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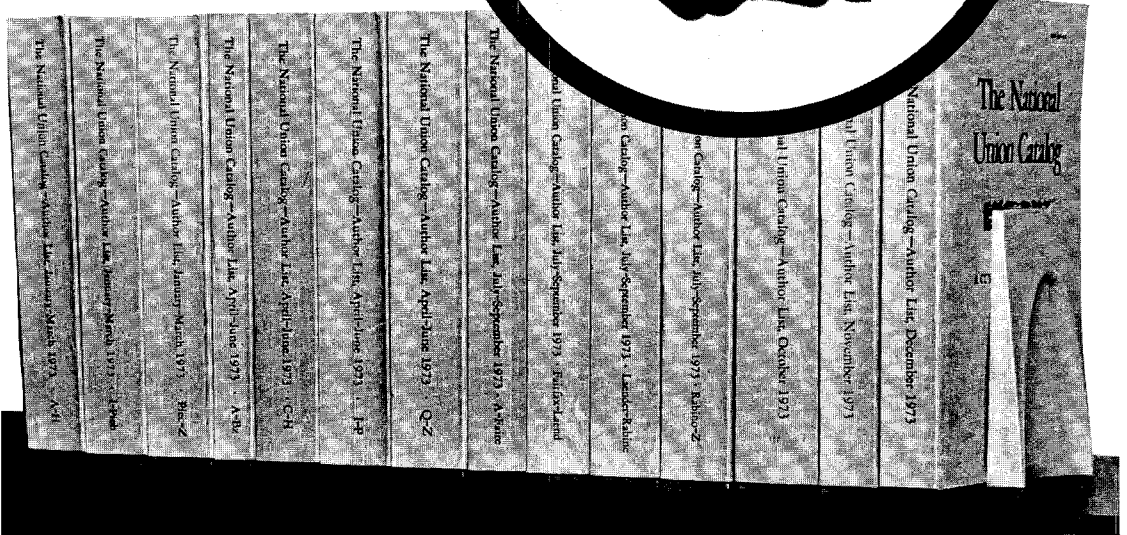
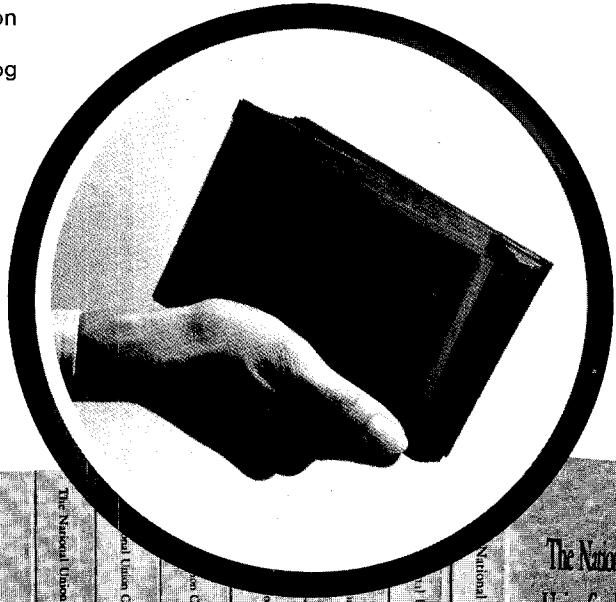
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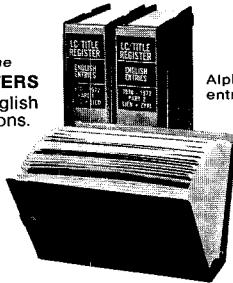
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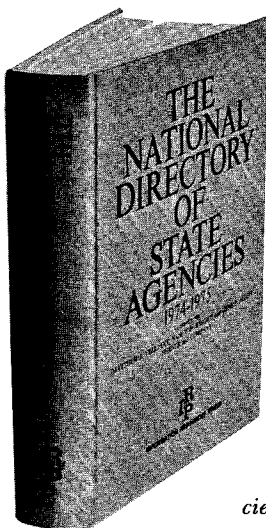
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LETTERS

The Qualified Unemployed

I read "The Challenge for Library Schools: An Employment View" [*Special Libraries* 64 (no.10): 439-441 (Oct 1973)] with great interest. Having recently received an MLS (August 1972, University of Pittsburgh), I have a number of personal observations which may be of interest.

My resume does suggest that I *have* included in my program of study, insofar as possible, those topics which Mrs. Usher and her colleagues find lacking in many library school graduates wishing to enter the art/museum library. Although there is no way to document this, other than a record of past achievements and honors, and/or checking references, I am not one of the mediocre misfits, devoid of both competence and motivation. I do indeed have "an attractive personality and appearance and willingness to work." I am not employed in the field.

The consensus reached by Mrs. Usher and her colleagues is that most library schools are not adequately preparing students for employment in art and museum libraries. Granted! The implication, however, is that there are jobs for the "adequately prepared." Such is not the case. A realistic assessment of the current employment situation reveals that, despite generally poor training, there are *still* enough qualified individuals to more than fill openings in the field. It has been my experience that the market is already glutted with qualified people who meet criteria for the well prepared art librarian. While I certainly find no fault with improving education for art librarianship, to encourage such specialization without ever acknowledging the lack of opportunities to use it is an irresponsible act on the part of art librarians.

It is suggested that library schools should be more selective in admitting students, especially when there are more candidates than openings. Again, the implication is that these fewer, more qualified people will be able to find employment. I would still hazard a guess that there are not enough openings in the field to accommodate even a reduced number of people. From art librarians who have had position openings within the last three years, I would be very interested to know, for each job, how many qualified (i.e., people not having the education and personal deficiencies noted) applicants there were.

I consider my own experience a case in point. Having gone to some effort to overcome specifically those deficiencies mentioned in the article, I hit the job market. For over a year I have been looking for a position in an art library. I am frustrated beyond anyone's wildest dreams watching my education and ambition going down the drain for lack of employment opportunities.

I cannot be hired for an assistant's position in an art library. The degree makes me overqualified and, contrary to the assertion that new graduates "wish only to do what they consider professional," I have found that librarians will not hire anyone with an MLS to do what they (the librarians) feel is unprofessional. On the other hand, because there are so few openings and because I have relatively little experience, I cannot get a professional level position. I find it ironic (but not amusing) that the education often prevents me from getting the experience (i.e., being overqualified for a nonprofessional position where I might pick up some nitty-gritty experience) and the lack of experience (and the lack of opportunity) prevents me from using the education.

I realize that the article has called up from within me all of the frustrations of a person whose ambition is thwarted by the lack of opportunities in the field. There are people who meet the criteria for the well-prepared art librarian (needless to say, I think I'm one!), but for many of them, there are no jobs, and very few prospects.

Bonnie B. Trivizas
Arlington, Va. 22204

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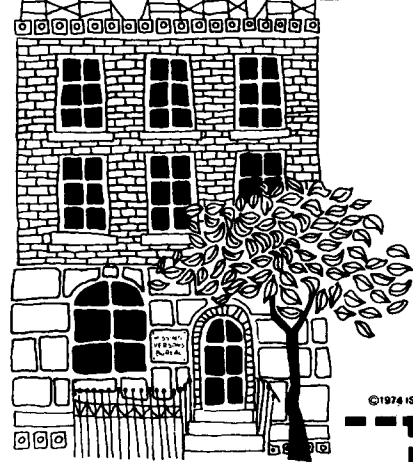
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Problem-Oriented Approaches in the Education of Librarians

Thomas J. Galvin

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

■ Some results of a detailed examination of changing educational objectives in business administration, public administration, education, and librarianship that have led to adoption of such problem-oriented instructional approaches as the case method and simulation in both preservice and in-service settings. Instructional goals are shown to derive quite directly from educators' perceptions of kinds of knowledge and/or

skill considered requisite to current and future demands of practice. Similarities and parallels in educational aims are identified among the several professions. Nine major assumptions about librarianship as a field of professional practice are found to be widely shared by those employing problem-oriented instruction in library schools and other training environments.

THE THEME of "Problem Solving in Libraries in the '70s" reflects the nature of the professional role in special libraries and information centers. It suggests that special librarians conceive of their work as centering in the identification, analysis, and effective resolution of operational problems that arise in the contexts of libraries and related information-processing, human-service agencies. This view of the special librarian as problem analyst and problem solver, and of special librarianship as an applied rather than an essentially theoretical dis-

cipline, is central to the recent emergence of the problem-oriented approach as a full or partial replacement for more traditional instructional methods in both formal preservice education and in-service training of professional library personnel. It serves as well in a number of significant ways to link librarianship as a field of practice with such professions as law, business administration, public administration, and education by virtue of parallel shifts that have occurred in teaching strategies in these fields.

The principal object of this paper is to summarize some of the results of a recent systematic investigation of the rationale underlying the current interest in such essentially problem-oriented instructional modes as the case method and simulation teaching in librarianship and several other professional fields (1). This

Thomas J. Galvin was associate director and professor, School of Library Science, Simmons College, Boston, Mass. He is now dean of the Graduate School of Library and Information Sciences, University of Pittsburgh, Pittsburgh, Pa.

investigation took as its point of departure some seemingly self-evident assumptions about both professional education and professional practice which were subsequently borne out and verified through the collection and analysis of data. Perhaps the most important single finding was the overwhelming confirmation of a strong linkage between the nature and content of library practice and the nature and content of education for librarianship where problem-oriented instruction is employed. While the bond between teachers and practitioners is clear throughout professional education, where the case method or simulation teaching have been selected by those responsible for either formal or informal instruction for professional service, educational goals and objectives can be seen to derive quite directly from teachers' or training leaders' perceptions of the particular kinds of knowledge and skill which they believe to be requisite for success in terms of their understandings of the current and future demands of practice. Thus, by enumerating the goals and values of problem-oriented instruction, we may be able to arrive at a fuller and clearer understanding of the nature of professional practice itself.

Problem-Oriented Instruction

Case method and simulation teaching are two types of problem-oriented instruction which have been widely adapted to the formal education and in-service training of librarians, as well as to the preparation and continuing education of professionals in other fields. Among those who have pioneered in the development of these innovative approaches to education for special librarianship are Kenneth R. Shaffer of Simmons College and Mildred H. Lowell of Indiana University in the context of case method instruction, and Martha Jane Zachert of Florida State University and James M. Matarazzo of Simmons College in the application of the simulation technique (2). Shaffer's work in this area dates from 1951; but well before his initial reports on this new teaching method

were published, Richard C. Dahl, then law librarian at the University of Nebraska, was urging adoption of the "case system" by library educators, and identifying parallels among lawyers, business managers, and librarians. Dahl argues that if students

can be helped to develop the ability to analyze situations, recognize problems and determine issues, search out the pertinent facts, develop alternatives, and reach reasoned decisions, the school will have gone far toward developing leaders for this profession (3).

Special librarians were also in the forefront in recognizing the values of problem-oriented techniques in the continuing education of librarians in service. As early as 1961, at the Annual Conference of the Special Libraries Association in San Francisco, a panel analyzed a problem case study, which was subsequently published in *Special Libraries* with readers invited to submit additional comments (4). More recently, Zachert has conducted continuing education seminars under SLA auspices utilizing the simulation approach (5).

Problem-oriented approaches are currently well established in both formal and informal teaching and learning situations. While they reflect a wide range of individual differences from one teacher or training leader to another—there being not one version of the case method or simulation teaching within any discipline, but many highly varied forms—they are characterized by certain common values which distinguish them from more familiar content-oriented, descriptive methods. Participant success is evaluated chiefly or solely in terms of the capacity to produce sound, viable, defensible solutions to groups of problems drawn from practice. By contrast, the content-oriented, or descriptive, course centers on a body of material which "may comprise principles, facts, theories, the tricks of the trade, or whatever the instructor or someone in authority has determined ought to be transmitted to and absorbed by the student" (6). The major emphasis and objective of the con-

tent-oriented course is mastery by the learner of this body of material.

Case method and simulation teaching are highly analytical and decisional in character. Those who have advocated their use in librarianship, law, business, education, and public administration appear to share essentially common views and values with respect both to the goals of professional education and the nature of professional practice in these several fields. In each instance, the best kinds of professional education and training are thought to be those that most nearly approximate the reality of practice through the provision of learning environments that foster development and testing of specific skills of complex problem analysis. These approaches are characterized by an emphasis on process over content in instruction, aiming especially at an understanding of the decision making experience in settings that replicate as fully as possible the multiple human and technical variables present in the real world.

Assumptions About Librarianship

It is possible to identify at least nine major assumptions about librarianship commonly held by those who have favored adoption of such problem-oriented teaching approaches as the case method and simulation. These are as follows.

1) *Librarianship is an applied discipline.* Thus, the principles of librarianship assume significance only in their application to the real problems of professional practice. The study of librarianship, then, needs to combine an understanding of its principles or "science" with the "art" of applying these principles.

2) *Librarianship is an emerging discipline, lacking, at present, a substantial fixed body of established general or generalizable knowledge.* The content of professional practice, therefore, becomes an important resource to be quarried through inductive methods. Clinical knowledge serves both as a basis for formulating new generalizations induc-

tively, and for testing tentative generalizations deductively. This makes problem-oriented instruction, combining inductive and deductive teaching-learning strategies, especially appropriate at this time to the education of library personnel.

3) *Librarianship is a dynamic field, subject to rapid growth and alteration as a consequence of changing social needs and emergence of new or revised technologies.* Education for librarianship should, therefore, emphasize principles and processes, rather than the transmission of factual information from teacher to student often characteristic of content oriented, descriptive instruction. A major aim of both preservice and in-service education should be to foster learner development of skills of analysis and judgment, as well as useful ways of thinking applicable to a variety of new experience.

4) *Librarianship is eclectic and interdisciplinary in character.* Library education must, therefore, provide for the synthesis of knowledge drawn from other disciplines in its application to the solution of library problems.

5) *As a professional, rather than a technical field, librarianship demands of those who practice it the ability to modify and adapt principles, concepts, techniques, and skills to meet the complex problems of practice.* Education for librarianship should, therefore, provide opportunities to acquire skill in the situational analysis of highly individualized problems drawn from practice, and in the resolution of complex problems to which there are no obvious, single, "right" answers.

6) *Decision making is a significant element in the content of professional practice in librarianship.* Education and in-service training for library personnel should reflect both the changing role of the professional in terms of increasing supervisory and administrative responsibility at all levels, and the decisional character of professional work in both technical and public service areas. Opportunities are needed to develop and test decision-making skills in environ-

ments that do not afford risk to the learner, the client, or the organization.

7) *Librarianship is practiced in an institutional or organizational setting, and therefore demands human, as well as technical skills.* It then becomes an important responsibility of education for librarianship in both its preservice and in-service aspects to foster development of skills of interpersonal relations, as well as those behavioral and attitudinal characteristics that enable librarians to establish effective working relationships within an organizational setting. The goals of education for librarianship, therefore, become both cognitive and affective.

8) *The librarian must be a self-directed lifetime learner.* The content of librarianship cannot be mastered within a finite period of formal study. The dynamics of social and technological change will continue to alter both the content and nature of professional practice, requiring both acquisition of new knowledge and modification of existing principles and techniques of practice. Education for librarianship should seek to make the student responsible as early as possible for the direction of his own learning, liberating him from dependence on the teacher or some other authority for continued learning.

9) *The administrative and supervisory aspects of librarianship are, in a number of significant respects, similar to administration and supervision in other fields.* In general, the objectives of courses and training programs in library administration and supervision should, therefore, be similar to, or in some respects even identical with, educational and training objectives in such fields as business administration, public administration and educational administration. Accordingly, it becomes appropriate for library educators and training leaders to utilize the methods and materials of supervisory training in these related fields.

Finally, this study has brought to light some similarities and parallels among the several professions that have made significant use of problem oriented instructional approaches. With the excep-

tion of law, all are emerging, rather than long-established, fields of academic study. For the professions generally, practice serves as a chief source for the content of instruction, making them especially suited to inductive teaching methods. Moreover, librarianship, law, business administration, public administration, and education have in common the fact that they do not derive solely or chiefly from a single parent discipline but are to one degree or another eclectic. In summary, these parallels are at least sufficient to suggest that newly emerging disciplines which draw heavily on practice for the content of instruction through inductive methods, which are essentially eclectic in character, and which do not possess a large body of established, fixed general knowledge, are likely to be most hospitable to problem-oriented teaching approaches.

Literature Cited

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Randall's Rationalized Ratios

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■ The statistics reported by a number of the IBM libraries have been used to construct ranges of acceptable ratios of acquisitions to total collection, loans to acquisitions and budget percentages to

be allocated among books, subscriptions, and personnel costs. The ratios, norms or guidelines are suggested as a management tool for evaluation or self-audit of the library activity.

LIBRARIANS are compulsive counters. For years we have counted our book loans, recorded our reference questions, enumerated the volumes in our collection, and periodically we have gathered our numbers into statistical compilations. The practice, initiated by academic and public librarians, is widespread among the industrial librarians without, perhaps, the justification the academic and public librarians have—accreditation and public support.

The industrial librarian uses the statistics to advise management of his stewardship and for comparison purposes. This year's data are compared with last year's data to establish "progress"—or lack of it. When the numbers of some other library are available, one's own library is compared with that of the revealing peer. Occasionally the library statistics are employed in making management decisions and judgments. When they are, the time and effort spent in collecting the data may be justified.

A recent compilation of statistics from the U.S. IBM libraries provided data from which a number of guidelines, norms, or ratios were empirically de-

vised. The data used were from a small number of libraries and covered only a small portion of a normal library's activities and services. As subsequent surveys provide additional data, more guidelines or norms may be established. Experience in their use may also enable us to improve the validity, and narrow the range, of the suggested guidelines.

