressed a need for information and library services.

The majority of the hospitals surveyed (70%) have no library services whatsoever. What already exist as libraries in the minority (30%) of hospitals are no more than small, inadequate, and neglected collections of books (mostly outdated) and perhaps a few journals housed in corridors, doctors' offices, individual rooms, or in some multipurpose room such as a dining or conference room. In some cases, what was claimed to be a library turned out to be just a collection of newspapers and magazines.

Lack of Funds

In a majority of hospitals no funds at all are provided for library service. In fact, lack of funds is the chief reason advanced for the nonexistence of libraries. Other reasons given are non-realization by the authorities, particularly government hospital authorities, of the need for library services in hospitals, and the absence of any initiative to promote the development of hospital libraries.

Funds, where provided, are generally grossly inadequate or not spent for the intended purpose. In one state, for example, each government hospital gets £N180.00 per annum which is spent on newspapers and popular magazines. In another, each hospital gets £N200.00 annually. A large government hospital in yet another state gives £N200.00 yearly to each department for its library needs. Many of the departments do not have office space, let alone space for a library.

Table 1. Survey of Library/Information Needs of Non-University Teaching Hospitals in Nigeria

Question	Yes	% of Total	No	% of Total
1. Do you need information for your work?	87	99	1	1
2. Do you have a library/information office in your hospital?	26	30	62	70
3. Should a library or information office be provided in your hospital?	87	99	1	1
4. Do you have a professional librarian?	2	2	86	98

Ironically, one government hospital receives £N8,000.00 annually for library service, as part of its yearly budget, but this sum of money is not spent and is allowed to revert to government coffers. Apparently, the hospital authorities do not know how to go about setting up a library service and have not bothered to employ anyone to organize such a service. It must be mentioned that voluntary agency (missionary) hospitals such as the Baptist hospitals, which are foreign-sponsored, provide more funds (an average of about £N500.00 each) for their library services.

Generally, existing libraries, whatever their condition, are managed by clerks, secretaries, nurses, or doctors. There are only two instances of hospitals being run by professionally qualified librarians. A Baptist missionary hospital library is run part-time by a lecturer in the seminary who holds a master's degree in library science in addition to a doctorate in the discipline which he teaches. The Kaduna State hospital library service has procured the services of a professionally trained librarian.

An Exception

Kaduna State provides a happy exception to the generally poor picture of hospital libraries in the country. Here in Katsina the State Ministry of Health has created a state research and library unit charged with the responsibility of setting up library facilities in all hospitals and health centers maintained by the state government. The unit has employed the

services of a chartered librarian, through the Voluntary Service Organisation of the United Kingdom, who since September 1975 has set to work establishing three separate libraries in Katsina: School of Nursing Library, School of Midwifery Library, and the Katsina General Hospital Library, which also serves the needs of the research unit itself. More libraries in other hospitals throughout the state are planned to follow.

Although the three libraries are still in the infant stage and will not be properly functional for a long time, the hospital staff demands for service are being satisfied as much as possible. The librarian enjoys the cooperation and support of the health commissioner and spends a total budget of £N41,000.00 for the year.

Solving the Funding Problem

The survey has shown that health care workers in Nigerian hospitals need information for their daily work and therefore require library service. What, however, is the crucial factor in the development of hospital libraries, as indeed of any other category of library service, is funding, without which no service can be provided to meet manifest need. The question therefore is how can the chief problem of lack of funds be solved?

The Inter-governmental Conference on the Planning of National Documentation, Library and Archives Infrastructures, held in Paris in September 1974, in its NATIS (National Information Systems)

recommendation, invited member states of Unesco "to take suitable action to create or improve a national system or an infrastructure for information services in accordance with the economic and social structure of the country and its cultural heritage, and within the framework of the national over-all and sectoral development plans and its communication policy." Furthermore, it invited:

... governments and public authorities to regard their responsibilities for information provision in the same way as they assume responsibility for the citizens education. The conference, by recognizing the inter-relationships between information services and other elements in social, economic and cultural profile of a country and by discarding the muted and unreal isolation in which these services have existed, in some cases for so long, has—it is hoped—made clear to governments the vital role of these services in development policies. . . (2).

Government should fund hospital library development as well as the development of other categories of libraries. The present rate of investment, however, by Nigeria's federal government in library development gives no happy indication that the government has accepted the concept of NATIS or fully realizes the contribution of libraries in national development. The government has allocated £N2.5 billion (8% of the Gross Domestic Product) to education. The investment in library services is £N35.536 million including £N15.8 million for National Library development. This sum is only 0.0094% of the Gross Education Expenditure, low by international standards (3). Negligibly little, if anything at all, of even this low percentage goes into hospital library development.

Need for Government Awareness

The foregoing figures need not be as depressing as they seem. Even in the face of such basic needs as good roads, water, and electricity, which compete for the national budget, library development can attract more funds from this oil-rich country, provided the government is made to realize that libraries are an important

part of the infrastructure for national, social, and economic development. The Kaduna example cited above is a humble but inspiring demonstration of the fact that where government recognizes the value of library service, it will provide funds for library development. However, it remains the duty of the body of professional librarians, particularly medical librarians in this case, to impress the role and contribution of library service on the government as well as present government with concrete proposals for development. The recently inaugurated Medical Library Section of the Nigerian Library Association should call the government's attention to the need for hospital library service.

Recommendations have to cover the factors of accommodation, stock, staffing, and networking of hospital and other medical libraries. Standards of library practice have to be set up and this may require the Nigerian Library Association (Medical Library Section) to work in collaboration with other professional bodies (Nigerian Medical Association, Nursing Council of Nigeria, etc.) in setting up standards of hospital practice aimed at better health care for the nation.

Suggestions

The writer's experience in the process of conducting the survey further attests to the need for professional action to "engineer" hospital library development. Most health administrators and other workers interviewed saw the survey as long awaited assistance and eagerly awaited the recommendations. Even before the survey was completed, one hospital (the Neuro Psychiatric Hospital in Aro, Abeokuta) requested and obtained advice and proposals for setting up a hospital library. The proposals have since been forwarded to the Federal Ministry of Health.

The appointment of professionally qualified librarians to administer hospital libraries is a very important point to be included in any recommendations for hospital library development. It takes a

trained librarian to transform a collection of materials into a growing, well-organized library, providing relevant and useful information, and maximizing resources through inter-library cooperation and networking.

Obviously, it would not be feasible to employ a professional for every size of hospital library. A sensible arrangement could be to appoint "circuit riders" (4)—librarians serving groups of small hospitals, each too small by itself to be able to hire the full-time services of a professionally qualified librarian. One circuit rider librarian, a trained medical librarian, runs a circuit serving three to four libraries, drawing on a base resource library to meet needs of library users. The circuit rider arrangement, has the advantages of economy, of extending the use of available resources, and of stimulating greater need for information.

Summary

Health workers in Nigerian hospitals need information for their respective areas of work and therefore require library service. Most hospitals, however, at present lack any form of library service. Library service, where it is currently provided in the great minority of hospitals, is grossly inadequate. The main factors causing this are lack of funds, non-realization by the government of the need for and importance of library service in hospitals, and the absence of any initiative for hospital library development.