The source data are contained in Tables 1 and 2. To protect the anonymity of the librarians, numbers rather than library names are used. Table 1 was used to construct the ratios of acquisitions to collection size (A:C), loans to acquisitions (L:A), loans to collection (L:C), and loans to borrowers (L:B). Table 2 pertains to budgets which are reported in percentages rather than in dollar figures. There are three activities for which all industrial libraries spend money. These three were considered an entity and the salaries, books, and subscriptions are reported as percentages of that entity for each library. The entity is also reported as a percentage of the total budget. The difference between the entity and the total budget, when it exists, is used for rent, overhead, computer

Table 1. Collection Size, Acquisitions and Loans

Library	Collection	Acquisitions	Loans	Borrowers	A:C	L:A	L:C	L:B
1	38,340	1,791	10,725	789	.05:1	6:1	.28:1	14:1
2	23,000	900	11,500		.04:1	13:1	.50:1	
3	14,979	541	4,442		.03:1	8.2:1	.29:1	
4	14,600	2,000	1,400	1,400	.14:1	.7:1	.09:1	1:1
5	12,900	1,000	3,675		.08:1	3.6:1	.28:1	
6	10,397	516	3,607	2,382	.05:1	7:1	.34:1	1.5:1
7	8,561	1,290	2,878		.15:1	2.2:1	.23:1	
8	8,112	500	6,000		.06:1	12:1	.74:1	
9	7,126	42	1,776	400	.006:1	42:1	.25:1	4.4:1
10	7,000	115	1,300		.01:1	11.3:1	.18:1	
11	6,500	350	2,300		.05:1	6.5:1	.35:1	
12	6,500	592	1,825	536	.09:1	3:1	.28:1	3.4:1
13	1,600	180	500	35	.1:1	3:1	.30:1	14:1
14	1,067	67	466	1,000	.06:1	7:1	.44:1	.46:1
15	800	50	253	180	.06:1	5:1	.32:1	1.4:1
16	630	380	400	230	.06:1	1:1	.63:1	1.7:1
17	600	40	100	100	.06:1	2.5:1	.17:1	1:1

Code A—Books Acquired; B—Borrowers; C—Books in Collection; L—Books Loaned

Table 2. Budgets

Library	Personnel			Percentages of Entity			Percentage Entity of Tot. Budget
	P	NP	Total	Sal	Bks	Subs.	
1			10	63	17	20	70
2	3	6	9	59	15	26	65
3	3	5	8	33	22	45	89
4	4	3	7	80	6.5	13.5	78
5	4	2	6	68	8	24	60
6	3	3	6	60	17	23	64
7	3	3	6	71	12	17	87
8	2	2	4	41	42	17	70
9			4	62	→38←		64
10	4	0	4	76	5	19	72
11	3	1	4	40	22	38	89
12	2	1	3	48	10	42	74
13	1	2	3	45	39	16	67
14	1	2	3	60	7	33	87
15			3	59	17	24	100
16			2.5	47	29	24	100
17			2	70	4	26	59
18	1	1	2	78	8	14	73
19	2	0	2	72	15	13	45
20			1.3	69	5	26	44
21			1	82	12	6	85
22			1	73	→27←		94
23			1	80	7	13	99
24			.3	56	12	32	100

• • •

charges and inter-divisional services. The guidelines, norms or ratios which were devised from the two tables are discussed in detail in the following paragraphs.

Ratio of Acquisitions to the Total Collection (A:C)

In an industrial library the adequacy of the book collection is determined first by the degree of match between the sub-

ject content of the collection and the information requirements of the using clientele, and second by the currency of the literature resource. It is the second factor which can be indicated by the A:C ratio. In the literature of a changing technology books become obsolete. An electronics book 5 years old is subject to question, one 10 years old is out of date and a 15 year old text, if used to attack a current problem, may do more harm than good. The major portion of the titles in an electronics collection should be those published in the preceding few years. However, even an electronics library will have to retain some titles of historic interest, regardless of their age, and it will need books in fields such as mathematics or welding techniques in which obsolescence of the literature does not occur as rapidly as it does in electronics.

The industrial library serving a discipline which is more stable and less responsive to technological changes must still continue to include all pertinent new publications if the collections are to be dynamic. A mathematician may be willing to use a book on set theory written in 1930 but he will feel deprived if a book in his field and called to his attention in a recent issue of *Mathematical Reviews* is not available for his use.

The suggested A:C ratio ranges between .06:1 and .1:1. Expressed differ-

ently, the number of accessions should be between 6% and 10% of the total number of books in the collection of an established library (one that is 10-15 years old). At the .06:1 ratio, 90% of the collection could be replaced in 15 years and in 10 years at the .1:1 ratio.

Of the 17 libraries in Table 1, eight were within the guidelines, seven below, and two were above. The libraries which were below the suggested envelope of an acceptable A:C ratio are subject to one of two criticisms. If the collection is an adequate one, the acquisition rate is too low and obsolescence of resource is being encouraged. If all of the required books are being purchased, the collection must then be assumed to contain unwarranted deadwood and needs weeding.

It should be stressed that the A:C envelope of .06:1 to .1:1 is valid only for an industrial library concerned with literature covering a changing technology; it would not be appropriate for an academic library with a requirement to maintain volumes for historical purposes. Neither is the envelope valid for an industrial library which is still building its basic collection; an A:C ratio higher than the suggested envelope is necessary in this situation.

Ratio of Loans to Acquisitions (L:A)

The purpose of an acquisition program is to build a literature resource which is needed and used. The L:A ratio can be used as an index of the validity of the acquisition activity. While it would be possible to keep a separate record of the use of the new books, few libraries do. Most libraries, however, do maintain a record of the number of books added to the collection and the number loaned. An L:A ratio ranging between 3:1 and 7:1 suggests that the acquisitions program is adequate.

The data on Table 1 records four libraries below the envelope, five above, and eight within it.

If the L:A ratio falls below 3:1, the probability exists that the library is not getting multiple use of its books. This situation exists when the acquisitions

program brings in books which are not used or when the library serves a stationary store's function. It buys only what is requested and permits the requester to retain, rather than requiring him to return, the new book.

If the ratio exceeds 7:1, it suggests that an inadequate number of books are being added to the collection and a preponderance of the loans are of the older titles in the collection. A check of Table 1 shows that with one exception (library No. 8), the libraries with L:A ratios in excess of 7:1 have low A:C ratios.

Ratio of Loans to Total Collection (L:C)

There are a number of factors which contribute to the lending activity of a library. A major element is the information requirement of the library clientele. As compared to a library supporting a research activity, a library in a manufacturing environment will have a small loan rate; it will also tend to have a smaller collection and a fewer number of active users.

Using the data contained in Table 1, the suggested L:C envelope ranges from .3:1 to .4:1. That is, the number of loans made during the year should range between 30% and 40% of the number of volumes in the collection. Of the 17 reporting libraries, nine were below the envelope, four within it, and four above.

There are several possible reasons which can account for an L:C ratio below .3:1. These include the possibility that 1) the collection is too large for the requirements of the users; 2) it contains too many old titles and needs weeding; 3) the subject interests of the users have changed and the collection contains many books no longer pertinent to the information requirements of the clientele (again, the collection should be weeded); or 4) it may simply mean that the library is inadequately used and the library management should publicize the services and resources.

If the ratio exceeds .4:1, it may be that the collection is small and needs building. On the other hand it may be that

the library staff is unusually effective in getting the library's resources used.

Ratio of Loans to Borrowers (L:B)

Only 10 of the 17 libraries reported the number of borrowers. Those which did report had such a wide range of numbers that a ratio envelope was not suggested. When sufficient data become available, it is presumed that research activities will have a heavy per user ratio and that manufacturing groups will have a low one. It will probably be more indicative of the type of library than are the other ratios.

Salary Percentage of Budget

The one known guideline on salaries for industrial librarians is that which Ruth Leonard included in "Objectives and Standards for Special Libraries" published in *Special Libraries (1)*. She suggested that salaries run between 60% and 79% of the total library budget if overhead charges are excluded from the budget. Because the entity of salaries, books, and subscriptions excludes many items in addition to overhead, the recommended range is dropped to 50-69%.

There are two conflicting determinants which affect the proportion of a library budget which should be spent for salaries and for literature. These are the need for personal access to an extensive literature resource and the need for intensive assistance in obtaining access to the information in the literature. The relative importance of the two needs vary depending on the discipline to which the user belongs. The PhD chemist, physicist, and mathematician know not only the basic literature of their fields but they are trained in the use of the secondary journals which give them access to the literature. A library serving a clientele of such knowledgeable users may emphasize the proportion of the budget spent for materials as compared to salaries.

However, if the library clientele is comprised of members of professions which traditionally are not users of the literature, much more librarian assist-

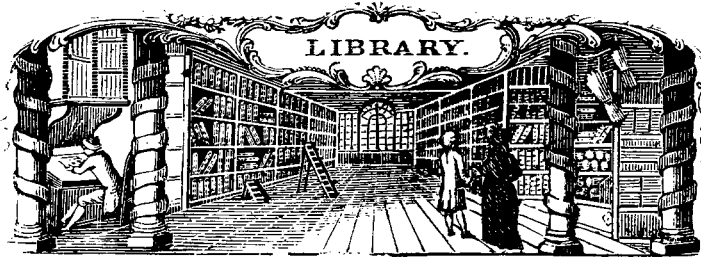
ance will have to be provided and the portion of the budget expended on library salaries will have to be higher. In this environment the library services will have to be emphasized and services require personnel.

Both extremes are represented at one or another of the IBM libraries which may explain why the salary percentage ranges from 33% to 82%. Of the 24 libraries, six are below the suggested envelope and nine are above.

Expenditures for Books and Journals

Justification for suggesting that the expenditure for journals should be two to three times that spent for books in an industrial library is based on two factors. In the scientific and technical fields new information is usually first reported in the serials literature and subsequently summarized or synthesized for inclusion in the book literature. For the serious research worker who is concerned about the original publication of research results, access to the journal literature is a requisite. In addition, the cost of the journal literature has increased much more rapidly than has the cost of books. As recorded in the Bowker Annuals (2), (3), the cost of the average science book has increased from \$10.99 to \$17.34 between 1964 and 1973; during the same period the average chemistry and physics journal price has gone from \$16.50 to \$56.61.

The suggested ratio of 2:1 to 3:1 for the expenditure for serials compared to that for books is explicitly a rationalized ratio not substantiated by the data supplied by the reporting libraries. Only nine of the 17 libraries reported a ratio of 2:1 or higher and of the nine, three reported ratios in excess of 5:1. At the other extreme five libraries reported they spent more for books than they did for journals. The aberrations from the suggested ratio challenge rationalization. In one case, a legal library is warranted in a heavy expenditure for books as compared to journals because the lawyers require extensive collections of state and federal statutes and codes and a relatively



small number of legal journals. In some cases budget cuts could be met only by arbitrarily reducing the expenditures for literature. Unfortunately, in several libraries the librarians appear to have abrogated, or never implemented, their responsibility to conduct a meaningful acquisitions program. Responding to the importunities of their clientele, they provide a stationery store's rather than a library function.

Staff Composition

A number of library activities require the exercise of judgment and extensive knowledge based on training and experience. These include management, literature selection, classification, subject analysis, and reference service. These functions should be performed by a professional member of the library staff. The major portion of the manpower of a library staff is spent on less demanding functions and can be performed by nonprofessional personnel. To make the most effective use of a professional staff member, management should provide adequate clerical support enabling the professional to devote most of his time to those functions which require the professional judgment and knowledge he possesses.

A ratio ranging from 1:1 to 1:3 (professional to nonprofessional) is suggested as a desirable goal. The 1:3 ratio can be achieved only in a fairly large industrial library where the volume of activity is sufficient to warrant complete separation of professional and clerical assignments. In the smaller libraries, the professional staff members will have to perform a

number of clerical functions and the ratio will, of a necessity, be closer to 1:1.

The number of professional staff members should not exceed the number of nonprofessional until and unless we are able to make more effective use of the contemporary technology to perform the clerical functions in the library. Of the 14 libraries reporting the professional to nonprofessional ratios, six recorded more professional than nonprofessional personnel.

Limitations of the Ratios

No claim is made for the universal applicability or absolute verity of the guidelines. They are suggested for use solely in an industrial library environment. More experience in their use with a much wider data base is necessary to assure their validity.

The ratios which are suggested cover only a narrow spectrum of library activities. Many of the library services do not lend themselves to numerical measurement and some of those which do are not usually counted.

Finally, the ratios are only as valid as the numbers on which they are based. For example, the statistics reported by library no. 4, Table 1, are suspect. It is unlikely that a library with 1,400 borrowers would lend only 1,400 books or that it would buy 2,000 books in a year.

Value of the Ratios

Experienced and knowledgeable industrial librarians might question the need for formalized guidelines or norms to cover such obvious commonsense things as the relative amount spent for journals

as compared to the amount for books or the ratio of professional to nonprofessional personnel on the library staff. It is true, however, that many libraries are staffed and managed by personnel who lack the formal training or the experience which would provide the background for such judgments. The extensive number of divergences from the suggested guidelines recorded in the two tables suggests that norms can provide tools for self-audit and self-examination.

The primary value of the guidelines is in their use as a management tool. No two libraries are identical and differences are to be expected. However, extensive variation from a guideline should serve as an alerting signal to library management. The variation should be investigated to obtain an explanation based on

rational grounds. If the departure from the norm can not be justified, corrective action should be initiated.

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Cost Comparison of Manual and On-Line Computerized Literature Searching

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■ Cost and searching time comparisons are made between manual and on-line literature searches. The formula

$$C_{\text{total}} = (T \times C_{\text{sum}}) + P$$

is presented which captures all on-line cost factors. A minimum cost of \$1.00 per minute of on-line searching is derived. Average searching time for man-

ual searching is 22 hours at a total cost of \$250; for on-line it is 45 minutes at a total cost of \$47.00. It is pointed out that most reported low on-line search costs fail to account for all cost factors. Figures are those prevailing at the time of writing.

LITERATURE searching is one of the specialized and personalized services that differentiate special librarianship from other kinds of librarianship as was noted by Waldron in her award-winning article (1). Until recently many medium- and large-sized special libraries not only provided on-demand and even anticipatory literature searches routinely for their clientele but did this through specific "literature search" units either within or closely allied to the library.

Literature searching, useful and desirable though it may be, is, nevertheless, expensive—so expensive, in fact, that many special libraries have been forced to reduce the service and seek other less expensive alternatives. Perhaps the reason for the paucity of literature on the topic

of literature search cost is that it is not pleasant to call attention to the expensive subject. Berul (2) earlier had also noted that there was a dearth of analytical reporting on cost/effectiveness of non-computer versus computer retrieval systems and my search of the literature confirms his observation.

The primary reasons that it is so expensive are: 1) To be done well, it ought to be done by qualified personnel. 2) It takes time. In almost twenty years of special librarianship, I have worked with and met many highly qualified and truly professional literature searchers. Their characteristics invariably include a high degree of intelligence, a high level of education, much experience, a subject specialization, dedication, and competence. In order to obtain and retain such individuals, one must be prepared to pay them well. In order to do a good job they need time and sufficient help to free them from the clerical tasks such as

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Table 1. Average Cost of 48 Manual Literature Searches at Lockheed-California Company Library, Jan–Aug 1973.

Average Time for Search		Cost per Hour	=	Average Searching Cost	+	Average Support Cost*	=	Average Total Cost of Manual Search
22 hours	×	\$10.00/hr	=	\$220.00	+	\$30.00	=	\$250.00

* Support Cost = 4.2 hrs. of clerical time per search at \$6.00 per hour + \$5.00 for reproduction, materials, etc.

reproduction, clipping, pasting, packaging, locating citations, reshelving, etc., that are peripheral to the function.

Fortunately, there has recently appeared a tool which, if properly applied, can assist literature searchers in their work, reduce some of the cost surrounding their activities, and, perhaps, most importantly for them, save their jobs. This article will relate some economic experiences with this tool—the on-line interactive, computerized information retrieval system—used as an aid in literature searching.

Manual Searches

Table 1 shows the average cost of manual literature searches performed at the Lockheed-California Company Library, Burbank, during the period of January through August 1973. Only *real experienced costs*—all of them—are presented. These “rock bottom” costs ought to be modified by the addition of such factors as inflation, higher rates, overhead, etc., by each library to the extent such factors affect that library. The per hour cost of the professional literature searcher, for example, was calculated at the administrative rate of \$10.00 per hour (including overhead) because the technical information center personnel are considered “administrative.” Many other libraries would probably have to use a higher “engineering” rate. Clerical help cost was calculated at an all-inclusive \$6.00 per hour. Reproduction materials costs are estimated at \$5.00 per search to cover paper and reproduction machine costs. Not included is the actual cost of obtaining (off-the-shelf in-house circulation, buying or borrowing) the materials re-

quested by the users as a result of the search.

The average time for the 48 manual searches of 22 hours coincides almost precisely with the average time reported by Maier (3) of “nearly 22 hours.” Rogers (4), as will be noted again later, assigns an average of 16 hours per search to duplicate 330 MEDLARS machine searches. Bivans (5) for a small sample of five, gives the average time spent on manual searches as 20.0 hours but adds “more time could have been spent.”

My own observations of manual literature searching operations at Thiokol Chemical Corporation/Reaction Motors Division, at California Institute of Technology/Jet Propulsion Laboratory and other NASA libraries confirm these figures as representative ones.

Computer Searches

Between May and September of 1973, the Lockheed-California Company Library also performed 66 literature searches using the DIALOG on-line interactive information retrieval system which was accessed via a cathode-ray-tube (CRT) terminal (Hazeltine 2000) and a telephone coupler device. Attached to the terminal was a printer which could immediately copy any information displayed on the screen.

The data bases currently offered by Lockheed's DIALOG include the following: NTIS; INSPEC (Science Abstracts); Chemical Market Abstracts (CMA); COMPENDEX (Engineering Index); PANDEX; TRANSDEX; Chemical Abstracts Condensates; ERIC; Exceptional Children Abstracts; Abstracts of Instructional Materials (AIM/ARM); Psycho-

Table 2. Average Cost of 66 Computer-Aided Literature Searches via the DIALOG On-Line Interactive Information Retrieval System

Average Time for Search		Cost per Minute	=	Average Searching Cost	+	Average Off-Line Printout Cost	=	Average Total DIALOG Search Cost
45 minutes	×	\$1.00/min	=	\$45.00	+	\$2.00	=	\$47.00

logical Abstracts; Abstracted Business Information (ABI/INFORM); National Agricultural Library/CAIN.

Descriptions of the data bases and pricing information are presented by Donati (6) and by Zais (7).

Three features of DIALOG were found to be particularly attractive: 1) full-text retrieval capability; 2) the easy-to-learn retrieval language consisting of some ten key commands; and 3) its interactivenss, by which is meant that the user and computer act and react together, the computer responding to the directions and redirections of the user who is seeking information on a specific subject. This interactivenss is more than just talking to a computer. As Brenner (8) cautioned "it involves all the old complexities of trying to interact with and outguess an indexer."

By providing the user the full display access to the indexing vocabulary and recursive definition of search expressions, DIALOG acts as a data processing extension of the human operator who directs and controls that retrieval process as it converges on a relevant subset of documents. As a result of the variety of operations available in DIALOG, the user with a well-defined search topic can proceed directly to desired records; the user who cannot so explicitly define his search product can browse through the file to investigate successive avenues of interest as they occur to him or her, or as they are suggested by intermediate retrieval results (9). Katzer (10) noted "on-demand access to the index or dictionary contributes sizeably to improving the cost-performance" of the on-line free-text bibliographic retrieval system. Carville, et al. (11) point out that the user of an on-line system should use the most pre-

cise terms first and the common terms last—the opposite of the procedure in a manual search.

Table 2 shows the average cost of 66 DIALOG on-line literature searches. An attempt has been made to capture all real experienced costs.

The following formula was used:

$$COST_{total\ per\ search} = (T \times C_{sum}) + P$$

where

T = on-line time in minutes.

C_{sum} = sum of all costs per minute of operation.

P = cost of off-line printed citations.

C_{sum} includes:*

C_{DIALOG} =

Cost of DIALOG at \$25 per connect hour = \$0.41/min.

C_{LABOR} =

Cost of labor at \$10 per hour = \$0.17/min.

C_{TELEPHONE} =

Cost of telephone hookup at \$15 per hour = \$0.25/min.

C_{EQUIPMENT} =

Cost of terminal/coupler/printer lease at \$186/month = \$0.17/min.

C_{sum} = \$1.00/min.

Robertson and Datta (12) state that the major component of the cost of searching is the computer time (Central Processor Unit time) used. Since in the study the computer used was the accessed DIALOG computer, the cost of the computer in our formula is included in the

* Each of the cost elements contributing to C_{sum} will vary for every organization and over any specific period; see following paragraphs for explanation of cost data cited.

connect time. They (12) then state that the other components are connect time, human time (labor), stationery and telephone charges. Our formula incorporates all these elements and adds one which was omitted, namely, equipment cost.

Cost of DIALOG Service (C_{DIALOG})

For cost of DIALOG service see Donati (6) or Zais (7) to determine the cost of applicable data bases.

Cost of Labor (C_{LABOR})

The cost of labor is the cost (salary and overhead) of the operator of the terminal. The figure of \$10.00 per hour used in our calculations is the administrative rate, noted earlier, which was charged for all professional staff time in the library, as opposed to the \$6.00 per hour for clerical time. The charge would be higher if a scientist or engineer were to do his own search at the terminal. Literature searchers in other organizations may be governed by other rates, perhaps an engineering rate of \$15.00 per hour or more. Consequently, the figure used during this five-month sample, \$10.00 per hour, or \$0.17 per minute, would not be valid for other organizations; it could be less but probably would be more.

Cost of Telephone Hookup ($C_{\text{TELEPHONE}}$)

The figure of \$15.00 per hour reported here is based on the approximate cost charged the library for the special telephone hookup through the CALAC switchboard to Palo Alto. During the reporting period, the cheaper nationwide TYMNET communications network which is available for \$10.00 per hour was not used. An impending move of the library from Van Nuys to its present location at Burbank and other administrative factors precluded the arrangement for the TYMNET use. Other organizations would undoubtedly be able to reduce the cost to about \$0.17 per minute by using TYMNET. Another option is presented by Donati (6).

Cost of Equipment ($C_{\text{EQUIPMENT}}$)

The per month cost via a lease arrangement for the Hazeltine terminal/coupler/printer was \$186.00. Since the cost is fixed at that rate, it is obvious that the cost per minute of use will be determined by actual time used—the more the equipment is used, the less per minute it costs. The estimated \$0.17 per minute cost represents actual use of the terminal during the period of study. The terminal was also used for other DIALOG applications during this period as will be noted later. This total time used was taken into account in determining the actual equipment cost per minute of its operation. Other organizations would have to substitute their own figures which could be higher or lower depending on use. As the use of DIALOG increases this element in the total cost will decrease.

Cost of Off-Line Printed Citations (P)

The average number of pages of off-line citations requested per search was 20 and the cost of each page of citations was \$0.10. A page usually has one citation with abstract but can have as many as three or four if a format without abstract is requested. Often, the searches included some citations printed during on-line scanning of some of the items retrieved. The cost of these was not included in the printout cost of the search because the bulk of the cost is absorbed in the connect time cost for the DIALOG service. These on-line printouts were merely taken off the printer and given or sent immediately to the searcher. The time duration for the search is increased slightly if the requester asks for immediate printout of desirable citations. Beyond a certain small number of citations it is obviously not economical to print the citations while searching since the overnight or, at most, two-day delay in arrival of off-line printed citations is not an unreasonable delay and is acceptable to most requesters. There were some exceptions, however. Some requesters pre-

Table 3. Average Cost of Machine Search for Client Searches (from Chenery, *RQ*, p. 257, Spring 1973)

Period	Number of Searches	Average Cost per Search for:				Total
		Engineering	Clerical	Copying	Computer	
1970	338	\$31.45	\$4.61	\$3.56	\$16.79	\$56.41
1971	327	39.97	5.04	3.89	15.74	64.65
3/72	19	40.16	5.31	3.08	8.32	56.87
4/72	18	32.87	6.28	4.34	9.84	53.32

fer to get at least a few items immediately and, after all, that is a feature of on-line searching that can, and probably should, be exploited.

How does our experienced average cost of an on-line search of \$47.00 compare with other reported costs of machine searches? Rogers (4), in a sample of 330 searches, gives the 1967 cost of a machine search through a three-year MEDLARS file as an actual average of \$85.13. He also notes that these same searches done in the traditional manual mode would require 2.7 man-years or an average of 16 hours per search as noted previously.

McCarn (in 13) notes an analysis on MEDLARS searches and states "they cost roughly \$75 a search." He also notes that they "did cost studies on intelligence community retrieval systems many years ago and the figures were about \$250 per search."

Table 3 is adapted from Chenery's (14) data for cost of computer searching. From the table the average cost of 702 machine searches was calculated at \$60.18. The table includes a breakdown of average costs for 1) average engineering time to confer with the client to define the question, prepare a search strategy, and to screen the results of the search for relevance to the question; 2) average clerical costs to prepare the strategy for entry into the computer and to find and reproduce abstracts of items identified by the computer; 3) average copying costs of reproducing the results and mailing them to the client; and 4) average computer costs to process the average search.

Chenery also presents some data for 245 machine searches for university libraries for which search strategies were

prepared at the universities. These searches, for which the average engineering cost column (the third column in Table 3) was essentially eliminated, average out to a cost of \$27.68 per search.

Others cite much lower costs for on-line searches. Morton (15) states that a typical on-line search takes only a few minutes and the total cost per search generally approximates \$5-\$10. Brenner (6) also lists under \$10.00 a search and Radwin (16) states that the direct cost of retrospective searches lies in the \$3.00 to \$17.00 range, with the typical cost running in the area of \$8.00. These low figures probably do not consider all the cost elements which were included in our study. Radwin, in fact, did acknowledge that his typical cost does not include such elements as labor, telephone hookup, and equipment costs.

Katter and McCarn (17) in discussing AIM-TWX (abridged Index Medicus-TWX), reported that an average search ran about 20 minutes and may cost the man up to \$14.00. They do, however, concede that computer costs were paid by the Lister Hill Center for Biomedical Communications of the National Library of Medicine. "Most users of the system start with available terminals for which there is no additional cost." The costs of terminals and toll calls were paid by the users.

It is important to note that during the period of the study DIALOG was also used for purposes other than on-line retrospective literature searches in a mode which we referred to as the "reference mode." This was used to locate specific references, particularly to the collection of over 500,000 uncataloged microfiche in the library, when only specific retrieval elements were known—author,

AD numbers, corporate sources, report numbers, contract numbers, titles or fragments thereof, project names, and sometimes subjects. Often these requests were collected, grouped and submitted to specific data bases in DIALOG in one sitting via stacked commands. There were some 115 instances of such uses and their average time of on-line use was 13 minutes for an average of \$13.00 per such use.

There were instances when the librarian held the phone in one hand (with an engineer on the line calling from an out-of-state meeting) while the other hand was on the keyboard of the terminal getting specific citations on the CRT screen from which specific data in the abstract of competitor company reports were read to the grateful caller. These are probably the types of situations Rosenberg (18) had in mind when he noted that the on-line system "offers the opportunity of getting information for a crisis at a given point when it is needed."

Often keywords, particularly in new areas of metalworking and structural applications, were used to find a specific valuable citation for an engineer through the full-text retrieval capability of DIALOG long before such keywords were used in the printed subject thesauri or abstracting and indexing journals.

In the "reference mode" category, also, were uses of DIALOG for demonstration and tutorial purposes for Lockheed management personnel or for librarian colleagues. These uses frequently exceeded the 13-minute average use.

One final application must be mentioned, the use of DIALOG as an aid to the cataloger, indexer, and acquisitions librarian. They would bring lists of AD numbers or titles and authors for "rush" processing or ordering to be aided by on-line searching or verification purposes. Sources, prices, or the removal of distribution limitations were topics on which DIALOG provided useful information.

Conclusion

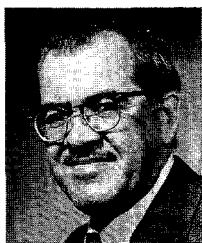
In conclusion, it appears to be demonstrated conclusively that DIALOG on-

line searching is an efficient and cost-effective complement for and, in some instances, an acceptable substitute for costly manual literature searching in some special libraries. Since data bases and types of other resources used in preparation of manual and on-line searches differ significantly, no attempt has been made to qualitatively compare manual and on-line retrospective searches. Both types of searches "helped" the clientele served.

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The Role of the Librarian in Management

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■ Using a new type of management called consultative, with data available from library-wide automated systems providing the basis for use and user surveys and analysis, each professional librarian participates in the decision-making and problem-solving functions within the library organization. The

committee and task force structure of the McLaughlin Library management system are described in detail as they relate to the involvement of professional librarians in the science division in the total problem-solving and library-service concept.

THE UNIVERSITY of Guelph Library has a nontraditional library system to match its building, the McLaughlin Library. When the building was being designed it was considered an opportunity to also design a library system which would not be restricted by a particular physical environment. This library system was conceived as a single total unit meeting the objectives of service defined below, and the architect was asked to design as few physical barriers as possible in the building in order to achieve that purpose.

The main functions which make up the library service at the University of Guelph are as follows: collection development; information, orientation, and reference; collection use; collection organization and access; information system design and analysis.

Although responsibilities for various of these service functions cross several department and division lines, prime responsibility is divided into specific departments and divisions. The routines and objectives of each department and

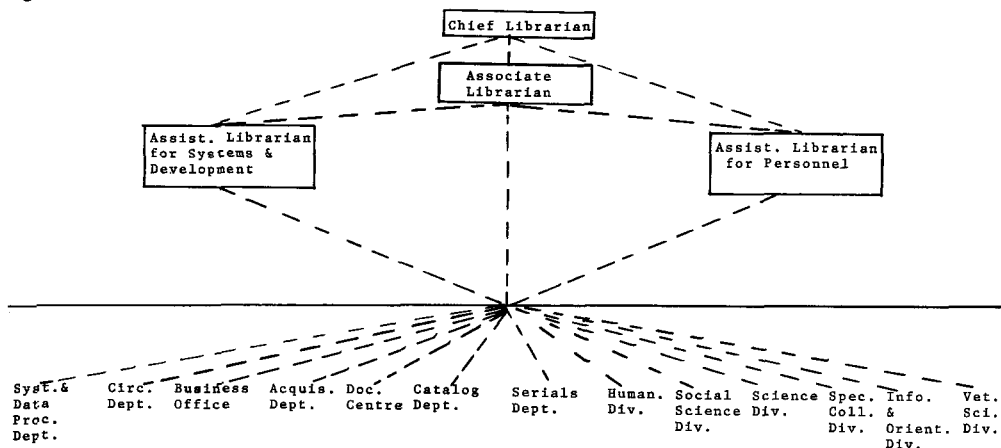
division are coordinated through standing committees, which, in effect, are the decision making apparatus of the library system.

This type of library management is sometimes called participative; but as it is applied at Guelph, it can more correctly be termed consultative. It is this type of management—consultative—that is analyzed in order to determine if objectives of library service can be more effectively realized in the environment which it creates. Henri Fayol, in his classic work of 1916, adopted the following definition of management: "To manage is to forecast and plan, to organize, to command, to co-ordinate and to control" (1, p.5). The vocabulary is not contemporary but the responsibilities of management have changed little.

Structure

The structure of the Guelph consultative management system is illustrated in Figure 1. The University of Guelph Library has a staff of 153, 36 of whom are

Figure 1.



LIBRARY ORGANIZATION
January, 1974.

Staff 159 (37 Professional)

COORDINATING COMMITTEES

DEPARTMENT/DIVISION HEADS
ALLOCATIONS AND COLLECTIONS DEVELOPMENT
BUDGET
ORIENTATION
SYSTEM COORDINATION
SERIALS
DOCUMENTS
RARE BOOKS, REGIONAL & AGRICULTURAL HISTORY

professional. Of these latter 30 are librarians; the others are systems analysts, accountants, and similar professional specialists. Direct service to the library users is provided primarily through four subject divisions, two functional divisions and the circulation department, while the other functional departments operate as their names indicate—cataloging, acquisitions, etc.

Forecast and Planning

Returning to Fayol's terms: planning involves "examining the future and drawing up the plan of action" (1, p.6). At Guelph the responsibility for projection of future needs and plans rests with the senior administrative staff. As shown in Figure 1, this consists of the chief librarian, an associate librarian, and assistant librarians for personnel and for systems and development.

A primary task for this senior staff is defining objectives of library service

which will complement and serve the objectives of the university itself. At Guelph there are two principal objectives which relate directly to the academic community:

1. To provide material for students' course work, assigned reading as well as reference and background reading for essays, papers, and projects, and to provide reference and bibliographic assistance related to the material;
2. To provide material and services in support of research and advanced study.

Two other objectives are concerned with the library in its relationship with other academic libraries, particularly in Ontario, and with the community at large:

1. To work with other academic libraries in Ontario within the Ontario Universities Library Cooperative System;

Figure 2.

PUBLIC CONTACT SURVEY

DATE: Day_____Month_____Yr._____ SEMESTER: Fall Winter Spring SEMESTER Week_____

2 3 1

1. DAY: Sunday Monday Tuesday Wednesday Thursday Friday Saturday

1 2 3 4 5 6 7

2. TIME: AM 8 9 10 11 12 PM 1 2 3 4 5 6 7 8 9 10 11 12 AM 1 2

8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 1 2

3. AREA REPORTING:

1. Circulation Information	8. Library Administration	15. Sci. Div.
2. Catalogue Information	9. Information Desk	16. Soc. Sci. Div.
3. Catalogue Department	10. Reserve Desk	
4. Serials Department	11. Documentation Centre	17. Hum. Div.
5. Bibliographic Search	12. Listening Room	18. Other
6. Acquisitions	13. Special Collections	
7. Business Office	14. O. V. C.	

4. QUESTION TRANSMITTED BY:

	<u>Faculty</u>	<u>Grad. Student</u>	<u>Under-Grad.</u>	<u>High School</u>	<u>Staff</u>	<u>Library Staff</u>	<u>Research Borrower</u>	<u>Extramural Borrower</u>	<u>Other</u>
	1	2	3	4	5	6	7	8	9

5. MEDIUM USED:

	<u>In Person</u>	<u>Phone</u>	<u>Telex</u>	<u>Mail</u>	<u>Other</u>
	1	2	3	4	5

6. QUESTION ABOUT:

1. Recalls	11. Restricted Circ.	21. Search for Serials	31. Loan of Pencils, etc.
2. Holds	12. Theses	22. Search for Documents	32. Addresses
3. Limited Loans	13. A-V Materials	23. Locational Direct.	33. Biblio. Check
4. Reserves	14. Newspapers	24. Group Studies	34. Request Status
5. Fines & Overdue	15. Maps	25. Studies	35. Order Status
6. Semester Loans	16. Microforms	26. Carrels	36. Allocations
7. University Cards	17. I L L O	27. Conference Room	37. Invoices
8. Res. & Extrm. Borrow.	18. Photocopy	28. Library Regs.	38. Others
9. Document Loans	19. Microform copy	29. Maintenance	
10. Rare books	20. Search for Books	30. Phone Books	

7. QUESTION DEPTH:

	<u>Directional Question</u>	<u>Bibliographic Instruction</u>	<u>Ready Reference</u>	<u>Extended Reference</u>	<u>Unanswered</u>
	1	2	3	4	5

8. TOOLS USED:

1. Card Catalogue	10. Circulation List
2. Serials List	11. Borrowers List
3. Doc. Centre Catalogues	12. Shelf List
4. K.W.O.C.	13. Circ. Dump
5. Subject Headings	14. Total Trans.
6. Abstracts & Indexes	15. Telephone Books & City Directory
7. Reference Books	16. Files
8. Encyclopedias	17. Top of head
9. COM File	18. Other

9. REFERRED TO:

1. Circulation Information	11. Documentation Centre
2. Catalogue Information	12. Listening Room
3. Catalogue Department	13. Special Collections
4. Serials Department	14. Inter-Library Loan Office
5. Bibliographic Search	15. O. V. C.
6. Acquisitions	16. Sci. Div.
7. Business Office	17. Soc. Sci. Div.
8. Library Administration	18. Hum. Div
9. Information Desk	19. Other
10. Reserve Desk	

10. DETAIL OF SOURCES USED _____



2. To provide, on a limited basis, service and materials, not otherwise available, to the community and region.

With broad objectives defined, the "plan of action" is determined by the establishment of immediate and specific goals on a one- and two-year basis. All departments and divisions participate in the preparation of these annual goals.