A task facing the recently inaugurated Medical Library Section of the Nigerian

Library Association is to take the initiative and provide guidance for the development of hospital libraries. The idea of the circuit rider should be studied for application to Nigeria in extending library service to even the smallest hospitals in the country. The development of hospital libraries is an important step in the direction of building a national network of medical libraries.

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Literature Cited

1. Cumming, Eileen E. / Library Surveys: Their Application and Value to Hospital Libraries (1972). *International Library Review* 6 (no. 4):397-402 (Oct 1974).
2. Green, Stephen / NATIS: The Theme for the 1970s. *Unesco Bulletin for Libraries* 29 (no. 3):117-123 (May-Jun 1975).
3. Olaniyan, B. F. / Mobilizing Library Resources and Services for National Development in Nigeria. Paper presented at University of Lagos Library Staff Seminar, June 1976.
4. Ittner, Judith A. / The Circuit Librarian: Extending Library Service to Community Hospitals. (In press) 1975.

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Godfrey S. Belleh is acting medical librarian, Medical Library, College of Medicine of the University of Lagos, Lagos, Nigeria.

Concerned about YOUR Association? Propose a Future SLA Officer.

The Nominating Committee for Spring 1977 Elections requests YOUR assistance in its search for the best qualified candidate to represent YOU as future officers of YOUR Association. This means that YOU, as a member of the Association, must be concerned with the caliber and abilities of the officers who will be leading YOUR Association. We need YOUR recommendations for those members who are most knowledgeable of all phases of Association activity, who have shown a dedication to the goals of the Association, who are representative of its diversified professional interests and various geographical areas, and who would be willing and able to accept nomination.

Candidates are needed for the offices of President-Elect, Chairman-Elect of the

Chapter Cabinet, Chairman-Elect of the Division Cabinet, and two Directors.

Please submit your suggested names by letter with a brief note giving qualifications. Contact a member of the Committee whom you know best or the Chairman of the Nominating Committee, Gilles Frappier, Library of Parliament, Parliament Buildings, Wellington St., Ottawa, Ont., Canada K1A 0A9. This must be done prior to the New York Conference, June 5-9, 1977.

Roger M. Martin

Lou Parris

Anne C. Roess

Ruth S. Smith

Gilles Frappier, Chairman

The 1977 SLA Annual Business Meeting Jun 8, 1977

As required by Article VII, Section 3 of the Association's Bylaws, notice is hereby given that the Annual Business Meeting of Special Libraries Association will be held at 9:00 a.m. on Wednesday, Jun 8, 1977, at the New York Hilton, New York, NY, during the Association's 68th Annual Conference.

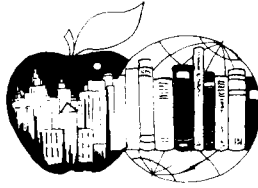
SLA Employment Clearing House at Conference

The SLA Employment Clearing House will be available to SLA members and to employers registered at the Conference in New York. The Clearing House will be open Sun., Jun 5 (1-5 p.m.); Mon., Jun 6 (9 a.m.-5 p.m.); Tues., Jun 7 (9 a.m.-5 p.m.); Wed., Jun 8 (9-5 p.m.).

Résumé forms for members can be obtained from the Membership Department, Special Libraries Association, 235 Park Avenue South,

New York, NY 10003. The completed résumé forms must be returned by May 27. The Clearing House will arrange interviews at the Conference.

Employers with vacancies may request "Job Opening" forms from the same address as above; the deadline for their submission is also May 27. Job descriptions for the vacancies will be posted at the Clearing House.



WORLDWIDE INFORMATION SOURCES

Special Libraries Association, 68th Annual Conference
New York, New York, June 5-9, 1977

Information knows no boundaries. The collection of information and its organization and utilization also has no geographical limits. As the world grows smaller, the need for expanded intellectual horizons grows larger. Since no library is an island, we as special librarians must respond by taking upon ourselves the challenge of broadening our bases of knowledge, to better serve our users. This challenge of identifying and using Worldwide Information Sources, whether it be for the small, medium, or large library, is the theme of the 68th Annual Conference of the Special Libraries Association. The aim of this Conference will be to increase your awareness of the many sources of information available throughout our own Association and elsewhere.

New York (The Big Apple—a center of international activity and information) is the natural host for a Conference with the theme of Worldwide Information Sources. Libraries and information centers exist here in all areas of business and industry, social sciences, arts and humanities, and natural and applied sciences.

A busy Conference week is planned for all attendees. *Sunday* will include several events. In addition to registration, workshops, and Chapter and Division Officer meetings, there will be a

“Welcome to New York” gala which will feature Rep. Bella Abzug. She will speak about the “Big Apple” and the joys of living and being in the greatest city in the world. The annual Conference-Wide Reception will precede this gala. Back by popular demand this year is the “first attendees” function. This provides an opportunity for first time Conference attendees to get acquainted with each other, with the Conference structure, and with ways of getting the most out of their first Conference. The day will end with the open houses at Division hospitality suites, allowing all to unwind and greet old friends and meet new ones.

Monday's General Sessions are entitled “The Public/Government Sector.” Speakers and their topics will be: Preben Kirkegaard (Rector, The Royal School of Librarianship, Copenhagen, Denmark, and President of International Federation of Library Associations), “Role of the General Library in Modern Society”; John Woolston (Director, Information Sciences, International Development Research Centre, Ottawa, Canada), “International Information Systems: Their Potential Impact on Special Libraries and Specialized Information Centers”; and Col. Andrew Aines (Senior Staff Associate, National Science Foundation, Wash-

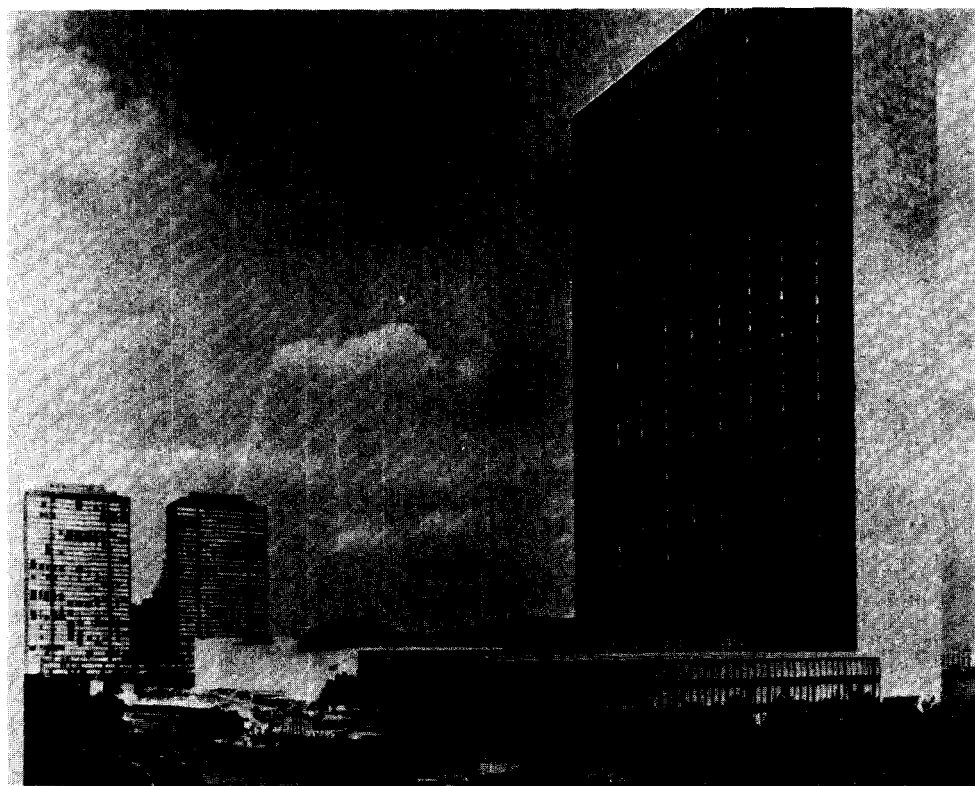
ington, D.C.), "New Realities for Librarians and Information Specialists in the International Field."