During 1973, for example, each science division reference librarian submitted an outline of divisional aims and objectives, relating to specific problems or needs which could be identified through daily interaction with both the collection and the library users. After finalization in discussion with the division head, the science division goals were coordinated with those of other departments and divisions at a department/division heads meeting.

Delegating a measure of planning responsibility to individual departments or divisions in this way has several benefits. It not only increases the accountability of all members of the professional staff, but it involves contributions to the design and development of library programs from those best informed and most capable of such participation.

Responsibility for fulfillment of specific goals are assigned to the various departments and divisions, while library-wide objectives are met through the established standing committees, or through special task forces which are created for specific shorter term purposes. Annual reports at the end of the year summarize progress made in meeting the assigned objectives.

The planning function is assisted through the analysis of various library surveys or through the management data automatically supplied by the library automated systems. The science division is responsible for the collection of data on shelving books returned from circulation or from in-library use. Carrel and study use surveys, as well as reference surveys (see Figure 2) are also conducted each semester, to provide information about how the library facilities are being used, or to determine if the library staff is responding to user needs.

The science division data, coordinated with survey and use analysis results from other divisions, are studied by the appropriate committees as well as by the senior administrative staff, and recommendations for changing library staffing routines or services can be made.

Organize

"To organize a business is to provide it with everything useful to its functioning: raw materials, tools, capital, personnel" (1, p.53).

The raw material in a library is the collection. In a traditional library system the responsibility for organization of the collection resides entirely with the technical service departments—catalog, serials, documents, etc. Additions to the collection in such a system are handled through acquisition or order departments, while selection may be done by the reference department, or by a separate department called collections.

In the Guelph system, while the actual routines of cataloging and ordering reside primarily in the acquisitions, cataloging, serials and documentation departments, a standing committee on collection development, with membership from each subject division and operational department, supervises and coordinates selection and collection policy and monitors collection development. Liaison with the various departments of the faculty with respect to collection development is also maintained through this committee.

More specialized collections are developed through a committee for rare, agricultural, and regional history. Librarians with particular interests in these areas serve on this committee, and work with faculty members to develop strong collections of local history material.

In a subject divisional library with all science material—whether books or journals, nonprint or maps—located together in one area, individual catalogs to access that material are indispensable to the librarians in offering assistance to the faculty and students. These tools are

provided for each division through the University of Guelph automated systems. The serials list, computer produced and updated monthly, is the corner-stone in provision of service for the science collection. Again, contrary to the procedures of a more traditional library organization, the science division and its staff is able to influence the format, content and production of the serials list. The serials coordinating committee, in which each division head is a member, makes all decisions about format changes, information inclusion, frequency of distribution, etc. Problems with serials which are determined through day-to-day work in the division are resolved through the committee, and solutions, such as placing back issue microfilms in the stacks with bound journals rather than separating them in cabinets, are coordinated in all divisions.

Copies of other library tools—daily circulation lists, book catalogs of division monograph holdings, book catalogs for the document and map collections, KWOC subject index on COM File (computer on microfilm) for the document system—are all located at the reader service point in the science division. These tools, like the serials list, are also monitored through the committee structure of the library.

The capital of the library could be interpreted as the budget, which provides the books, staff, and necessary equipment. Budgeting, of course, is a function of planning and is primarily the responsibility of the senior staff, with recommendations related to divisional and departmental needs given careful consideration.

Another interpretation of library capital could be the library building itself—the physical environment in which the collection is housed, service is provided, and in which the student does research or studies. The McLaughlin Library is one of the most flexible libraries in North America: the furniture, including each double faced book stack section, has its own lights and is movable independent of any overhead lighting system. Within each library division this means

that the staff must be alert to changing patterns of use, so that the stacks, carrels, or other facilities can be moved to more adequately reflect user needs. Surveys on use of carrels or studies and on user satisfaction are conducted so that the environment, as well as the service in the science division, is responsive to user needs.

Personnel is the most valuable management resource, and its selection, evaluation and motivation is the most important factor in the consultative management system. At Guelph the selection of professional staff is made through a search committee, with representation from all levels of professional staff.

The personnel function throughout the Guelph library system is a responsibility of the assistant librarian for personnel. Specific assignments to this office include: charts of library organization; job descriptions for library positions; procedures for staff evaluation; programs for in-service training.

Working within this framework, the assistant librarian for personnel provides guidance to all division and department heads in dealing with day-to-day staff problems, in standardizing job content, and in coordinating performance reviews, salary reviews, and promotions. Programs for in-service training for the support staff are developed with the assistance of all department and division heads.

Command

Another of Fayol's management components is that of command, which means "maintaining activity among the personnel" (*1*, p.6), including making "unity, energy, initiative and loyalty prevail among the personnel" (*1*, p.98). In the Guelph consultative management system this is interpreted as motivation.

One of the problems of university library management identified by Booz, Allen, Hamilton in the study for the Association of Research Libraries was that of staffing standards. "There is an increasing need for personnel possessing (i) academic credentials equivalent to

those of the faculty and advanced students served and (ii) in addition, a degree in library science" (2). At Guelph all librarians are encouraged to acquire a subject master's degree as well as the master's degree in library science. For a position as a divisional reference librarian, the subject degree is now a selection requirement.

To perform successfully no matter what the selection criteria, however, requires that a consistent program and attitude motivate the professional staff. Herzberg's famous motivators—"achievement, recognition, work itself, responsibility, advancement, and growth" (3)—must be easily recognizable in the system.

Division heads share with the assistant librarian for personnel the task of ensuring that the reference librarians are motivated in their work, just as the chief librarian is primarily responsible for the motivation of the department and division heads. Personal interviews; detailed discussion in various committee meetings of library objectives, problems, financing and resources; and an internal communication system which distributes committee minutes and other relevant library management documents to all professional staff, assist in provision of the motivation factor in the Guelph management system.

Coordinate

The Guelph library system committee structure meets Fayol's definition of coordination in management. "To coordinate means binding together, unifying and harmonizing all activity and effort" (1, p.6). This coordination is perhaps the most distinctive feature of the consultative management system.

The most important committee is that of the department and division heads, which meets biweekly and discusses all operational or planning problems. This committee can only be effective if the rest of the coordinating structure—standing committees and task forces—is working successfully.

For instance, in the Science Division there are regularly scheduled meetings of

the reference librarians, library associates and assistants. The type of communication at these meetings varies; sometimes it is simply dissemination of factual information, while at other times new procedures are established or problems are identified and solutions considered. If day-to-day divisional operation functions are involved, problems can be resolved within the divisional meeting. Anything which affects or is the concern of another department or division is transmitted to the appropriate Standing Committee or to the Department/Division Heads Committee.

Standing Committee membership is open to all professional staff members, and in some instances library associates also participate. Aside from those staff members most vitally concerned with a problem area, membership from the staff at large is also involved in each committee. For example, the Standing Committee on Serials Membership is as follows: head, serials department; library systems analyst (for serials systems); heads, science division, humanities division, social sciences division; O.V.C. branch librarian; and a professional librarian (chosen at large). Standing committees meet biweekly or monthly, and forward any policy problems or operational decisions to the department/division head meeting.

From time to time a particular problem may confront the library and its solution is assigned to a specially formed task force. Such a group meets for a specific purpose, with positive definitions of both objectives and time limits. Such a task force was established when it was decided to combat book losses in the library through installation of a detection system. Other task forces have been assigned responsibility for conversion of retrospective files.

Another important committee which provides a channel for information and communication is the monthly meeting for all professional staff. This becomes a forum for reports of activities of various members at seminars or conferences, for announcements and explanations of new systems or services, or for discussion of

University of Guelph library participation in wider provincial and national information systems and networks.

Control

The final heading under which the Guelph management system is studied is that of control, of which Fayol says: "In an undertaking, control consists in verifying whether everything occurs in conformity with the plan adopted, the instructions issued and principles established. It has for object to point out weaknesses and errors in order to rectify them and prevent recurrence. It operates everything, things, people, actions" (1, p.107).

In a subject divisional library such as that of the University of Guelph, the responsibilities of the division are similar to those of a special library. For students and faculty members using the science division, almost all service is provided in the division. This includes traditional reference service—preparing bibliographies, answering reference questions, instructing users in the intricacies of sophisticated bibliographic tools—in addition to responsibility for stack and collection maintenance, interlibrary loan or photocopy searching, orientation programs for new users, and preparing search strategies for on-line information retrieval.

Control of the various routine functions is provided through procedure manuals, job descriptions, work standards, statistical data collection and analysis. Performance reviews and feedback enhanced by the committee system or from the library users also provide a measure of control.

Control monitoring of the direct service to the user is more difficult. This comes through verbal staff review sessions, observation of attitude and performance, analysis of reference and user satisfaction surveys, and through patron feedback. Initial control in the provision of reader service is, of course, contingent upon the selection process.

McGregor, an academic who has had profound influence on the field of man-

agement states that: "In the recognition of this capacity of human beings to exercise self-control lies the only fruitful opportunity for industrial management to realize the full potential represented by professional resources" (4). The best control for dynamic and responsive library service is a staff totally committed to involvement in a system which provides such service.

Conclusion

Does the University of Guelph Library consultative management system meet the classic definition of management, and at the same time provide a library service which meets the changing and increasing requirements of its academic community? Without detailing the quantitative data from the automated internal library management system, a description of some of the activities of the science division staff may indicate the success of the system. These include:

- 1) assistance in the design of an automated bibliographical system for a faculty research project which resulted in a publication;
- 2) provision of lectures in the literature of various science disciplines within regular scheduled classes;
- 3) compilation of major bibliographies, coordinated with automated retrieval systems to meet individual faculty requests;
- 4) collection development, particularly in interdisciplinary science fields;
- 5) analysis of quantitative data from various science division use surveys for research and publication purposes.

Other specialized services provided by library staff include the development of book catalogs for individual faculty members based on interest profiles established in the library. Within Ontario, Guelph staff members have been active in the development of the new Ontario Universities Library Cooperative System (OULCS), which is based on a concept of cooperative automated union catalogs for all library materials.

As Ontario University libraries move

from complete autonomy of collections and services to cooperative use of interdependent resources, it is essential that the library be able to provide a dynamic service, responsive to this changing environment. To make this type of service possible librarians must be knowledgeable not only about their own set of activities, but about the objectives of service within their library, the system designed to meet those objectives, and their own relationship to it. They must also, as members of an academic community, be committed to continuing research and education within their own areas of specialized knowledge so that they can make a growing contribution both within their own library system and within the expanding information network.

The University of Guelph Library consultative management system provides its staff with the environment necessary for this involvement and for the provision of this expanded service. Operating independently within their own area of expertise and yet coordinated into a total system through the management structure which has been described, professional librarians have been able to achieve a new measure of both success

and satisfaction in a large university library.

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A Look at Bibliotherapy

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■ Bibliotherapy is the use of directed reading as a therapeutic treatment in clinical situations. Its history in the United States is discussed. In the early 1960s, the library field exhibited some interest in the topic; an issue of *Library Trends* and an American Library Asso-

ciation workshop were devoted to the subject. Since that time, little has been written in the library field about the use of bibliotherapy. It seems an obvious area for active exploration by the library profession.

ONE does not hear much about bibliotherapy these days, at least not in library schools or in the literature. It is, obviously, something to do with therapy through books. But why is it not discussed? Why is there no course of study, or, at least, a course in it offered? It seems to be a natural interest for the humanistic library profession. Why is it such a little-known area?

Webster's Third New International Dictionary (1961) defines it as follows: "the use of selected reading materials as therapeutic adjuvants in medicine and psychiatry; guidance in the solution of personal problems through directed reading." There are several other definitions in the literature such as, "the process of dynamic interaction between the person-

ality of the reader and literature, as a psychological field which may be utilized for personal growth, assessment and adjustment" (1).

Historical Background

What is the history of bibliotherapy, of using books and other reading material as a form of therapy? According to Ruth Tews, as early as first century Rome, reading and medicine were associated; but bibliotherapy in the U.S. was not really known until the 19th century. In 1815, Benjamin Rush and in 1853, John Minson Galt, both physicians, recommended reading in the hospital as part of a patient's therapy/treatment. But it was in 1904 that bibliotherapy was first recognized as an aspect of librarianship. In that year a trained librarian became head of the library at McLean Hospital in Waverly, Mass. A program combining psychiatry and library science ensued. The Menningers used bibliotherapy in their clinic in the 1930s

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giving the librarian a role as bibliotherapist. In 1941 a major step was the appearance of the definition of bibliotherapy in *Dorland's Illustrated Medical Dictionary*: "the employment of books and the reading of them in the treatment of nervous diseases."

In the following decades there was much writing done, but perhaps due to the uncertainty about the concept, theories exceeded practical applications. When bibliotherapy was attempted it was done by psychiatrists or psychiatric social workers. Librarians remained in the background except for some cases of group reading in V.A. hospitals. But with all the time that had passed, and all the writing that had been done, bibliotherapy was still considered some sort of vague art, not a science.

With the development of the social and behavioral sciences in the 1960s, the use of reading to produce a change in attitude/behavior was recognized by the library field. In 1962, *Library Trends* held a symposium on the subject and devoted an entire issue to it with contributions from authors in various professions. The A.L.A. followed up with a workshop in 1964 that was attended by members of professional groups such as physicians, occupational therapists, psychologists and, of course, librarians. That workshop concluded that there were three prerequisites for bibliotherapy to develop as a field: an educational program, scientific research, and standard nomenclature. A "clinical librarian" with broad training in interpersonal relations was discussed. After the A.L.A. workshop, the Association of Hospital and Institution Libraries became active in bibliotherapy and in their *A.H.I.L. Quarterly* there appears a section called "Bibliotherapy Clearinghouse" (2, p.172-175).

How It Works

In spite of all the writing on bibliotherapy, many librarians remain unaware of its potential and of their potential as therapists. There are really two aspects of bibliotherapy: 1) as extended, in-depth reading guidance and 2) as a

type of therapeutic treatment of a patient. With the recent advent of community medicine, the concept of librarians as community therapists has become popular (2, p.180). An additional working definition for bibliotherapy is the "healthful effect of reading on the reader" (3). This describes the general reading guidance area which includes exhibits and displays, face-to-face contact between the reader and librarian where the librarian tries to discover the reader's interests and supply satisfying reading material, and even group discussions.

But bibliotherapy can be more than a special type of readers' guidance. There is a difference between meaningful, helpful employment of books and their therapeutic use in a clinical sense (4, p.12). Bibliotherapy attempts to reshape a person's thinking which may result in an attitudinal or behavioral change. It can be a potent tool and, as Briggs at the University of Minnesota suggests, it should be prescribed as carefully as medication. One should be aware of the indications and contraindications for use and the dosage (4, p.13).

Books can be powerful and valuable tools of communication when prescribed carefully for patients who are mentally disturbed. Literature reflects human experiences of all times and places and so provides access to records of human lives, attitudes and feelings (5, p.166). Various mechanisms come into play when there is interaction between a reader and a book. A reader may identify with a character or specific experiences in a book and be able to purge him/herself of repressed feelings and thoughts. The patient may gain insight into his/her own problems through identifications with the reading and be able to stand back and accept reality more readily. Through reading and learning that a problem is not unique, the problem seems less frightening. The reader may gain a feeling of universality; the realization that he/she is not alone with his/her problems in the world can also help to lessen feelings of inferiority that may exist.

There are other valid reasons for prescribing reading for psychiatric patients.

It can be a diversion from immediate difficulties, it can serve as a normalizing agent and link with the outside world, it can provide an opportunity for identification with characters whose lifestyles are socially acceptable and desirable (i.e., provide models for behavior) (1, p. 23). Through group discussions or even reading aloud a person becomes more socialized.

In 1960, Carolyn Schrodes described her theory of the relationship between bibliotherapy and psychiatric analysis. As literature is an expression of people's feelings and ideas, it can often reflect the psychological reality of the reader. Through bibliotherapy, phases similar to those in psychoanalysis appear: universalization, identification, projection, introjection catharsis (abreaction), and insight (6). Therefore, it can be seen that the potential for bibliotherapy as a therapeutic tool in clinical situations is tremendous. But how can it be effected and what is the librarian's role?

The Librarian's Role

Reading has an advantage over direct human communication because it is not as intrusive as the spoken word. It is possible to read with much less defensiveness than it is to communicate directly with another person. A book is much less threatening, much less demanding, but still can offer much in the way of communicating human situations and allowing the reader to apply them to his/her reality.

In 1937, Dr. William Menninger was using bibliotherapy in his clinic. He delineated the responsibilities of both the physician and the librarian in the treatment program. The physician was ultimately responsible for the contents of the library, the weekly list of readings assigned to the patients (as submitted by the librarian), prescribing the first reading assignment, holding weekly conferences with the librarian regarding problems and results, communicating historical and psychological data and the reading habits of a patient to the librarian for her aid and, finally, carrying on

discussions with the patient on the therapeutic readings. To the librarian he delegated the following: mechanics of purchasing, maintaining and distributing the books, personal knowledge of books loaned to patients, interviews with patients regarding reactions to the prescribed reading and written reports of the patients' comments on the reading (7).

In 1962, another physician, Edwin F. Alston, similarly divided the duties of the physician and librarian in bibliotherapy. The physician should know what he/she hopes to achieve by prescribed reading, summarize the basic psychological mechanisms of the patient and indicate what kind of reading would be beneficial and what would be contraindicative for the individual patient. The librarian should have a list of material commonly used in bibliotherapy, have a knowledge of plots and problems treated in the literature and be able to intelligently observe and evaluate a patient's reactions and/or behavior changes (5, p.173).

The role of the librarian as described by both Menninger and Alston is one that Margaret Hannigan would consider to be that of a "pharmacist." In it a librarian fills a physician's orders for prescribed reading and has certain responsibilities in suggesting books and in discussions with patients. Yet doctors are not bothering with bibliotherapy much anymore. It is up to the librarian to become more than a "pharmacist," to become a bibliotherapist. In this new role a librarian would be a member of a treatment team, sit in on interviews with patients, read case histories, conduct bibliotherapy sessions, and report results to other staff members (8). In order for a librarian to be an effective member of a treatment team, he/she must have, in addition to highly developed library skills, a wide knowledge of literature with the ability to evaluate and choose books to satisfy a patient's needs. He/She must also know the patients and their problems, be able to stimulate them to read the prescribed material and establish good rapport with them so that the

interviews and group discussions will be fruitful.

A librarian in an institution is in a singularly advantageous position. Just as a library is identified with the "outside world," so is the librarian. By representing the non-institutional world, the librarian is often seen as a nonauthoritarian and nonthreatening figure, giving him/her the chance to become closer to patients than other staff members. Bibliotherapy does not only include prescribed reading and resulting discussion groups. Employment of patients in the library, reading stories aloud, having patients participate in play reading and developing a relationship between patients and therapist are all valid aspects of bibliotherapy.

In surveying the literature on bibliotherapy, I found few well-developed recent applications of it. One impressive example is at McLean Hospital in Massachusetts, as described by David J. McDowell. The librarian is part of the activity therapy department in the hospital and, in addition to traditional library duties, is involved with bibliotherapy. There is a group of 5-8 patients that meets weekly in the library to read and discuss short stories. The group chooses the stories, each of which can be read aloud within forty-five minutes leaving forty-five minutes for discussion. A play reading group involves 4-8 patients and although the short plays are chosen by the group, the parts are assigned at the meeting and are read without special preparation. Three to ten patients participate in the poetry reading which lasts from sixty to ninety minutes. Poems are distributed at the beginning of the meeting and the discussion generally begins at points of similarity between the poem and the feelings of the patients (9). The author indicated that the groups are well received and are beneficial.

Conclusion

As a field, bibliotherapy is lacking in several areas which prevent it from becoming a scientific procedure. There are no standardized techniques, no special-

ized training programs for librarians, no data from investigations and experimentation, not even an adequate theory of bibliotherapy. As Howard M. Bogard said,

If the librarian is to be envisioned exclusively as a nice, friendly and helpful individual, then perhaps the therapeutic aspects of his psychiatric hospital role should be played down. Is the nice, friendly, helpful relationship void of conscious awareness or utilization of contributing dynamics sufficient, or can we hope and plan for something more? (4, p.15).

If the answer to this last question is to be "yes," it is up to librarians to work for the establishment of bibliotherapy as an accepted and important part of patient treatment.

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Map Collections in India, Australia, and New Zealand:

An Overview

Margaret U. Ross

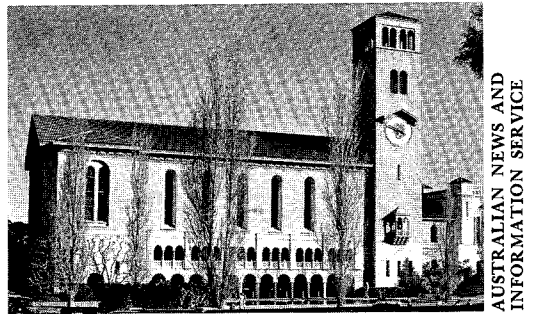
Wayne State University, G. Flint Purdy Library, Detroit, Mich. 48202

■ A dearth of publications about map collections in India, Australia and New Zealand led to a sabbatical proposal for the purpose of obtaining such information. An overview of some existing collections is presented with hopes for continuing communication between these areas and their American and Canadian counterparts.

A SEARCH of library literature about map collections in India, Australia, and New Zealand revealed little pertinent information (1). Libraries existed and one could only hope that map collections existed (2). Where were the collections located? When had they been formed? How did they function? What were their holdings? What were their problems?

Letters describing the author's proposed study together with a questionnaire (see Appendix A) were air-mailed to a selection of libraries listed in the *World of Learning*. A blow-by-blow description of the odyssey is not within the limits of this paper. Rather, a synopsis of the findings will be presented.

Figure 1. The University of Western Australia, Winthrop Hall

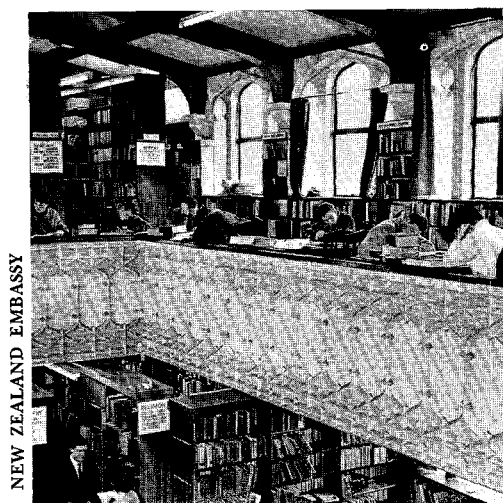


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Responses

Twenty-six letters of inquiry were mailed and twenty-five responses were received. Not all of the universities listed in Appendix B were visited. In India, the University of Delhi was visited. In Australia, the University of Western Australia at Perth, the University of Adelaide, the University of Melbourne, Monash University (near Melbourne), the Australian National University at Canberra, the University of Tasmania at Hobart, the University of Newcastle and the University of Queensland at Brisbane were visited. In addition to these academic libraries in Australia, the

Figure 2. Students in the library at the University of Auckland, Auckland, New Zealand



State Library of South Australia (Adelaide), the State Library of Victoria (Melbourne) and the Australian National Library (Canberra) were visited. In New Zealand, only the library at the University of Waikato (Hamilton, North Island) was visited.

This report must therefore be considered incomplete. To those libraries missed a heartfelt apology is extended and a promise to subject them to scrutiny the next time around.

Twenty-three universities advised that they had map collections, of which five were located in libraries, fifteen were departmental collections and three had split collections—part in the library and part in the departments.

The Collections

Most of the university map collections were founded as post-World War II units although some of the universities were founded much earlier. In Australia, this growth can be attributed to the establishment of the Australian Universities' Commission in 1959, at which time the major share of government responsibility for the universities passed from the state governments to the commonwealth government (3).

While the departmental libraries I visited appeared to function as integral parts of their departments, I was advised that outsiders also used the collections. The problems of space were ever apparent and upward expansion was the answer in some cases while pirating space from adjoining rooms was another answer.

The parallel of hours of service is quite similar to libraries in America. The departmental libraries listed their hours as 8:30/9:00 AM to 5:00/5:30 PM with some variations for special arrangements for use of materials after hours. Those collections in libraries offered somewhat longer hours.

The holdings of most of the libraries naturally placed an emphasis on collecting local, municipal, state, national, and international coverage in the order listed. There were some small special collections within the map collections (i.e., plat maps, cadastral maps, etc.).

The range in numbers of maps is from 692 at the University of Bombay to 52,000 plus at the University of New England (Armidale). The numbers of atlases ranged from 30 at Monash University to 250 at the University of Waikato at Hamilton, New Zealand.

Three other collections visited deserve special mention. The State Library of South Australia in Adelaide has a young, enthusiastic pre-professional in charge of its map collection. Elizabeth Ellis is converting the collection from Dewey to Boggs and Lewis, and uses a series of pictorial indexes bound in a loose-leaf folder as a finding tool for series. She has developed a hobby of collecting dolls in her travels (Southeast Asia and the Soviet Union so far) and utilizes these with maps for displays.

The State Library of Victoria in Melbourne has a professional librarian in charge—an American. Patricia Alonzo is active in encouraging the exchange of ideas as well as maps with other map librarians in and around Melbourne. There was some talk in the newspapers in Melbourne recently about a new building for the State Library and I hope it does work out because her collec-

AUSTRALIAN NEWS AND INFORMATION SERVICE
Figure 3. The Public Library of New South Wales in Sydney includes, among others, the Mitchell Library

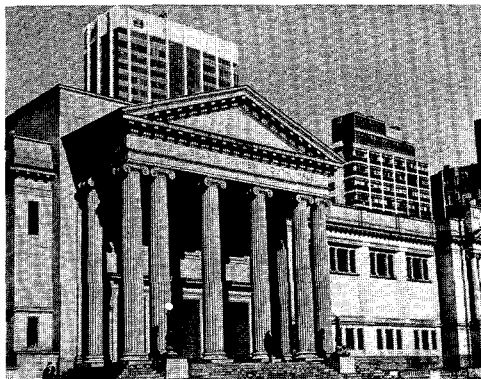
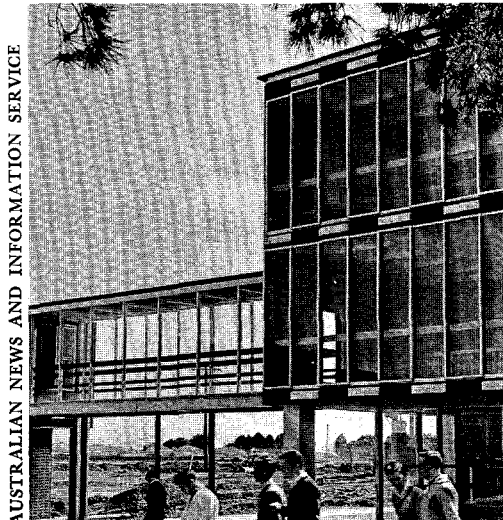


Figure 4. Students leaving the library block at the new Monash University in Melbourne



tion is badly fragmented in the present building.

The National Library of Australia, occupying a beautiful building on the shore of Lake Walter Burley Griffin in Canberra, supports the largest map collection in Australia—a million and a quarter of maps and 1,000 atlases of all types. Tom Knight, the map librarian, had just returned from a three-month leave in England but graciously took time to show me through the collection. As with the other collections visited, the

National Library of Australia is faced with many of the same problems.

Problems

Funding appears to be a problem in all areas and judicious selection procedures are vital and are supplemented by searching out gratis or exchange procedures to assist in the acquisition of maps.

Another problem is that of attempting to establish some sort of uniformity in cataloging and classification if possible. Boggs and Lewis, modified or partially modified, is now used by five universities and the National Library of Australia as well as the Mitchell Library in Sydney.

The problems of map libraries throughout these areas, as in the United States, are budgets, staffing, space, and equipment. But probably the most difficult problem for these libraries is their geographical location on the surface of the earth. The distances involved in communicating orders and receiving maps from other parts of the world is compounded by inadequate postal systems.

Some of these problems have been discussed in the September 1973 issue of the *Australian Library Journal* in an article by Dorothy Prescott of the University of Melbourne (4).

Developments

One large ray of light has resulted from the formation in Australia of an organization devoted to establishing communication within the ranks and, hopefully, with the rest of the world—the Australian Map Curators' Circle. This organization met for the first time in Canberra in April 1973. A letter has been printed by the organization and will be sent to some fifty Commonwealth and State Government offices now producing maps, advising that a Circle member will be calling to discuss the problems involved in obtaining maps for their collections. The Circle will also serve as a forum for the exchange of information and ideas and, no doubt, some heated discussions on matters pertinent to Australian map collections.

Conclusion

While I found different degrees of activity and recognition of the value of the collections at the universities I visited, I was not disappointed. They are utilized, they are fulfilling an apparent need and some have specialized materials. All persons in charge of the collections were enthusiastic and the outlook, while beset with problems, is not bleak.

I hope that further communication with those I met can be continued as a source of friendship as well as a means of continuing the flow of information from that—for us—distant part of the world.

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APPENDIX A

Map Collection Questionnaire

Name and Address:

Name of the person in charge of collection:
Telephone No.:

Date Collection was established:

Information regarding collection:

Location of map collection: In Library_____ Elsewhere_____

Number of Maps:

Are Maps cataloged: If yes, system used:

Number of Atlases:

Are Atlases cataloged: If yes, system used:

Hours of Service:

Information regarding university:

Total enrollment of students:

Total faculty:

Enrollment in Geography Dept.:

Do you have any special area studies such as Ethnic Studies, Urban Studies, etc.?

Are there any local holidays of which I should be informed?

Comments: (continue on back of page if necessary)

APPENDIX B

	Date Est'b	Location	No. of Maps	No. of Atlases	Cataloging System
Un. of Bombay	1959	Library	692	160	Card catalog
*Un. of Delhi	1959	Geography	3,000	200	Vertical file
Un. of Calcutta	—	Geography	—	—	—
*Un. of Western Australia	1965	Geography	29,000	120	Boggs & Lewis
*Un. of Adelaide	1964	Geography	18,000	150	Lists & indexes
*Un. of Melbourne	1964	Library	21,000	Only un- bound	Atlases—Dewey Maps—Boggs & Lewis
*Monash Un. (Melbourne)	1963	Geography	25,000	30	None
Latrobe Un. (Melbourne) (1)	—	—	—	—	—
*Australian Nat'l Un. (2)	—	—	—	—	—
Flinders Un. of So. Aust.	1966	Sch. of Soc. Sci.	6,650	10 (Bal. in Library)	A.G.S.
Un. of New So. Wales	1967	Geography	10,000	100	Boggs & Lewis
Un. of Sydney (3)	—	—	—	—	—
Macquarie Un.	1966	Library	12,000	130	Joint Rules and L.C.
*Un. of Newcastle	1954	Geography	21,000	24	Boggs & Lewis
Un. of New England	1954	Geography	52,000	70	Kardex
James Cook Un. of North Queensland	1961	Library	2,055	35	Atlases—Dewey
*Un. of Queensland	1953	Geography	11,000	60	—
*Un. of Tasmania	1953	Geography	11,500	180	Boggs & Lewis
Un. of Papua and New Guinea	—	Library	2,500	60	—
		Geography	8,000	—	—
Un. of Auckland	1954	Geography	10,000	—	Boggs & Lewis
*Un. of Waikato	1965	Library	40,000	250	A.G.S.
Massey Un.	1959	Library	450	120	—
		Geography	6,000	—	A.G.S.
Victoria Un. of Wellington (4)	—	Geography	—	—	—
Un. of Otago	—	Libraries	6,500	232	Bliss
		Depts.	9,000	12	Boggs & Lewis
Un. of Canterbury	1954	Geography	50,000	200	—

* Denotes organization visited.

(1) Response stated no collection as yet.

(2) Two collections: Research School of Pacific Studies has 30,000 maps.
School of General Studies—no figures available.

(3) No response.

(4) Department did not respond.

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Actions of the Board of Directors Oct 3-5, 1974

The SLA Board of Directors held its Fall Meeting Oct 3-5, 1974, at the Gramercy Park Hotel in New York City. During the meeting the Board visited the Association Office to familiarize themselves with Association operations and to meet members of the staff.

FY 75 General Fund Budget—The Board approved the General Fund Budget for FY 75 (page 38). Due to increasing costs and inflation, the budget approved was slightly in deficit. For the first time, budgets for the subsidiary funds were presented.

Chapter and Division Allotments—Recognizing that Chapters and Divisions need more money to carry on their programs effectively, the Board approved an increase in the annual allotments for FY 75. Chapter allotments were increased to \$3.25 per member (8.3%). Division allotments were increased to \$2.25 per member (12.5%). As in past years the allotments will be paid for all member categories, including Student Members, as well as for those members with extra Chapter or extra Division affiliations. Allotment checks for 1975 based on the Dec 31, 1974, membership count (highest of the year) will be mailed about mid-February 1975.

Employment of the Handicapped—The Board authorized the President to appoint an SLA Representative to the President's Committee on Employment of the Handicapped. William B. Saunders, Antioch-Putney Graduate School Library, Philadelphia, Pa., was appointed.

Provisional Division Status—In response to a petition from the Physics-Astronomy-Mathematics Provisional Division, the Board extended its provisional status for a period of two years until Oct 1976. At Sep 30, 1974, the Provisional Division had 96 members.

Pilot Education Program—The Special Committee on the Pilot Education Program had prepared a model program outline on tape for use by SLA Chapters and others to advise women of their rights. The Board had the opportunity to listen to the tapes and ap-

proved the model program. The Committee is continuing to work on a pamphlet and plans to present a draft of it to the Board at the 1975 Winter Meeting.

Networks—A Standing Committee on Networking was established to coordinate the policy and role of the Association in networks. This action was a result of several recommendations from the Special Committee on Network Planning (Vivian Arterbery, chairman). The members of the Special Committee will form the nucleus of the new Standing Committee.

Education for Special Librarianship—The Research Committee was assigned responsibility for a research project on the identification and analysis of the needs and expectation in education and preparation for special librarianship.

Aslib Resolution—The Board adopted Resolutions of Congratulations on the Occasion of Aslib's Fiftieth Anniversary. The Resolutions appear elsewhere in this issue.

1974 Pay Plan—Following its normal procedure, the Board adopted a 1974 Pay Plan for Association staff. The Pay Plan was most recently revised in 1972.