Tuesday's *General Sessions* will focus on "The Private/Business Sector." They will present Pat Carbine (Publishing Editor, *MS Magazine*, New York), "... But Can He Type"; and James Adler (President, Congressional Information Service, and SLA Professional Award Winner, 1972, Washington, D.C.), "Entrepreneurs of Information: How Publishers Think." A *Special General Session* will be presented by the SLA Special Committee who will present a "Review of Provisions of the New Copyright Law."

Contributed Papers have been selected, and these papers, which will be given in both oral presentation and Poster Session form, promise to be a highlight of this year's Conference. These sessions have been planned so

they will not conflict with the General Sessions. Persons who wish to attend for one day will be able to hear General Session speakers as well as Contributed Papers, in management, new techniques, sources-resources, networks, and many other relevant and practical topics.

In addition to the General Sessions and Contributed Paper Sessions, all 26 *Divisions* have active programs planned. Some early highlights: field trips to Wall Street firms, the United Nations, ethnic neighborhood tours, automated newspaper libraries, several regional museums, Bell Laboratories, The New York Public Library, Consolidated Edison Co., publishing houses (both editorial and customer service functions) and the Port Authority of New York and New Jersey, and even a haunted house on Staten Island. Program meetings will be given on such



diverse subjects as patent information, census publications, supermarkets and the consumer, the outer continental shelf, earthquake alert systems, the future of scientific journals, international aspects of utilities, and a "Book and Author Luncheon" with very special guest speaker Isaac Asimov. Also planned are two joint ventures of several Divisions, one a Circle Line Tour of Manhattan—a must for all visitors to NYC—and another tour of the American Museum of Natural History, including cocktails, dinner and the fantastic Lasarium show.

New York City itself is a reason to begin planning for your visit in June. For those coming the first time and for those making a return visit, there are literally hundreds of events which occur each day. You will want to begin picking and choosing what to see and attend. They include "the Great White Way"—Broadway with its plays and musicals; off-Broadway events; Greenwich Village; Lincoln Center (the

complex full of theater, ballet, symphony, opera and open air concerts); the United Nations; the corporate headquarters of many major businesses of the world; the World Trade Towers (containing a new and exciting restaurant "Windows on the World" and its incredible view of all of New York City and surrounding states); the Circle Line boat trips around Manhattan (truly the most spectacular way to see the big apple); the many museums (which contain priceless old masterpieces as well as new and innovative art); the New York Public Library; and over 1200 special libraries. The list is unending. Your visit promises to be one of the most informative and exciting trips you will ever take.

Start planning your trip and get ready for one of the greatest Special Libraries Association Conferences ever to be held.

Be Part of It!!!! Become "One Of the Nice Things About New York"
New York Conference Committee

Books Donated

The Association Office in connection with its policy of supporting facilities in correctional institutions has contributed an assortment of books to the New York City Department of Correction, N.Y., N.Y., on topics of general reading interest.

Herman W. Green, director of institution libraries, said, "On behalf of our inmates, I thank . . . Special Libraries Association for the generous donation of reading material."

British Learned Societies to Emphasize Latest Technology at SLA Conference

Some of Britain's most famous learned societies will exhibit at the Special Libraries Association Conference, New York Hilton Hotel, June 5-8. Involved will be the father of them all, The Royal Society, or to give it its full title—hardly used today—The Royal Society of London for Improving Natural Knowledge.

Founded in 1660, it had King Charles II as a member. Among Americans honored for scientific work in its early days was Benjamin Franklin, who besides making a considerable contribution to the founding of the United States invented the lightning conductor.

Now the society is concerned more and more with the characteristic technology of the day—from space to new forms of energy. In fact many of the exhibitors from Britain are principally involved with electronics, computers, and machine-readable data bases, which make information on scientific subjects readily available from worldwide sources.

Among the newest and most intriguing of the publications is the British Chemical Society's *Journal of Chemical Research*, a multinational project recently started on a joint basis with French and German chemical organizations. The publication is in synopsis format backed simultaneously with full texts in two forms, microfiche and miniprint.

The British-based Commonwealth Agricultural Bureaux (CAB) will be promoting its new computerized information data system now available to scientists in the U.S. by telephone link.

ASLIB (Association of Special Libraries and Information Bureaux) is a leading authority on information, library and consultancy services, training courses, publications, and conferences organized both for those who provide information and their customers in industry, the professions, government, and the academic world.

The Pharmaceutical Society's massive extra pharmacopoeia, known as Martindale, is being brought up to date in a 27th edition in the same month as the conference, while the 170-year-old Royal Society of Medicine will feature its *Tropical Doctor* quarterly on the stand it will share with Academic Press.

Compiled and edited at the Library of Congress, the National Union Catalogue, Pre-1956 Imprints, will be shown by Mansell In-

formation Publishing Ltd along with other aids to book finding of interest to libraries and economic research institutions. The imprints will eventually extend to 600 volumes.

Since its foundation in 1910, Britain's Textile Institute, an exhibitor from Manchester, has made a major contribution to technology and design in the industry through over 100 textbooks and monographs.

Inspec, the information services division of the Institute of Electrical Engineers provides computerized services which range from information to meet the individual scientist's personal needs to records in machine-readable form on magnetic tape for use on the subscriber's own computer. The institution itself will show three new journals.

Among the chief exhibits of the Royal Institute of British Architects will be the architectural periodicals index which embraces articles on architecture, construction and the environment appearing in 500 international journals in a number of languages.

Many American universities and colleges subscribe to the series of seven earth science abstracts published by Geo Abstracts Ltd. Geo Systems has a new project for providing geological maps to support its other services covering the earth sciences called Geoarchive.