Resolutions of Congratulations on the Occasion of Aslib's Fiftieth Anniversary

Whereas, the Aslib Jubilee Celebration is observed during the week of 22 September to 27 September, 1974; and

Whereas, the first meeting of Aslib in 1924 was reported to have been convened as a result of the 1923 annual meeting of Special Libraries Association in which Mr. J. G. Pearce, Metropolitan Vickers Electrical Company, Manchester, had been a participant; and

Whereas, there had been frequent warm, personal contacts at meetings of the two organizations during past years; and

Whereas, Aslib has attained a position of high respect for its professional excellence and as a dynamic and forward looking organization in the world-wide community of workers in specialized library and information service; therefore

Resolved, That the Special Libraries Association express its congratulations to Aslib on the occasion of the Fiftieth Anniversary of Aslib.

Resolved, That the Special Libraries Association on this memorable anniversary, expresses the hope and desire for renewal of closer contacts with Aslib whose objectives are so akin to our own.

Resolved, That the Special Libraries Association, its Board of Directors, its members and staff extend to Aslib as a corporate body and to the officers, members and staff of Aslib our heartfelt wishes for continued growth and for ever-increasing success in all activities of our sister organization.

General Fund Budget (Summary) Jan 1-Dec 31, 1975

Dues & Fees		\$267,000
Less Chapter Allotments	(29,600)	
Division Allotments	(22,900)	
Student Group Allotments	(500)	
Chapter & Division Con-		
tingencies	(200)	
Allocation to Special Libraries	(53,000)	
		(106,200)
Dues & Fees NET (after allotments)		\$160,800

INCOME, GENERAL OPERATIONS		
Dues & Fees (Net)		\$160,800
Contributions (Patrons & Sponsors)	3,000	
Contributions (others)	500	
Periodicals Programs		
Special Libraries Program (Net)	(400)	
Scientific Meetings Program (Net)	1,900	
Technical Book Review Index		
Program (Net)	<u>1,700</u>	
		3,200
Conference Program (Net)	83,200	
Education Program (Net)	5,100	
Promotion Program (Net)	(9,900)	
Non-Serial Publications Fund (Net)	1,500	
Interest Income	9,000	
Addressing Service	3,000	
Other	500	
		259,900
Income for General Operations		(260,800)
Expenses of General Operations		
Anticipated Excess Expenses Over		
Income		\$ (900)

EXPENSES, GENERAL OPERATIONS	
Salaries (Net)	\$152,600
Employee Benefits (Net)	28,700
Office Services	65,300
Occupancy Costs	37,900
Professional Fees & Services	21,000
Travel (Net)	14,300
Member Services	11,000
Systems Study	3,200
Bank Charges	400
Depreciation on Furniture	1,000
Miscellaneous	100
	\$335,500
Overhead Transfers from Program	
Budgets	(59,700)
Overhead Transfers from Other	
Funds	(12,000)
NSP Postage & Handling Fees—	
Transfer	(3,000)
Expenses of General Operations	\$260,800

We have been reminded that 1974 was the 25th anniversary of the CNLA Joint Committee on Library Education.

Many SLA members were in attendance at the Princeton Conference on Library Edu-

cation sponsored by CNLA in 1949. The Joint Committee grew out of the recommendations arrived at during the Conference.

1975 CANDIDATES FOR SLA OFFICE

For President-Elect

BAER



HEWITT



Mark H. Baer is libraries manager, Hewlett-Packard Co., Inc., Palo Alto, California. He received a BA and an MLS from the University of Washington (1955).

He was chemistry/chemical engineering librarian, University of Washington (1956/57); engineering and technology division librarian, Oregon State University (1957/59); and director, Technical Information Services, Ampex Corporation, Redwood City, California (1959/66).

Mr. Baer has been a member of ASIS and is a member of the Institute of Electrical and Electronics Engineers and the California Library Association. He is the author of a chapter on "Serials and Out-of-Print Titles" in *Acquisition of Special Materials*, published by the San Francisco Bay Region Chapter of SLA; *The Special Library in Industry*, a John Cotton Dana Lecture published by the University of Oregon/SLA Student Group. In addition, he was Editor-in-Chief of the 1st edition *Union List of Periodicals: Science-Technology-Economics* published by the San Francisco Bay Region Chapter and is a member of the committee which prepared the 2nd edition of that publication.

He was also a lecturer at the School of Librarianship, University of California, Berkeley, California (1966/70), on the Organization, Administration, and Services of the Industrial Research Library, and is a frequent guest lecturer at San Jose State University, Department of Librarianship.

SLA Chapter Activities. He was president, San Francisco Bay Region Chapter (1965/66) and has held committee assignments within the Chapter.

SLA Division Activities. He was formerly Secretary/Treasurer of the Engineering Division.

At the Association Level. Placement Policy Committee chairman (1967/69); Conference Advisory Committee (1970/72); 1971 San Francisco Conference Chairman; Committee on Committees (1972/74); Board of Directors (1971/74); Conference Co-Chairman, 1979 Pan-Pacific Conference, SLA and SLA Japan. A member of SLA since 1957.

Vivian D. Hewitt is librarian, James Thomson Shotwell Library, Carnegie Endowment for International Peace, New York. She received the AB with honors in French and psychology from Geneva College (1943) and the BSLS from Carnegie Institute of Technology Library School (1944). She also took graduate courses in community organization at University of Pittsburgh (1947/48).

She was junior assistant and special worker with young adults (1944/45), and senior assistant (1945/47), Carnegie Library of Pittsburgh, Wylie Avenue Branch, and senior assistant, Homewood Branch (1947/49). She went to Atlanta University School of Library Service as instructor-librarian (1949/51), after which she became researcher and assistant to the director, Readers' Reference Service, Crowell-Collier Publishing Company, New York (1953/55). She then became librarian, Rockefeller Foundation, New York (1955/63).

Mrs. Hewitt is a member of ALA and its Black Caucus, the Board of Directors of METRO (New York Metropolitan Reference and Research Library Agency) and of Windham Child Care. She was librarian/consultant, Mexican Agricultural Program of the Rockefeller Foundation, Mexico City (1958); a member of the selection panel to choose a librarian for the Nigerian Institute of International Relations (1966); consultant for the library, Federation of Protestant Welfare Agencies (1969). She has conducted seminars in library management for American Management Association and has lectured on special librarianship.

SLA Chapter Activities. In the New York Chapter she served as secretary/treasurer, Biological Sciences/Hospital Group (1961/63), 50th Anniversary Committee (1964/65), Hospitality Committee chairman (1964/65), program chairman (1967/69), deputy conven-

tion chairman (1967), president-elect (1969/70), president (1970/71). She coordinated a Chapter seminar on planning and equipment for the special library (1970).

At the Association Level. NGO Observer to the United Nations (1964/70); SLA Representative to Pacem in Terris Convocation

(1965); SLA Representative to White House Conference on International Cooperation Year (1965); International Relations Committee (1964/65, 1970/73), chairman (1965/69). SLA Representative to IFLA (1970/74). A member of SLA since 1952.

For Chairman of the Chapter Cabinet

DEUSS



LESLIE



Jean Deuss is chief librarian, Federal Reserve Bank of New York, Research Library. She received a BA with a major in history (1944) from University of Wisconsin and an MSLS from Columbia University (1959).

For 12 years she was employed in various personnel and secretarial positions. She became cataloger, Council on Foreign Relations Library (1959/61). In 1961 she went to Federal Reserve Bank of New York, Research Library, as head cataloger (1961/68), assistant chief librarian (1969/70), and assumed her present position in 1970.

SLA Chapter Activities. In the New York Chapter, she has served as 2d vice president/editor, Chapter News (1961/62); Membership Committee chairman (1962/63); 50th anniversary year chairman (1964/65); program chairman (1966/67), and Chapter president (1971/72).

SLA Division Activities. She was secretary/treasurer of the Social Sciences Division (1962/64).

At the Association Level. Tellers Committee (1965/66); Consultation Services Committee (1966/68); Convention Printing Committee, chairman (1966/67); Treasurer (1967/70); Chapter Liaison Officer (1972/74); Chapter Cabinet Chairman-Elect (1974/75). A member of SLA since 1959.

Philip Leslie is assistant director of libraries, Smithsonian Institution, Washington, D.C.

Before joining the Smithsonian he managed a variety of contracts in the information industry for Informatics, Leasco and Documentation Incorporated. He is a former assistant director, NASA Scientific and Technical Information Facility, and has served as chief librarian, Ryan Aeronautical Goodyear Atomic Corp., the Sandia Corp., and Brown University Physical Sciences Library.

SLA Chapter Activities. He was president, San Diego Chapter (1961/62); director, Washington, D.C. Chapter (1969/71), and chairman, Documentation Group, Washington, D.C. Chapter (1971/72) and has held committee positions.

SLA Division Activities. He was chairman, Documentation Division (1962/64).

At the Association Level. Committee appointments. A member of SLA since 1946.

For Chairman-Elect of the Chapter Cabinet

Lois E. Godfrey is assistant head librarian, Los Alamos Scientific Laboratory of the University of California, Los Alamos, New Mexico. She attended the University of Michigan, and received a BS in Library Science from Simmons College (1950).

She was a reference librarian at the Johns-Manville Research Center (1950/54), then moved to Los Alamos where she has been successively technical library section leader (1954/55), technical literature searcher (1956/59), assistant branch librarian (1959/63), and

GODFREY



SCHILD



assistant head librarian since 1963. She has worked half time since 1956.

She has been active in the New Mexico Library Association, serving on its Legislation and Intellectual Freedom Committee (1960/74), including three terms as its chairman (1961/62, 1967/68, 1969/70). She is also active in the League of Women Voters of Los Alamos, having served in many capacities since 1954, and currently as president. She is editor of the *Proceedings of the Regional Workshop on the Report Literature* (Western Periodicals Co., 1966), and co-editor with Helen F. Redman of *Dictionary of Report Series Codes* (SLA, 1962) and its 2nd edition (SLA, 1973). She is also the author of "National Translations Center" published in *Proceedings of the Second Annual Federal Interagency Field Librarians Workshop*, Denver, Colo., 1973 (The Workshop, 1974), and of "Speed Weeding: Discarding Duplicate Books in a Large Scientific and Technical Collection, Part I." *Bulletin of the Special Libraries Association Rio Grande Chapter* 11:71-72 (1968).

SLA Chapter Activities She was a member of the New Jersey Chapter for four years, and a charter member of the Rio Grande Chapter, serving as Awards Committee chairman (1960/61, 1962/63), Bulletin editor (1964/66), Nominating Committee (1960/62), Program Committee chairman (1956/58, 1971/72), Program chairman for the Regional Workshop on the Report Lit-

erature (1965), Report Series Dictionary Committee (1959/62, 1967/72), Bylaws and Procedures Manual Committee (1959/62, 1972/75), and president (1959/60, 1972/73).

SLA Division Activities. She was chairman of the Science-Technology Division's Committee on Division and Section Structure (1960/61), a member of the Nominating Committee of the Chemistry Section of Science-Technology Division (1961/62), and Nuclear Science Division Nominating Committee (1965/67), including chairman (1966/67).

At the Association Level. Consultation Service Committee (1968/70); Special Committee on Translation Problems (1973/75). A member of SLA since 1950.

Doris Lee Schild is librarian, IBM Systems Research Institute, New York. She received a BA (1938) from Rice University and an MLS from Columbia University (1963).

Her first job after library school was as researcher-librarian on *The Gallatin Annual*, published by American Heritage. In 1964 she joined the Components Division of IBM at East Fishkill, transferring in 1965 to Systems Research Institute in New York.

She is a member of ASIS, and chairman of the Nominating Committee of the New York Chapter (1974/75).

SLA Chapter Activities. In the New York Chapter, she has served as Program Chairman (1969/70); first vice president (1971/72); president (1972/73). Museums, Arts and Humanities Group Hospitality Committee (1970/71).

SLA Division Activities. Museums, Arts and Humanities Division Nominating Committee (1971/72). Business & Finance Division, Nominating Committee chairman (1973/74).

At the Association Level. Oral History Committee (1971/72). A member of SLA since 1963.

For Chairman of the Division Cabinet

DUNNIGAN



ECHELMAN



Mary C. Dunnigan is librarian, Fiske Kimball Fine Arts Library, University of Virginia. She received the BA from Mary Washington College of the University of Virginia (1942) and the BLS from Columbia University School of Library Service (1947). She has been a graduate student, Virginia Polytechnic Institute and State University, Division of Urban Affairs, since 1973.

She was library assistant, National Industrial Conference Board (1945/47); librarian, Rubber Manufacturers Association (1947/48); director, library department and information services, United States Brewers Association (1948/65); librarian, Institute of Textile Technology (1965/68); librarian, Virginia Polytechnic Institute and State University School of Architecture (1968/73).

She is a member of New York Historical Society and Society of Architectural Historians.

SLA Chapter Activities. She was president, New York Chapter and Virginia Chapter.

SLA Division Activities. She was chairman, Museums, Arts & Humanities Division.

At the Association Level. A member of SLA since 1946.

Shirley Echelman is chief librarian, Chemical Bank, New York. She received the BSc

from University of Nebraska at Omaha (1956) and the MLS from Rutgers University (1966).

She was librarian, BEA Associates, New York (1960/65). She assumed her present position in 1966.

She was adjunct lecturer, Rutgers University (1966) and is a member of Pi Gamma Mu and Beta Phi Mu.

SLA Chapter Activities. In the New York Chapter she was vice-president (bulletin editor) (1968/70).

SLA Division Activities. In the Business and Finance Division she was chairman-elect and bulletin editor (1970/71) and chairman (1971/72).

At the Association Level. Division Liaison Officer (1972/74); Division Cabinet Chairman-Elect (1974/75); Conference Advisory Committee (1972/75). A member of SLA since 1965.

For Chairman-Elect of the Division Cabinet

FIELD



Judith J. Field is head, General Reference Department, Flint Public Library, Flint, Michigan. She received a BBA in 1961, AMLS in 1963 and MBA in 1969, all from the University of Michigan.

She was a reference librarian at Western Electric/Bell Telephone Labs, Inc., Indianapolis (1962/65) and at University of Michigan Natural Science Library, Ann Arbor (1965/66). She was associate librarian in the Graduate School of Business Administration (1966/69) and international business librarian for the Institute for International Commerce at the school (1969/72). She assumed her present position in 1972.

She co-authored *Bibliography of International Finance* in 1971 and has delivered several talks on new business services and government documents including the Continuing Education Seminar in Toronto in 1974. She is a member of ALA and ASIS and was treasurer of the Michigan Chapter of ASIS (1971/73).

KING



SLA Chapter Activities. Assistant editor (1962/63) and editor (1963/65), Indiana Chapter bulletin *Indian SLAnt*. In the Michigan Chapter she was bulletin editor (1967/68), secretary (1971/72) and a member of the Program Committee (1973/74).

SLA Division Activities. In the Business and Finance Division she has served as vice-chairman (1971/72) and as chairman for two terms (1972/74).

At the Association Level. John Cotton Dana Lecturer (1974); Education Committee (1974/77). A member of SLA since 1962, a life member.

David E. King is editorial librarian, Standard Educational Corporation, Chicago. He received a BS from Ball State University in English with library science minor (1958) and an MALS from Rosary College (1971).

He was librarian for Sachem Central Schools, Lake Ronkonkoma, New York (1958/60); U.S. Army Dependent Schools, Nellingen, Germany (1960/61); and volunteer, U.S. Peace Corps, Nabua, Camarines Sur, Philippines (1961/63). He was a college traveller for American Book Company (1963/64) and became librarian at R.R. Donnelley & Sons Company, Chicago (1965/69). He has held his present position since 1969.

His memberships include ALA, Illinois Library Association, Chicago Library Club,

and Illinois Regional Library Council. He is chairman of the Continuing Education for Librarianship Committee of Illinois Library Association; a member of the Advisory Council of Librarians to the Graduate School of Library Science, University of Illinois; a member of the LSCA Title III Subcommittee of the Illinois State Library Advisory Committee; and a task force chairman on the Information Services Committee of the Illinois Regional Library Council.

SLA Chapter Activities. In the Illinois Chapter, he has served as editor of the *Illinois Chapter Membership Directory* (1968/69), member of the Hospitality Committee (1970/72), Nominating Committee chairman

(1970/71), and Education Committee chairman (1971/73). He was chairman of the Chapter's seminar, "Sources for the Seventies: A Reference Up-Date" (1973).

SLA Division Activities. In the Publishing Division, he has served as program chairman (1970/71), editor of the *Publishing Division Bulletin* (1971/73), chairman-elect (1973/74), and chairman (1974/75).

At the Association Level. Publisher Relations Committee chairman (1969/71), SLA Representative to the Association of American Publishers (1969/71), Recruitment Committee (1972/73), Deputy Conference chairman for the 1975 Chicago Conference. A member of SLA since 1966.

For Director (1975/78)

KRUPP



ROBERTS

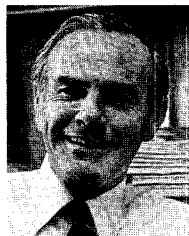


Helen Marcus

MALINOWSKY



MILLER



Marylyn Roberts is librarian, Intelcom Rad Tech, San Diego, Calif. She attended classes at Los Angeles City College and New Mexico State University, Alamogordo Campus (1966). She is currently enrolled in the Innovative Curriculum degree program at California State College, Dominguez Hill.

She was engineering librarian, North American Aviation (Rocketdyne Division) (1952/60); librarian, Office of Aerospace Research, Holloman Air Force Base, N.M. (1962/66); assistant librarian and librarian, Whittaker Corp. (1966/73). She assumed her present position in 1973.

She is a member of California Library Association, National Microfilm Association, and American Business Women's Association.

SLA Chapter Activities. In the San Diego Chapter she was Hospitality chairman (1969/70), secretary (1970/71), vice-president (1971/72), president (1972/73), consultation officer (1974/75).