Other exhibitors will include: the Institute of Mechanical Engineers—30 books and nine periodicals published recently; BHRA Fluid Engineering—has collected and processed information in its field for 30 years with emphasis on industrial requirements; the Metals Society—produces publications jointly with the American Society for Metals; the Institute of Physics and subsidiary Adam Hilger—a range of journals in conventional and microfiche form; Learned Information (Europe) Ltd.—producing a new journal, "On-Line Review," covering latest data bases, new systems, equipment and search aid; Pitman Publishing Ltd.—promoting its advanced publishing program in mathematics; Teakfield Ltd.—has developed a new reporting scheme in the business information area; and the Institution of Civil Engineers and Pharos Distribution Services Ltd.

There will also be an information booth run by the Association of Learned and Professional Society Publishers, sponsor of the group.

Virginia Bailey, librarian, United First Florida Banks . . . died Sep 9, 1976. A member of SLA since 1972, she was a past director of the South Atlantic Chapter.

John Morrow Bobb

John Morrow Bobb, Jr., 60, of Greenville, S.C., died January 12 following a long illness.

A native of Hollidaysburg, Pa., Bobb attended Allegheny College and was a graduate of Pennsylvania State University and the Carnegie Library School of the University of Pittsburgh. He was a member of Pi Gamma Mu social science honor society. Following graduation from Penn State he served in World War II.

Bobb's career as a librarian began in State College, Pa., where he served in the public library and later as engineering librarian at Penn State University. From there he moved to Tennessee, where he was assistant chief librarian at the Oak Ridge National Laboratory for 17 years. Following his retirement in 1973 he assisted in the development of the proposed library for the Alyeska Pipe Line Company, Houston, and in 1974 he joined the staff of the Greenville County Library, S.C., as business and documents librarian. An active member of professional associations, Bobb served as President of the Tennessee Library Association, and later as a director of the South Atlantic Chapter of SLA. He also served as treasurer of the Science & Technology Division of Special Libraries Association. Other memberships included South Carolina Library Association and Piedmont Special Libraries Association.

At his request, Bobb's body was left to the Medical College of Charleston, S.C. for research. Contributions can be made in his



BOBB

memory to the American Cancer Society. Acknowledgments should be sent to Mrs. Alice Hauffer at the following address: Meadow Mist Road, Route 1, Pulaski, Pa. 16143.

Carolyn T. Lloyd

Jacqueline W. Felter, retired, former director of the Medical Library Center of New York . . . died Sep 19, 1976. She was a co-designer and director of the Union Catalogue of Medical Periodicals Computer Center in New York, and co-editor of the Handbook of Medical Library Practice. Mrs. Felter had been an SLA member from 1943-1974.

Simone Spoerri, Chemists' Club librarian, New York, N.Y. . . . died in early June 1976. She had been a member of SLA since 1965.

Florence Wagner, retired in 1962 after serving for 40 years as librarian of the *Wall Street Journal* . . . died Sep 13, 1976. She was active in the New York Chapter during the 1940s and 1950s. She had been an SLA member since 1930.

WASHINGTON LETTER

Telecommunications Demonstrations

Public and private nonprofit agencies, organizations, and institutions are eligible applicants for a new telecommunications demonstration grant program administered by the Office of Telecommunications Policy in the Department of Health, Education, and Welfare.

Preliminary information and draft regulations are printed in the *Federal Register*, Jan 24, 1977, pp. 4135-37. Final regulations will be issued later this spring, and then a solicitation of awards will be published in *Commerce Business Daily* which will describe specific application requirements.

According to the draft regulations, HEW plans to award grants to support the planning, development, and acquisition or leasing of facilities and equipment for demonstration projects using nonbroadcast telecommunications for the transmission, distribution, and delivery of health, education, and social service information.

For the purposes of this program, "non-broadcast telecommunications facilities" includes, but is not limited to, cable television systems, communications satellite systems and related terminal equipment, and other methods of transmitting, emitting, or receiving images and sounds or intelligence by means of wire, radio, optical, electromagnetic, and other means (including nonbroadcast utilization of telecommunications equipment normally associated with broadcasting use).

This is a new program created by Congress in 1976 as part of the Educational Broadcasting Facilities and Telecommunications Demonstration Act (PL 94-309). Congress authorized \$1 million for the demonstration program for one year only. It is expected that Congress will review the year's performance and then amend and extend the demonstration grant program for additional years. The full \$1 million was appropriated for fiscal year 1977 (the current fiscal year which ends Sep 30, 1977) and will be available for grant awards later in the year.

Librarians interested in the program should write: Office of Telecommunications Policy, Department of Health, Education, and Welfare, Room 409E, HEW South Portal Building, 200 Independence Ave., S.W., Washington, D.C. 20201.

Humanities Challenge Grants

In mid-January, the National Endowment for the Humanities announced its new program of challenge grants authorized by PL 94-462. Eligible applicants are nonprofit humanities organizations including educational institutions, libraries, museums, historical societies, film/television production centers, advanced study centers, research organizations, scholarly societies and presses, and consortia of such groups.

Challenge grants are matching grants—one federal dollar provided for every three non-federal dollars an eligible institution can raise. Examples of possible uses of the challenge grants include but are not limited to the following: 1) general operating expenses, 2) defraying operating deficits, 3) renovation of facilities, 4) acquisition of equipment and materials, 5) maintenance, preservation, and conservation of collections, 6) improved planning, evaluation, and automated data systems, 7) design and conducting of development and fund-raising efforts, 8) new or expanded programming and services, 9) increased community-oriented information and outreach programs, 10) establishment of inter-institutional programs for resource-sharing and joint administrative purposes, and 11) special bicentennial projects. For the bicentennial projects, the matching requirement may be waived in certain circumstances.

For more information on this new program, contact: NEH Challenge Grants, National Endowment for the Humanities, Washington, D.C. 20506.

NCLIS

On February 8, the National Commission on Libraries and Information Science testified before congressional appropriations committees, asking Congress to appropriate \$3.5 million for the White House Conference on Li-

brary and Information Services. The Commission told Congress that about 34 percent of the \$3.5 million would go directly to support state conferences; 18 percent for direct costs for the national conference; and 48 percent for direct support costs (including technical assistance) for both the state and national conferences.

The national White House Conference will be composed of about 500 delegates, the Commission told Congress, and will last four days. "The NCLIS is confident it can plan and conduct a White House Conference that will indeed result in the improvement of the Nation's libraries and information centers and in more effective and increased use by the public," the Commission said. "In addition, the Conference will be a major force in developing a balanced intergovernmental system of services and funding with the appropriate participation at the local, state and Federal levels."

NCLIS also asked Congress for \$563,000 for its own budget in the coming fiscal year (FY 1978). Looking to the year ahead, the Commission said several new task forces will be constituted, including a task force on the

public/private interface, which will attempt to define the respective roles of the government and private sectors in terms of the Commission's Program Document ("Toward a National Program of Library and Information Services: Goals for Action," officially adopted by NCLIS in 1975). Other new task forces include one on the role of school library/media centers in the National Program, and one on library services for Native Americans.

The Commission spoke of its expectation "to take the first steps toward implementing a national periodicals access program," based on the soon-to-be-released report of its national periodicals task force. NCLIS also mentioned briefly a publication on national information which it has recently published for the Committee on the Right of Privacy of President Ford's Domestic Council. While the supply lasts, single copies of this 233-page report, *National Information Policy*, are available at the Commission's offices, 1717 K Street, N.W., Washington, D.C. 20036. It will also soon be on public sale through the Superintendent of Documents, U.S. Government Printing Office, at \$4.65 a copy (stock no. 052-003-00296-5).

Sara Case

HAVE YOU HEARD?

Need a Translation?

A 14-page booklet, *How to Obtain a Translation*, is available from the Aerospace Division of SLA. A detailed step-by-step procedure is presented, including how to check and handle a request, how to search for an available translation, how to order one if none is available, and what to do with the completed translation. Price: \$3.00, payable to Aerospace Division of SLA. Write: Stanley A. Elman, Lockheed-California, Central Library, 2555 N. Hollywood Way, Burbank, Calif. 91520.

Afro-American Journal

The Afro-American Historical Association of the Niagara Frontier has begun publication in January of a biannual interdisciplinary journal—*Afro-Americans in New York Life and History*. Articles focus on blacks in New York State and include methodology and trends in local and regional Afro-American studies. Subscription rate is \$6.00 per year. Send orders to: The Editor, *Afro-Americans in New York Life and History*, P.O. Box 1663, Buffalo, N.Y. 14216.

Government Report Available

Development of a coordinated information policy for the nation is urged in an official report, *National Information Policy*, published by the National Commission on Libraries and Information Science. The 233-page report details the findings of a year-long study by the Domestic Council's Committee on the Right of Privacy. Single copies of the report are now available at the Commission's offices, 1717 K Street, N.W., Washington, D.C. 20036. It will also soon be on public sale through the Superintendent of Public Documents, U.S. Government Printing Office, at \$4.65 per copy.

New Doctoral Program

The University of North Carolina at Chapel Hill School of Library Science has announced a PhD program in library science beginning with the fall semester, 1977. For information on the scope of the program and entrance requirements, write: Haynes McMullen, Chairman, Doctoral Commission, School of Library Science, Manning Hall 026-A, University of North Carolina, Chapel Hill, N.C. 27514.

Chemistry Information Service

Chemical Abstracts Service (CAS) has initiated an information service designed to keep scientists and engineers informed of the latest research and technological developments in specialized areas of chemistry and chemical engineering. The service, called *CA Selects*, consists of a series of biweekly publications each containing complete *Chemical Abstracts* abstracts and accompanying bibliographic citations. Currently available are Organosilicon Chemistry, Forensic Chemistry, Photochemistry, High Speed Liquid Chromatography, Mass Spectrometry, and Psychobiochemistry. For subscription information, write: CAS, Marketing Department, Ohio State University, Columbus, Ohio 43210.

Map Indexing

At the suggestion of SLA's Geography and Map Division, the H. W. Wilson Publishing Company has altered their indexing procedures to include maps in the bibliographic entries whenever a map appears in an article.

Occasional Papers

The University of Illinois Graduate School of Library Science has just released No. 125 in its series of *Occasional Papers*: "The Acquisition of Maps and Charts Published by the United States Government," by Jane M. Low. Numbers in the series are available from: Publications Office, Graduate School of Library Science, 249 Armory Building, University of Illinois, Champaign, Ill. 61820. Single copies are \$2.00 each; subscriptions are available on an annual basis for \$7.00 and cover a minimum of five issues per year.

Scholarships Available

The University of Illinois Graduate School of Library Science at Urbana-Champaign is seeking applicants for its Educational Opportunities Scholarship Program (EOSP). The master's degree program is open to minorities and underprivileged whites with a bachelor's degree from an accredited institution. Most scholarships are in the form of half-time graduate assistantships. Recipients also are granted tuition waivers. Further information and application forms are available from: Scholarship Program, Graduate School of Library Science, University of Illinois, Urbana, Ill. 61801.

Minority Fellowships

Simmons College awards two fellowships for graduate study in library science each year

under a grant from the Massachusetts Board of Library Commissioners, through LSCA Title I funds. The fellowships are to educate minority group members with a high level of academic ability and interest in librarianship to work in Massachusetts libraries. Each fellowship carries a stipend for two semesters of full-time study plus remission of all tuition charges. Contact: School of Library Science, Simmons College, Boston, Mass. 02115.

Free Publications

A number of publications on cancer control and cancer research are available free of charge from the International Union Against Cancer, rue du Conseil-Général, 3, 1205 Geneva, Switzerland.

Research Project

The Office of University Library Management Studies of the Association of Research Libraries has received a \$110,000 grant from the Andrew W. Mellon Foundation in support of a one-year project to design and test a procedure for the analysis of collection acquisition, retention, and preservation policies at university research libraries.

ERIC Clearinghouse Transferred

The Educational Resources Information Center (ERIC) Clearinghouse on Information Resources was transferred to Syracuse University from Stanford University Jan. 1, 1977. The Syracuse clearinghouse, one of 16 such centers in the U.S., will be responsible for the areas of educational technology, library science, and information science. ERIC clearinghouses form the world's largest screened knowledge data base about education.

Broadcasting Museum

The Museum of Broadcasting (1 East 53rd Street, New York, N.Y. 10022) has recently been established to collect, catalog, and exhibit radio and television programs. The programs are on miniaturized audiotape and videotape cassettes which are played back on custom-designed electronic consoles. The facilities of the museum are available to the public on a membership basis.

Expanded Search Service

The Norris Medical Library of the University of Southern California has joined with the USC-based WESRAC (Western Research Application Center of NASA) to expand computer-assisted search services for USC faculty, students, and staff. Services are also available to off-campus users including

hospitals, academic institutions, business and industry. Operating at different locations but joining together as the University Computer-Assisted Search Services (UCASS), Norris and WESRAC are searching more than 50 data bases in a wide variety of subject areas.

UN Catalogs

Free catalogs are available describing publications of two specialized United Nations agencies—Food and Agriculture Organization (FAO) and General Agreement on Tariffs and Trade (GATT). The catalogs are entitled *FAO Books in Print 1976-77* and *Publications of the General Agreement on Tariffs and Trade 1976*. Send requests to: Unipub, Box 433, Murray Hill Station, New York, N.Y. 10016.

Micrographics Kit

A micrographics lecture kit, designed to aid an instructor in developing four to five hours of lecture material on micrographics courses, has been developed by the National Micrographics Association (NMA). Housed in an attractive binder and including a selection of nine NMA consumer booklets plus a hardbound test book, the kit is available at \$100.00 from: NMA, Publications Sales, 8728 Colesville Road, Silver Spring, Md. 20910.

Architecture Collection

An Inventory of the Ihra T. Frary Audiovisual Collection has been published by the Ohio Historical Society. One of the few in-depth studies of architecture in the Western Reserve and Firelands Sections of Ohio, this 96-page inventory includes almost 16,000 photographs. Cost is \$4.76 to OHS members and \$5.95 to non-members (plus postage). Orders should be sent to the OHS Sales Department, Ohio Historical Center, Columbus, Ohio 43211.