At the Association Level. Membership Committee (1974/76). A member of SLA since 1967.

Robert G. Krupp is group chief, Science and Technology Research Center, New York Public Library. He received the BS in chemistry from University of Buffalo (1942) and the MLS from Columbia University School of Library Service (1955). He has taken additional library service courses at Catholic University and computer technology courses at MIT and IBM.

During World War II he worked as a chemist, Carbide and Carbon Chemicals Co., Institute, West Virginia. In 1945 he transferred to their Research and Development Division, South Charleston, West Virginia, to do research. He became technical librarian (1951) to develop information retrieval methods for patents and technical reports. While in library school he worked in the New York Public Library's Science and Technology Division. In 1955 he became assistant librarian, American Cyanamid Co., Bound Brook, N.J. He became supervising librarian, New York library, Bell Telephone Labs (1959), and designed the new library

in Holmdel where he went in 1961. In 1963 he transferred to Library Technical Processes Department and again took over the New York Library of Bell Telephone Laboratories. In 1965 he joined New York Public Library as chief, Science and Technology Division. He assumed his present position in 1973.

He is a member of American Chemical Society, having held various offices and presently is a consultant to Chemical Abstracts Service. He is a member of ALA and its Science and Technology Reference Service Committee, Booklist committee and co-editor, *Reference Books for Small and Medium-Sized Public Libraries*. He belongs to NYLA and is advisor to its Technical Resources Committee. He is a frequent lecturer at American Management Association seminars, industrial seminars, and library schools.

SLA Chapter Activities. He was president, New Jersey Chapter (1964/65). In the New York Chapter he was chairman, Technical Sciences Group (1969/70).

SLA Division Activities. Chairman, Science-Technology Division (1972/73).

At the Association Level. NSP Committee (1967/68), chairman (1968/70); Publisher Relations Committee (1970/71), chairman (1971/72); Scholarship Committee (1973/76). John Cotton Dana lecturer. A member of SLA since 1954.

Edward P. Miller is interim dean and chairman, Information Science Department, School of Library and Informational Science, University of Missouri, Columbia.

He received the Bachelor of Applied Science degree in aeronautical engineering, University of Toronto (1946), the Bachelor of Divinity degree *cum laude* from Kenyon College (1953), the MLS from University of Oklahoma (1965), and the PhD in industrial engineering (library systems management), University of Oklahoma (1972).

His first work experience was in aeronautical research with the Kellett Aircraft Corp., North Wales, Pa. and Cornell Aeronautical Laboratory, Buffalo, N.Y. He became head, Business & Technology Dept. (1965/66), coordinator of adult services (1966/68) and coordinator of adult & young adult services (1968/71)—all at Tulsa City-County Library System, Tulsa, Okla.

Dr. Miller is a member of AAAS, ALA, ASIS, Society for Technical Communication. He was a fellow of HEW, Office of Education, Higher Education Act Title II-B (1970/

71). He also received an Oklahoma State Library Grant in Library Science (1964). He has done systems analysis for St. Charles City-County Library System (1973); "A Systems Study of a University Library Circulation Department," University of Oklahoma, 1971; and was associate for systems analysis of Technical Services Division, University of Missouri-Columbia Library (1973) and Library Unification Study (1974). He has published articles in *Special Libraries, Illinois Libraries*, and presented papers at various conferences. He is presently writing a book *Improving Library Effectiveness: A Management Guide*.

SLA Chapter Activities. In the Oklahoma Chapter he was bulletin editor (1965/68), president (1969/70). He was organizer and first president, Mid-Missouri Provisional Chapter (1972) and bulletin editor (1974/75).

At the Association Level. Bylaws Committee chairman (1970/72); Research Committee (1972/74), John Cotton Dana lecturer (1973). A member of SLA since 1965.

H. Robert Malinowsky is assistant director of libraries for public services, University of Kansas Libraries, Lawrence, Kansas. He attended Midland College, received a BS in geological engineering from University of Kansas (1955), did graduate work in geology at University of Kansas, and received an MA in librarianship from University of Denver (1963).

Before entering the library profession he was production engineer, Gulf Oil Corp. He went to University of Kansas as assistant science librarian and engineering librarian (1963/64). He then became science librarian and instructor, Graduate School of Librarianship, University of Denver (1964/67) before returning to University of Kansas as science librarian (1967/69). He was appointed to his present position in 1969.

He is a member of Geoscience Information Society and has served as president (1970) and on the GIS Geoscience Serials Committee. A member of ASIS, he was president of the Frontier Chapter (1972). He is also a member of Mountain Plains Library Association and Tau Beta Pi. He has served on the graduate faculty, School of Pharmacy, University of Kansas; consultant, Kansas State Extension Service, and is currently on the faculty, Department of Librarianship, Emporia State Teachers College, teaching administration of special libraries. He was ap-

pointed to the Kansas State Library advisory commission (1974/75). He was on the Advisory Board of a Continuing Library and Information Science Education Project being conducted by Catholic University of America and funded by NCLIS and is on the board of directors of SALINET, a project to use an earth satellite for library purposes. He is the author of *Science and Engineering Reference Sources* (Libraries Unlimited, 1967, 1975).

SLA Chapter Activities. In the Colorado Chapter, he was bulletin editor (1964/66).

In the Heart of America Chapter he served as vice-president (1968/69), president (1969/70), board of directors (1970/71).

At the Association Level. Education Committee (1967/70), chairman (1971/74); Chapter Relations Committee (1970/71); SLA Representative to the American Association of Library Schools—Continuing Library Education Network (1972/74); Chapter Cabinet chairman (1974/75). A member of SLA since 1963.

Ballots and voting instructions will be mailed from the Association's New York Offices in late March or early April.

Officers and directors who will continue to serve on SLA's Board of Directors in 1975/76 are:

Miriam H. Tees who automatically succeeds to the office of President. **Edythe Moore** will serve as Past President. **Janet M. Rigney** will serve the third year of her three-year term as Treasurer (1973/76). **Robert L. Klassen** and **Marian Lechner** will serve the third year of their three-year terms (1973/76) as Directors. **Joseph M. Dagnese** and **Constance Ford** will serve the second year of their three-year terms (1974/77) as Directors.

CHAPTERS & DIVISIONS

Baltimore—A dinner meeting was held Oct 15. The program was a tour of the Family Planning Training Institute conducted by Lisbeth Olton, librarian of the institute.

Colorado—On Oct 12 the fall social was held at the Heritage Square Opera House.

On Nov 14 a business meeting was held at Colorado University. Marge Broward, director of the C.U. Business Library, discussed her 18 month experience with the Australian library community and library educational system.

The annual Christmas party and dinner was held Dec 14.

Dayton—The Ashland Chemical Company Research Library was toured Oct 8. The guest speaker was Dr. Edie Hedlin, Institutional Records Specialist, Ohio Historical Society.

On Nov 15 Frederic Scheffler was the host for a meeting at the University of Dayton. The highlight of the evening was the U.D. Research Institute's on-line retrieval system.

Florida—Three regional meetings were held in Florida during July. They were addressed by Mary Lou Knobbe. Each session was a "mini-workshop" devoted to "The Practicalities of Library Budgeting."

A luncheon meeting was held Nov 15 at the Florida Technological Institute. The panel discussed "Library Communications with Library Patrons." An exhibit accompanied the presentation.

Heart of America—A dinner meeting was held Sep 12 at the Old Washington Street Station, Kansas City, Mo. Committee reports were given which included plans for the 1974/75 year.

Hudson Valley—A visit to the new White Plains Public Library Oct 18 included an examination of the library's automated circulation system. Mary Valencik, director of the library, spoke about the management problems of planning and implementing the move to the new site.

The Hudson Valley Chapter has recently published a "Directory of Special Library Resources" in the area. It was edited by Martha Spiegel, is arranged alphabetically, and includes subject and special collection indexes. Price: \$10.00. Checks should be payable to the Hudson Valley Chapter, SLA.

Write to: Olive Chypre, SLA, IBM, Building 705 Branch Library, Box 390, Poughkeepsie, N.Y. 12602.

Kentucky—A meeting and panel discussion was held Oct 23 on "Crisis Is a Challenge." The crisis is the abundance of information; the challenge is making this information available.

Michigan—Dr. F. H. Wagman, director of the University of Michigan Library, addressed the Sep 19 meeting on the "U.S. Commission on Obscenity and Pornography."

The all-day session on Oct 11 was an update on reference and librarian education.

Mid-Missouri—An informal business meeting was held Oct 12. Slides were also shown on the work of the Fish-Pesticide Research Lab by Laura Crane.

Minnesota—A joint meeting was held with ASIS Sep 25 at which "Freelance Reference and Information" was discussed.

The Oct 24 meeting centered about the Minnesota State Prison library program.

The Chapter held a series of continuing education seminars in Oct and Nov. The topics included customer relations, management relations, and information storage and retrieval systems.

Montreal/Toronto—A joint workshop was held with CASLIS and CAIS Ottawa Chapter on "Techniques for Library Planning and Evaluation" Nov 22-24. Topics included budgeting, systems analysis, an analysis of human group activities using game theory, and communication in the development of automated information systems.

New York—Jane Janiak, chief librarian, Port Authority of New York and New Jersey, was the hostess for the Oct 8 meeting. The library and the World Trade Institute were visited before the meeting. Guy Tozzoli spoke about the World Trade Center. Thomas J. Kearney, manager of the Information Center, discussed Interfile, the computerized trade information service.

The *Special Libraries Directory of Greater New York*, 13th ed. is now available. The libraries are listed under subject headings; over 1,100 libraries in the area are included. To order send a check or money order for \$15.00 payable to SLA/New York Chapter to Diane Kaiser Cooper, Picture Collection-2310, American Heritage Publishing Com-

pany, McGraw-Hill, 1221 Avenue of the Americas, New York, N.Y. 10020.

New York, Business and Finance/Advertising and Marketing Groups—A joint meeting was held Oct 2. Max Shor gave a slide presentation on the Economic Census, API's new index. I. Zarembler introduced the American Petroleum Institute's new index to key petroleum publications.

New York, Museums, Arts, and Humanities Group—An all-day seminar was held in cooperation with New York Metropolitan Reference and Research Library Agency, Inc. The topic: Catalogs, their compilation, organization, use, and preservation.

New York, Publishing Group—A trip to Oceana Publications, Dobbs Ferry, N.Y., was scheduled for the Oct 17 meeting. The tour of the plant included the reprint department, the rare book collection, and a sample of hand leather bindings.

New York, Social Science Group—The meeting on Oct 1 centered on the theme, "Networking and the Special Library." Representatives of several operating networks spoke. A panel discussion and question-and-answer period followed.

Pacific Northwest—A business meeting Sep 7 was preceded by a description of the Pacific Forest Research Centre of the Canadian Forest Service in Victoria, B.C., by director M. H. Drinkwater. June Tomson reported on the recataloging of the book collection of the Centre to LC, its advantages and problems.

Pittsburgh—A one-day conference was held Sep 24 at the William Penn Hotel. The topic and the sponsor were the Bureau of the Census Institute on Economic Census.

In October the Patrick Henry Learning Center at Robert Morris College was visited.

A demonstration of IFI/Plenum Chemical Patents Data Base, Gulf Research and Development Company was the center of the Nov 20 meeting.

Publishing—A compilation of articles which have appeared in the Publishing Division *Bulletin* is now available. Titled, "Profiles of Publishing Libraries," the cost of the 34-page collection is \$3.00. Write Ron Coplen, Harcourt Brace Jovanovich, Inc., 757 Third Ave., New York, N.Y. 10017.

Rio Grande—The theme of the Oct 4 meeting was "Energy—Information and Research." The afternoon included several addresses and a panel discussion followed by a business meeting.

San Francisco Bay Region—The May 15 meeting took as its topic "Mass Transit." The environment and alternative means of transportation were considered.

The 50th year of the San Francisco Bay Region Chapter and the 30th of the Pacific Northwest Chapter were celebrated in a joint meeting Oct 25–26 in San Francisco. Sessions covered the resources of the Pacific Islands, Micronesia, Polynesia, and the Scripps Institute of Oceanography Library, the Washington Library Network Resources Directory, business and economic statistics courses, and the California State Library Union List. Also planned were tours of San Francisco libraries. The meeting was cosponsored by the Oregon Provisional Chapter, the Hawaii Chapter, and the Southern California Chapter.

Southern California—A joint meeting was held with ASIS on Sep 18 at the California Institute of Technology. A panel discussion on Futurology was preceded by dinner.

Toronto—Three papers on membership were presented at the Sep 19 meeting.

The October meeting was a tour of the Royal Ontario Museum Library and the special Chinese Exhibit.

Upstate New York—A tour of the Research Library and Research Studios at Eastman Kodak, Rochester on Sep 13 was followed by lunch and a meeting.

Washington, D.C.—The October Chapter meeting included a dinner at which Leo A. Orleans, China Research Specialist, Library of Congress, spoke. His topic: "A China-Watcher's View of China: A Few Comments and Lots of Questions."

On Dec 11 the program topic was "Tailored Cataloging Services: Two Points of View."

Washington, D.C., Biological Sciences Group—Wine and cheese were served at George Washington University's new Paul Himmelfarb Health Sciences Library. The new facilities were toured.

Washington, D.C., Documentation Group—The Oct 2 meeting included an on-line dem-

onstration of the New York Times Information Bank by Jeffery Pemberton.

Washington, D.C., Geography and Map Group—A boat tour of Baltimore Harbor was planned for Oct 5.

On Nov 14 Robert Alexander, research geographer, U.S. Geological Survey, spoke on the Central Atlantic Regional Ecological Test Site program.

Washington, D.C., Science Technology Group—A dinner meeting Oct 10 was addressed by William Gingras of CDC on the "Potential Future of OCR in Libraries."

Washington, D.C., Social Sciences Group—The group discussed methods and techniques for dealing with budget cuts and manpower ceilings Oct 9.

The December meeting dealt with cooperative ventures which might assist the special librarian.

The Social Sciences Group has published "Union List of Selected Microforms in Washington, D.C. Area Libraries." The areas covered include the social sciences and humanities. Order from the Social Sciences Group, Washington, D.C. Chapter/SLA, c/o E. S. Knauff, 2326 19th Street N.W., Washington, D.C. 20009. Cost: \$3.50 prepaid.

In Memoriam

Ilse Bry (1905-1974)

In the untimely death of Dr. Ilse Bry the community of specialized librarians and information scientists has lost one of its most devoted and most original acolytes. It was she who singlehandedly founded and edited the *Mental Health Book Review Index* and made it a widely consulted and highly respected publication. For many years, Dr. Bry provided every issue of the *Index* with an extremely lucid, always well-written editorial in which she discussed the most urgent problems in the overcrowded field of information concerning the large scope of the behavioral sciences. The subject-matter of these editorials was so timely and so well arranged that they were frequently cited and even reprinted *in toto*, once by such a prestigious periodical as the *AMA Journal of Psychiatry*.

Ilse Bry was born in Berlin, Germany, on Sep 14, 1905. She studied philosophy in Berlin, Munich, and Vienna, Austria, where she received her PhD degree with a dissertation on Spinoza. Before emigrating to the United States, she held a position as a librarian at the Municipal Library of Berlin-Charlottenburg.

She acquired a degree in library science and an MA in psychology at Columbia University

where she held her first American library position as a cataloger and abstractor. From there, she was called to be an assistant editor of *Psychological Abstracts*. Later, Dr. Bry was for several years the librarian of the New York Psychoanalytic Institute where she instituted many new procedures recognized as a valuable help by the busy psychoanalysts. The next stage was work at the New York Bellevue Center's Psychiatric Library.

Yet the highlight of Ilse Bry's life was the establishment of the *Mental Health Book Review Index*. She gave herself wholeheartedly to it and invested her considerable intellectual and professional abilities in this venture.

Henry Walter Brann
Takoma Park, Md.

Wayne M. Hartwell, retired, formerly librarian, Encyclopaedia Britannica . . . died suddenly Oct 19, 1974, in Flint, Mich. A member of the Illinois Chapter since 1952, he served as president in 1970/1971. Mr. Hartwell also served as president of the Reference Services Division of the American Library Association 1965/1966.

Washington Letter

November 11, 1974

National Science Policy

On October 11 the Senate, by voice vote, passed S.32, a bill to establish a framework for the formulation of national policy and priorities for science and technology. Designed to overturn the Nixon Reorganization Plan No.1 of 1973 which abolished the White House Office of Science and Technology and transferred its responsibilities to the National Science Foundation, the bill was reported unanimously by the Senate Committee on Labor and Public Welfare (S. Rep. 93-1254). Introduced by Senator Kennedy, cosponsored by 38 other Senators on a bipartisan basis, and supported by leaders of the scientific community, it is considered possible that the House may act on the measure before the end of this Congress. For text of the bill, section-by-section analysis, and comment see the *Congressional Record*, October 11, 1974, p.S19138-S19146.

As passed by the Senate, the bill establishes a White House Council of Advisers on Science and Technology to advise the President on research and development policies, plans, and programs. The new Council would recommend budget levels and priorities in the allocation of funds. The bill also requires the President to submit an annual report on science and technology to the Congress. Other provisions call for a comprehensive 18-month study of federal organization for science and technology by the National Academy of Sciences, and the initiation of two new programs by the National Science Foundation: 1) a continuing education program for employed scientists and engineers and 2) a program designed to help state and local governments improve science advisory efforts.

Freedom of Information Act Amendment

President Ford returned the Freedom of Information Act Amendment (H.R.12471)

without his approval on October 17 stating that in his opinion the bill is both unconstitutional and unworkable. Although gratified by changes which the Congress had made in response to his earlier objections, the President indicated that there were still significant problems which had not been resolved. Promising to submit his own amendments to the Act, he expressed the hope that the laudable goals of the legislation would be realized with reenactment of the measure incorporating language changes which he will propose.