Cataloging Meeting

Representatives of the British Library, the National Library of Australia, the National Library of Canada, and the Library of Congress met at the Library of Congress last November for informal discussions of problems and strategies on cooperative aspects of cataloging. One of the major topics was the impact that will result from the promulgation of two major compilations of cataloging standards that are now in the final stages of editing. The first of these is the second edition of the *Anglo-American Cataloging Rules*. The second work in progress is the 19th edition of *Dewey Decimal Classification*.

Serials Guide

Your Guide to USBE Services, a new 16-page pamphlet, tells librarians how to tap the resources of the Universal Serials & Book Exchange, Inc. The nonprofit clearinghouse now has four million issues of 35,000 periodical titles from which it fills requests. Member libraries contribute periodicals and can order them for modest fees. For a free copy of the guide, write: USBE, 3335 V Street, N.E., Washington, D.C. 20018

New Quarterly

The *Journal of Library History* will be published quarterly by the University of Texas Press and edited at the UT Graduate School of Library Science, beginning with the 1977 winter issue. The publication will focus on library history, philosophy, and comparative librarianship. Contact: The University of Texas News & Information Service, Box Z, University Station, Austin, Texas 78712.

Books in Print Supplement

R. R. Bowker Company is now preparing the 1976/1977 edition of *Supplement to Books in Print* to be published in April 1977. The supplement is published each spring to provide users of *Books in Print* with any price changes or information on titles which have gone out-of-print or out-of-stock since listed in *Books in Print, 1976*. The supplement will also include listings of new books published since the 1976 volume, as well as planned titles through July 1977. Contact: R. R. Bowker Company, 1180 Avenue of the Americas, New York, N.Y. 10036.

Research and Development

Since 1971 the FID Secretariat has collected information on planned and ongoing research in documentation and librarianship. Data covering more than 30 countries as well as international organizations are published in a bimonthly bulletin, *R & D Projects in Documentation and Librarianship*. Subscriptions are available from the FID Secretariat, 7 Hofweg, The Hague, Netherlands.

Metric System Guide

The National Bureau of Standards' *Metric Style Guide for the News Media* is available free, in limited quantities (no more than 25 per individual request) by writing the Office of Information Activities, Room A621 Administration Building, National Bureau of Standards, Washington, D.C. 20234.

NLW Materials

1977 National Library Week (Apr 17-23) posters, banners, and bookmarks are available from the American Library Association. The materials all carry the message "Use Your Library" and are effective advertisements for college, school, special, and public libraries. A list of possible uses for the materials will accompany every order. Only the banners are dated. For an order form, write to the Public Information Office, ALA, 500 E. Huron Street, Chicago, Ill. 60611.



Oceanography Series Planned

Two Soledad Prison inmates are dedicating themselves to a project they hope will become a valuable research tool for marine science students the world over. Thomas R. Potter and M. Larry Neighbors, both marine science scholars with several technical papers and inventions to their credit, are in the process of developing a series of books on the *World History of Oceanography and the People Behind It*. The series is expected to be the most comprehensive collection of information, photographs, charts, and maps ever correlated on the subject. Publication of the first volume of the series is targeted for late 1979 or early 1980.

The compilers are seeking listings of the following materials from national and international sources: citations on the history of oceanography; oceanographic and maritime museums and libraries; oceanographic and his-

torical data banks and data repositories; governmental and private agencies possessing oceanographic data. Also needed are books, photos, maps, and charts with accompanying explanations, and the services of interlibrary loan programs and language experts who could translate material from foreign countries. Potter and Neighbors plan to donate all material gathered for research purposes to a special oceanographic library or museum upon completion of the series.

Due to prison restrictions, it is requested that all material be in either book, photograph, or photocopy format, with four additional copies of each item (other than books) provided, since the compilers do not have access to duplication equipment. Address correspondence to: Thomas R. Potter (Box B-1895, CTF-C) or M. Larry Neighbors (Box B-58372, CTF-C), Soledad, Calif. 93960.

COMING EVENTS

May 1-4. Bank Librarians Conference, Bank Marketing Association . . . Boston, Mass. Write: Workshop/Conference Registrar, Education Department, Bank Marketing Association, P.O. Box 94383, Chicago, Ill. 60690.

May 12-13. Library Orientation for Academic Libraries, 7th Annual Conference . . . Ypsilanti, Mich. Sponsor: Center of Educational Resources, Eastern Michigan University. Topic: Putting Instruction in its Place: In the Library and in the Library School. Contact: Carolyn Kirkendall, Director, Project LOEX, Eastern Michigan University, Library/CER, Ypsilanti, Mich. 48197.

May 16-18. Fifth Canadian Conference on Information Science . . . Holiday Inn, Ottawa, Canada. Topic: From Sea to Sea: Perspectives of Information Science. Write: Leo Boychuk, Publicity Chairman, Conference 77, Canadian Association for Information Science, Box 158, Terminal A, Ottawa, Ont., Canada K1N 8V2.

May 16-18. International Symposium on Patent Information and Documentation . . . Sheraton Hotel, Munich, Germany. Sponsored by the German Society for Documentation and the German Patent Office in cooperation with the World Intellectual Property Organization. Leaflet and further details from: DGD/APD, International Symposium, Postbox 710, D-8000 Munich 1, Germany.

May 16-20. Library Administrators Seminars . . . School of Business, University of South Dakota, Vermillion, S.D. 57069. Library Management Seminar (May 16-18); Leadership and Budget Seminar (May 18-20). Fee \$125 for one seminar, \$225 for both. Contact: Dr. C. N. Kaufman, Program Director.

May 17-20. National Micrographics Association, 26th Annual Conference and Exposition . . . Dallas, Texas. Write: NMA, 8728 Colesville Rd., Silver Spring, Md. 20910.

REVIEWS

Application of Operations Research Models to Libraries: A Case Study of the Use of Monographs in the Francis A. Countway Library, by Ching-chih Chen. Cambridge, Mass., M.I.T. Press, 1976. 212 p. \$19.95.

This book should serve as a model for future library usage studies. It provides circulation statistics for one of the world's largest medical libraries to an extent that has rarely been available for any kind of library. The methods used to collect and analyze the data are set forth in a way that is easy to read and imitate, and an ample bibliography is given. Considerable effort is made to explore the many implications such statistics have for the formulation of better collection management policies. Indeed, a main theme of the book is that libraries must develop a sound quantitative approach for solving the many economic problems they face.

It is notable that the author is both a researcher and an experienced librarian. She

points out that much of the previous work in library operations research has been done by persons who are not familiar with the librarian's milieu and have difficulty in translating theoretical concepts into practical methods. Chen seeks to bridge that gap in the first part of the book, where she describes in relatively simple terms the formulas developed at M.I.T. as a mathematical model of how and why a book circulates as it does. The author adapts this model to the realities of the library environment and shows how to predict the circulation pattern of a class of books from a relatively small and biased sample of circulation history.

The second part of the book describes the methods used to collect and analyze the circulation histories and other pertinent data in the Countway Library. Each step in the process was tested, and special difficulties are noted. In general, the empirical results are in close agreement with the model predictions. The detailed results are presented in seven ap-

pendixes showing circulation patterns by book class and user class, loan period distributions, and the frequency with which books of different classes were checked out by the same user. Additional analytical results for checking the models are given, along with a ranked listing of the 163 most frequently circulated books.

In the final section of the book, the author describes how circulation statistics can and should be used to allocate book funds, select books, duplicate holdings, discard or store inactive materials, set loan period policies, and shelve books in a more suitable arrangement for browsing. The treatment of each of these applications is somewhat limited, uneven, and based largely on the quantitative aspects of such decisions. They serve to indicate areas for future fruitful research along the lines indicated by this present study and by extending the models to include cost and benefit measures.

This study satisfies its immediate objective of demonstrating the predictive value of a particular book use model in a particular library, and in doing this it has generated a remarkable set of usage statistics. The wider significance of this study awaits confirmation in subsequent studies in other libraries by similar and different methods, and even more importantly in the actual use of these kinds of arguments to help librarians set policies and make better decisions. Chen has taken an admirable first step in that direction.

Ferdinand F. Leimkuhler
Purdue University
West Lafayette, Ind. 47907

Information for Action from Knowledge to Wisdom, edited by Manfred Kochen. (Library and Information Science Series) New York, Academic Press, 1975. 248 p.

The preface to this book begins with a reference to science fiction. It starts with "In his 1938 *World Brain*, H. G. Wells argued for a sweeping reform in the way in which we bring our accumulated wealth of knowledge into effective reaction upon our . . . affairs." The preface goes on to say that this book is a result of the efforts to put together a "World Encyclopedia" which the editor terms "a movement, a social organ, a set of principles, called WISE (World Information Synthesis Encyclopedia)." I quote a sentence from this book to provide some of the style which these authors used to try to define part of their approach. "Usually the environment of a system is so

much larger than the system, and processes of change in parts of that environment are so much larger and more frequent, that we are likely to perceive a considerable degree of internal identity combined with a large extent of change in our environment; and perhaps this is the operational counterpart to what we refer to as our sense of time." Thus the aim of the book is to define what the information system and decision making apparatus should be in the future. I think I much prefer science fiction novels of H. G. Wells to this volume of papers for that purpose.

My major criticism is that the authors have produced a set of disjointed opinions. Without a crude idea of what the future holds for mankind, it is impossible to construct much of an information system to serve its needs. I have stated in print that mankind is presently in an unstable transitional social system (*Man in Transition*, 1973) coming from a stable social system and approaching an unknown social system which I have called an Automated Society. A stable social system is one in which man has decided that he has all the answers needed for a stable order and technology.

One way to try to define a stable system in the future is to remove a segment of mankind and place them on a space ship going a hundred light years away with the capability of performing research on their travels. What kind of an information system do these people need? First of all, they need to be able to produce for their physical requirements in a closed system. A computer ought to be able to run the entire economy in terms of needs and production. A second system of providing everything mankind has ever written should be on the space ship and this can be done in a very small space using microfiche techniques (this is mentioned in the appendix). The indexes to this collection do not have to be on a computer or can be integrated into a central computer for total control and total information. Decision making is not really necessary because all the big decisions were made when the space ship was designed. In cases of malfunction or accident, the information needed to repair the damage can be located in yet a third file for maintenance and repair specific for the space craft.

Science fiction should be interesting reading. If you are truly an intellectual and interested in blue sky thinking, this book might appeal to you. Frankly, H. G. Wells is a better place to start than this collection of papers.

Masse Bloomfield
Hughes Aircraft Company
Culver City, Calif. 90230

PUBS

(77-029) **Information • Politics. Proceedings of the ASIS Annual Meeting.** Volume 13, 39th annual meeting, San Francisco, Calif., Oct 4-9, 1976. Martin, Susan K., comp. Washington, D.C., American Society for Information Science, c1976. 176p., 10 microfiche. \$17.50 (\$14.00 ASIS members). LC 64-8303 ISBN 0-87715-413-9 ISSN 0044-7870

Part 1 contains abstracts of all papers plus subject and author/title indexes. Part 2 (microfiche) contains full papers with eye-readable author index for those papers contributed by the speakers.

(77-030) **1976-1977 American Library Directory.** 30th ed. Jaques Cattell Press, ed. New York, Bowker, c1976. 1389p. \$45.00. LC 23-3581 ISBN 0-8352-0891-5 ISSN 0065-910X

(77-031) **Reference Resources: A Systematic Approach.** Doyle, James M. and George H. Grimes. Metuchen, N.J., Scarecrow, 1976. 293p. \$10.00. LC 76-7080 ISBN 0-8108-0928-1

Intended as a guide for the librarian and as a searcher's manual for the user.

(77-032) **Third Open Conference on Information Science in Canada: Organizational Patterns in Information Science in Canada.** Marshall, Eric, comp. n.p., Canadian Assn. for Information Science (CAIS), n.d. 275p. \$10.00.

Proceedings of conference held in Quebec, May 8-10, 1975. Available from: CAIS, Box 158, Terminal Station, Ottawa, Ont., Canada K1N 8V2.

(77-033) **Fourth Canadian Conference on Information Science: Information Services in Canada.** n.p., Canadian Assn. for Information Science, 1976. 233p.

Proceedings of conference held in London, Ontario, May 11-14, 1976.

(77-034) **Toshokan: Libraries in Japanese Society.** Welch, Theodore F. Chicago, American Library Assn., 1976. 306p. \$15.00. ISBN 0-85157-220-0

Survey of the Japanese value system as it relates to Japanese libraries and librarianship. Various types of libraries are treated in separate chapters of this work.

(77-035) **Books in Other Languages: How to Select and Where to Order Them.** Wertheimer, Leonard. Ottawa, Ont., Canada, Canadian Library Assn., 1976. 129p. \$15.00. ISBN 0-88802-115-1

Covers selection aids and suppliers in Canada, U.S., and overseas for books in approximately 40 languages.

(77-036) **Towards a Complete Microform Library.** Thomas, Peter A. Hatfield, Herts., Great Britain, Natl. Reprographic Centre for documentation, 1976. Microfiche. (NRCd Publication 4). 0.30 (£0.20 NRCd members). ISBN 0-85267-091-5

Originally read as a paper given to the Conference "Microforms: their Availability and Use" organized by NRCd and Aslib at Manchester, Nov 18, 1975. Available from: NRCd, Hatfield Polytechnic, Endymion Rd. Annexe, Hatfield, Herts. AL10 8AU.

(77-037) **Libraries and Information Centers in the Chicago Metropolitan Area.** 2d ed. rev. and enl. Lee, Joel M. and Hillis L. Griffin, eds. Chicago, Ill., Illinois Regional Library Council, 1976. 592p. \$15.00 (\$9.25 Council members). LC 76-8351 ISBN 0-917060-01-6

Covers 403 libraries and information centers. Includes geographic, library, and librarian indexes, and a guide to subject collections.

(77-038) **Annual Review of Information Science and Technology, Volume 11, 1976.** Williams, Martha E., ed. Washington, D.C., American Society for Information Science, c1976. 457p. \$35.00 (\$28.00 ASIS members). LC 66-25096 ISBN 0-87715-212-8 ISSN 0066-4200

(77-039) **Introduction to Technical Services for Library Technicians.** 3d ed. Bloomberg, Marty and G. Edward Evans. Littleton, Colo., Libraries Unlimited, 1976. 298p. (Library Science Text Series). \$11.50. LC 76-43294 ISBN 0-87287-125-8

General introduction for paraprofessionals.

(77-040) **Major Libraries of the World: A Selective Guide.** Steele, Colin. New York, Bowker, c1976. 479p. illus. \$18.50. ISBN 0-85935-012-6

Arrangement is by country. Includes such information as address and telephone number, brief history, holdings, special collections, and facilities and services.

(77-041) **Helping Adults to Learn.** Knox, Alan B. Washington, D.C., Continuing Library Education Network and Exchange (CLENE), 1976. 64p. (CLENE Concept Paper #1). \$5.00 (\$4.25 CLENE members).

Essay selects and presents ideas from the literature related to the facilitation of adult learning.

(77-042) **An American Guide to British Social Science Resources.** Levine, Herbert M. and Dolores B. Owen. Metuchen, N.J., Scarecrow, 1976. 281p. \$11.00. LC 76-22690 ISBN 0-8108-0950-8

Intended for the American social scientist conducting research in Britain.

(77-043) **History of Libraries in the Western World.** 3d rev. ed. Johnson, Elmer D. and Michael H. Harris. Metuchen, N.J., Scarecrow, 1976. 354p. \$10.00. LC 76-25422 ISBN 0-8108-0949-4

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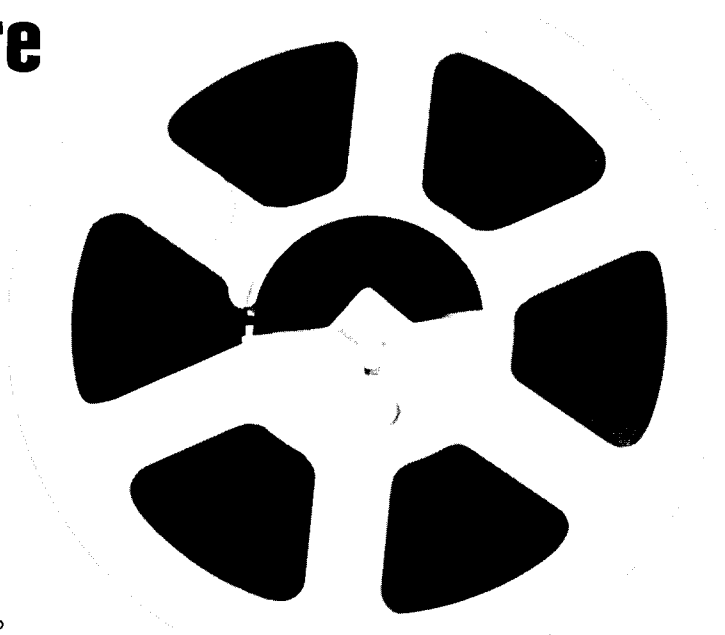
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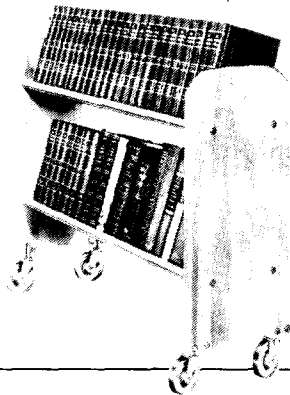
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Librarian—Fine arts library with primary emphasis on the visual arts and secondary emphasis on the performing arts. Requirements: MLS from ALA accredited library school; knowledge of reference tools and academic training in studio art, art history, and performing arts; one foreign language; experience which demonstrates success in dealing with the services, routines, and needs of a small, specialized, academic library which invites the use of the general public. Salary negotiable depending on experience. Send resumé, slides of art work, transcripts and three references by April 1, 1977 to: Search Committee; Fine Arts Library; Lake Placid School of Art; The Center for Music, Drama and Art; Lake Placid, New York 12946.

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Librarian—Program Development Officer. The University of South Dakota School of Medicine's Health Science Library is accepting applications for the position of Program Development Officer (PDO). The PDO will coordinate and develop medical library services in hospitals and other health care related facilities throughout South Dakota. The PDO will also be responsible for directing continuing education activities and providing out-state medical reference services. The individual reports directly to the Director of the Health Science Library. Qualifications include a Master's degree in Library Science from an ALA accredited graduate school, knowledge of medical literature, and demonstrated ability to coordinate an effective outreach program. This position entails considerable travel. Professional experience is desirable. Starting salary: \$12,500/annum. Position carries faculty rank. The position is funded through June 30, 1980, and may be renewable thereafter depending on availability of funds. Position opens July 1, 1977. Closing date for applications will be March 18, 1977, and thereafter monthly until June 30, 1977. Applications received by the 15th of the month will be considered for that month and qualified applicants will be considered for subsequent position. The University of South Dakota is an Equal Opportunity/Affirmative Action Employer. Send dossier to: Patrick W. Brennen, Director; Health Science Library; School of Medicine; University of South Dakota; Vermillion, SD 57069.

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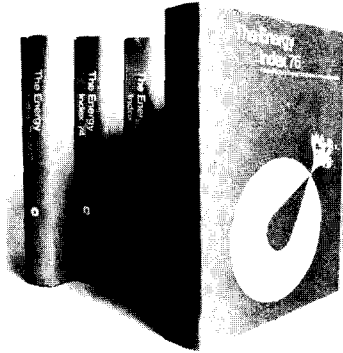


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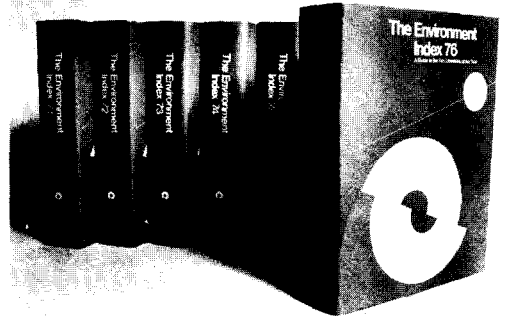
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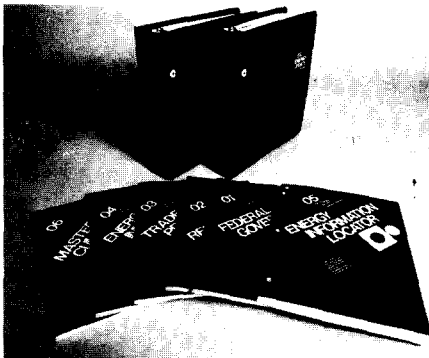
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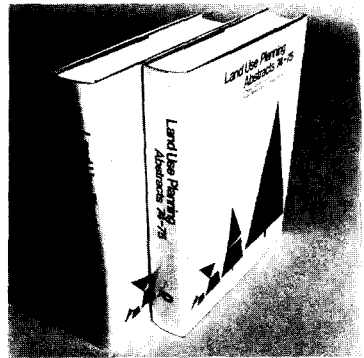
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