Support for the bill is widespread and, although it is opposed by the departments and agencies of the federal government, it is predicted that Congress will override the veto after it reconvenes on November 18.

Recent Development

The President's veto of the Freedom of Information Act Amendment was overridden in the House on November 20 by a 371 to 31 vote. On November 21 the bill became law (P.L.93-502) when the Senate by a vote of 67 to 27 also overrode the veto. The amended act improves access to government information, puts teeth into its implementation, requires agencies to provide indexes to their documents, and places limitations on charges for obtaining information.

GPO Microfiche Pilot Project

Details of a proposed Government Printing Office microfiche project were presented at an opening meeting of the Depository Library Council of the Public Printer held in Washington on October 29 and 30, 1974. The long awaited plan contemplates providing a microfiche version of the *Code of Federal Regulations* to a test group of 20 depository libraries to determine the feasibility and usefulness of instituting a full micrographic program.

Some form of microform distribution by GPO has been under consideration since 1970 when it was first proposed by the late Public Printer A. N. Spence. Since then two depository library microform preference surveys have been completed and have substantiated the initial findings that depository libraries desire distribution by microform.

The present proposal outlines in detail pilot project plans for film format and film classes, indexing techniques, bibliographic control, and microfiche header area presentation. The stated objectives of the project are to explore and document the adequacy, efficiency, and economy of these plans as the basis for an ongoing GPO micrographic program.

Ruth S. Smith, Chairman of SLA Government Information Services Committee, attended the sessions of the Depository Library Council and indicated that she had reservations about some of the recommen-

dations. She singled out for particular mention the recommendation that the Superintendent of Documents Office "do the cataloging of all federal documents in the MARC format and issue these MARC computer tapes as part of the MARC program." She pointed out that at the present time the Library of Congress includes some government documents in its Cataloging in Publication Program, but no MARC format has yet been developed for technical report literature. Some years ago, she said, a COSATI panel developed a format for interchange of information on magnetic tape which is quite widely used today for technical report literature by agencies such as National Technical Information Service, Defense Documentation Center, and others. The COSATI format is not compatible with MARC but it is an ANSI standard.

Ruth Fine
Washington, D.C.

STAFF DEVELOPMENT

The successful use of staff development programs is a major means by which effectively to utilize library personnel. The first column of the Current Literature Review Subcommittee (Staff Development Committee, Library Administrative Division, ALA) that appeared in *Special Libraries* was published in the July 1974 issue, p.304-305. The column will appear quarterly in the future.

The librarians now working on the subcommittee are Jean Coberly (Univ. of Houston); John DePew (Florida State Univ.); May Hall (Prince Georges Co., Md.); David Dowell (Iowa State Univ.); Sharon Irvine (Kraftco Corp.); B. J. Mitchell (California State Univ., Northridge); Susan Wick (Orange Co., Calif.); and Neal Kaske (Univ. of California, Berkeley), chairman.

The following articles address themselves to the future of organizational development, management, and management effectiveness.

Halal, William E. / Organizational Development in the Future. *California Management Review* 16(no.3):35-41(Spring 1974).

Because of its uneven history, the future of organizational development (OD) is unclear. This article attempts to note the future direction and character of OD programs. The effect these programs may have on organizational life is explored.

Stull, Richard A. / A View of Management to 1980. *Business Horizons* 17(no.3):5-12(Jun 1974).

Supervisors should be interested in this projection of five major areas of management by a specialist in management practices. Included are ideas for the future in such critical areas as education, equal employment practices, and roles for women.

Reddin, W. J. / Management Effectiveness in the 1980s. *Business Horizons* 17(no.4):5-12(Aug 1974).

Reddin discusses the expected rate of change for organizations, the underutilization of technology, the current state of organizational theory and design, the future of MBO (management by objectives), and the qualities and values needed by the manager of the 1980s. The author cites several works of interest to librarians interested in and/or responsible for organizational development.

... coming back to the present we look at a classic on administrative skill . . .

Katz, Robert L. / Skills of an Effective Administrator. *Harvard Business Review* 52(no.5):90-102(Sep/Oct 1974).

This article was first published in *HBR* in 1955, and is a classic. The author has added a retrospective commentary which updates the

work. Katz identifies three basic administrative skills (technical, human, and conceptual) that every successful manager must have in varying degrees. These skills are useful for evaluating one's own administrative effectiveness as well as that of others in the library and the parent organization.

... and looking to better understand others we find . . .

Myers, M. Scott and Susan S. Myers / Toward Understanding the Changing Work Ethic. *California Management Review* 16(no.3):7-19(Spring 1974).

Some of today's personnel problems may be the result of the many different value systems held by others. The authors borrow from C. W. Graves [*Journal of Humanistic Psychology* 10 (no.2):131-155(Fall 1970)] the idea of seven levels of psychological existence: 1) reactive, 2) tribalistic, 3) egocentric, 4) conformist, 5) manipulative, 6) sociocentric, and 7) existential. These levels are "relatively independent of intelligence, and the person's level . . . can become arrested at a given level or it can move upward or downward depending on that person's cultural conditioning and his perception of the opportunities and constraints in his environment." Must reading for those trying to understand one's fellow staff members and for those working in the area of staff development.

Roussell, Cecile / Relationship of Sex to Department Climate. *Administrative Science Quarterly* 51(no.2):211-220(Jun 1974).

A survey of teachers showed that sex of the department head does affect the behavior of department members. Males supervised by a female tended to perceive the power of that department head in terms of attitudes relating to personal female characteristics. Useful for groups preparing to choose a new department head in or out of the library world.

Weaver, Charles N. / Sex Difference in Job Satisfaction. *Business Horizons* 17(no.3):43-49 (Jun 1974).

The author investigates the job satisfaction attitudes of black women using data from a National Opinion Research Center Survey of 1972. He concludes that many variables—age, occupation, marital status, and others—correlate with reported levels of job satisfaction, but in general he finds no significant difference in job related values as perceived by black and white employees; so, it is sex over race.

... and in the area of communications there are some new ideas and facts . . .

Harriman, Bruce / Up and Down the Communications Ladder. *Harvard Business Review* 7(no.5):143-151(Sep/Oct 1974).

Harriman states that "communications in a hierarchical society or organization work according to the principle that governs gravity. Downward communications are usually better than anyone realizes and frequently more accurate than those at higher levels want them to be. Conversely, upward communications have to be pumped and piped, with a minimum of filters, in order to be effective." The New England Telephone Company used this theory to study its communications problems and then developed an effective program to solve those problems.

... as for "how to," note these . . .

Burger, Chester / How to Find Enough Time. *Nations Business* 62(no.9):70-72(Sep 1974).

Burger advocates planning to save time through the use of record books to facilitate keeping track of schedules, meetings, phone numbers, etc.; clustering phone calls and correspondence; and preparing a list of tasks to be completed daily.

Sears, William R. / The Art of Saying No. *Nations Business* 62(no.10):47-50(Oct 1974).

Choosing the right words to "sell" a person on a refusal is part of the art of saying no. Advice on how to give negative answers includes 1) delay; 2) ask signaling questions; 3) apologize and mean it; 4) never say no—say what amounts to it; 5) compliment; 6) say something nice before pointing out a flaw; 7) substitute an alternative; 8) avoid appearing mealy-mouthed; and 9) make it easy.

... for those setting up a conference or training program . . .

Halverson, M. Brent / Facing the Realities: Some Conference Planning Principles. *Adult Leadership* 23(no.2):47-49(Jun 1974).

Specific guidelines and realities are described for those responsible for planning conferences, workshops, and seminars. The importance of objectives is stressed as is the relevance of specific educational techniques and evaluation. Very helpful and clear.

Harman, Shirley J. / Management Training and Development: An Interim Project Approach. *Training and Development Journal* 28(no.6):16-19(Jun 1974).

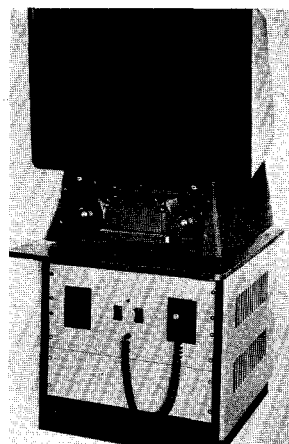
Suggests a combination of classroom and job based learning opportunities for management. Following workshop training in management skills, each participant devises a project upon which to work. This process assures maximum transfer of workshop training to the job.

Neal Kaske
Univ. of California, Berkeley

HAVE YOU SEEN ?



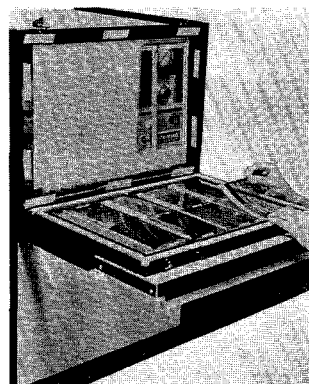
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A **Microfiche inspecting device**, the Pepco MFI, allows inspection in roll form from documents or COM recorders before duplication, cutting, and distribution. The fiche is projected onto a 22.5 in. \times 30 in. screen, several frames at a time to detect errors. A single cut fiche version is also available. For further information: Robert E. Tucker, Pepco Division, Computer Specialties Corporation, 87 Burlews Court, Hackensack, N.J.



The **Mini-Max Microform Viewer** is hand held. Designed for use with aperture cards and 18 \times through 48 \times reduction microfiche, it operates on 3 double "A" batteries and has an optional combined recharging, AC/DC converter accessory. For information: Criterion Micrographics, Inc., R.D. #2, 354 Wilmington Pike, Chadds Ford, Pa. 19317.



Microfiche Registration Template for use with the Micobra MS-10 Microfiche Printer automatically precisely aligns the microfiche master with the copy. Tight registration provides minimal loss of resolution. The template costs \$15.95 per set. Write: Micobra Corporation, 175 King St., Box 1187, Hanover, Mass. 02339.

HAVE YOU HEARD ?

Pollution

A bibliography, "Pollution in Alberta," covering 1964-1974 is available from Schick/Swanson, Library and Information Consultants, Ltd., P.O. Box 3395, Edmonton, Alberta, Canada. Annual updates will be available.

Standard 2707

The American National Standards Institute announces the publication of the international standard: "Transparent A6 size microfiche of uniform division—Image arrangements No. 1 and No. 2." UDC 778.142. Ref. no. ISO2707-1973 (E).

U.S. PhD Dissertations Listed

Xerox University Microfilms has published a list of 417,000 doctoral dissertations covering 26 fields of study. This *Comprehensive Dissertation Index* is a 37-volume computer-generated work based on keywords from dissertation titles. It covers practically all U.S. dissertations plus some 10,000 from Canada. A yearly supplement will be published. Library bound copies are available at \$2,495. The microfiche edition: \$1,995 (including 2 readers). Write: Xerox University Microfilms, 300 N. Zeeb Rd., Ann Arbor, Mich. 48106.

Management Training

Mainstream International has produced a new audio cassette program, "Women in Management, Part I," to develop managerial talent among women employees. It also espouses organizational practices. The program consists of six tapes with accompanying workbooks. Available from: Mainstream International, Inc., Suite J-10, 9601 Ashton Rd., Philadelphia, Pa. 19114. Price: \$97.50.

New Standards to be Developed

At a meeting Dec 14, 1973, of the American Society for Testing and Materials (ASTM), a committee on Fire Hazard Standards was formed. Meetings are open to all concerned with the problem. Contact: Chairman Bryant Mather, c/o ASTM, 1916 Race Street, Philadelphia, Pa. 19103.

On Microfiche

University Microfilms now has selected collections of government documents available on microfiche. Catalog, *Government Documents on Microfilm 1973*, can be obtained on request from Xerox University Microfilms, 300 N. Zeeb Rd., Ann Arbor, Mich. 48106.

Opportunities in Government Libraries

A final report has been prepared as a result of a study done by the University of Maryland College of Library and Information Services and the U.S. Department of Agriculture Library. The study, *Alternative Educational Patterns for Career Opportunities: Education, Job Roles, and Upward Mobility*, dealt with pre- and para-professional levels in government libraries in the Washington, D.C. area. It is available from the Student Supply Store, University of Maryland, College Park, Md. 20742. Authors: Margaret E. Chisholm and Charles R. Anderson. Price: \$4.75.

Personal Learning Package

A multi-media concept was used in order to produce the package which is based on NMA's *Introduction to Micrographics*. Included are an audio tape, a two-color microfiche, and a booklet containing the printed text with frame numbers. Cost: \$15 for NMA members, \$20 for nonmembers. Order from: National Microfilm Association Publications Sales, 8728 Colesville Road, Silver Spring, Md. 20910. Prepaid only.

Law Bibliography

The *Tarlton Law Library Legal Bibliography Series: A Bibliography of Legal Tapes and Cassettes*, compiled by Ann Beardsley, is now available. Sixty-eight pages long, it costs \$10.00. Write: Adrienne deVergie, Tarlton Law Library, University of Texas School of Law, 2500 Red River, Austin, Texas 78705.

ARL Executive Director Named

The Association of Research Libraries, Washington, D.C., has named John P. McDonald executive director of the association. McDonald will replace the retiring Stephen A. McCarthy on Jan 1, 1975.

PUBS

(75-001) **A Directory of Information Resources in the United States: Federal Government, with a Supplement of Government-Sponsored Information Analysis Centers**, rev. ed. Library of Congress, National Referral Center. Washington, D.C., LC 1974. iv,416p. \$4.25 LC 73-22041 ISBN 0-8444-0116-1 Supt. of Docs. LC 1.31: D62/4/974; Stock No. 3000-00067 CIP

(75-002) **A Report on Library Networks**. Hendricks, Donald D. Grad. Sch. of Libr. Sci., Univ. of Ill., Sep 1973. (Occasional Papers, no.108) 23p. ISSN 0073-5310 Single copy free.

Brief investigation of the major library cooperatives and their success or lack of it.

(75-003) **Decimal Classification in an Open Access Library**. Schlegendal, K. Nachrichten für Dokumentation 25(no.1): 15-18 (Feb 1974).

Describes the application of UDC in the Library of Parliament of Berlin. In German.

(75-004) **Canadian Library Systems and Networks: A Symposium**. Canadian Library Association. Ottawa, Ont., Canada, 1974. iii, 50p. \$3.00 ISBN 0-88802-101-1

Papers presented at a symposium on library systems and networks at the Canadian Library Association Conference, Winnipeg, 25 Jun 1974.

(75-005) **The Fear of the Word: Censorship and Sex**. Oboler, Eli M. Metuchen, N.J., Scarecrow Press, Inc., 1974. 370p. \$10.00 LC 74-6492 ISBN 0-8108-0724-6

(75-006) **The American Cartographer**. v.1(no.1) (Apr 1974). Washington, D.C., American Congress on Surveying and Mapping. \$7.00 per year, published twice a year in Apr and Oct.

(75-007) **Collection of Regional History and the University Archives**. Jacklin, Kathleen, ed. Ithaca, N.Y., Cornell University Libraries, 1974. xxiv, 258p.

Report of the curator and archivist 1962-1966.

(75-008) **How to Get What You Don't Have: A Guide to Obtaining Loans, Photocopies or Microcopies of Sci-Tech Publications**. Pitermick, Anne. Ottawa, Ont., Canada, National Research Council, Canada, 1973. viii, 104p. Half in English. Half in French. \$2.00 NRC No.13513.

(75-009) **The Energy Directory**. New York, N.Y., Environment Information Center, Inc., 1974. 500p. \$50.00 LC 74-79869

A guide to the nation's energy organizations, decision-makers and information sources.

(75-010) **Subject Heading Authority List**. Gullion, Susan L. and Mary R. Schroeder, comp. Los Angeles, University of California Center for the Health Sciences, Biomedical Library, 1974. ii,399p. \$12.50

(75-011) **Opening Day Collection**. 3d ed. Gardner, Richard K., ed. Middletown, Conn., Choice, 1974. iv,59p. \$7.50 LC 74-7093 ISBN 0-914492-00-4

A publication of the Association of College and Research Libraries, a Division of the American Library Association, it is a list of all the books which should definitely be found on the shelves of every college library, in the view of the editors.

(75-012) **American National Standard: Proof Corrections**. New York, N.Y., American National Standards Institute, 1974. iii,24p. \$5.00 ANSI Z39.22-1974

(75-013) **Global Communications Satellite Policy: INTELSAT, Politics and Functionalism**. Pelton, Joseph N. Mt. Airy, Md., Lomond Systems, Inc., 1974. 183p. \$14.50 cloth; \$11.50 microfiche. Cloth: ISBN 0-912338-32-6; Microfiche: ISBN 0-912338-33-4

(75-014) **Consumers Index to Product Evaluations and Information Sources**. v.1(no.1) (Jan 1973). Ann Arbor, Mich., Pierian Press. Quarterly. \$25.00 per year.

Includes citations, consumer-oriented articles, and product evaluations from popular magazines. Contains a separate section summarizing other sources.

(75-015) **Consumer Sourcebook**. Wasserman, Paul and Jean Morgan, eds. Detroit, Mich., Gale Research Co., 1974. xii, 593p. \$35.00 LC 74-10494 ISBN 0-8103-0381-7

Includes information helpful to the consumer trying to reach the right person to supply information or correct a complaint. Contains a directory to government organizations; associations, centers, institutes; media services; company and trademark information; sources of recourse; and advisory information.

(75-016) **Summary of Proceedings**. Seminar on Mechanical Engineering Information: Provision and Use. Wall, R. A. Loughborough, Leicestershire, England, University of Technology Library, Aug 1974. £2.

The seminar on engineering information sources, needs, and services was held Mar 27-29, 1974.

(75-017) **Official Meeting Facilities Guide**. Virginia Nonnenman, ed. New York, Ziff-Davis, Spring 1974. 478p. \$10.00

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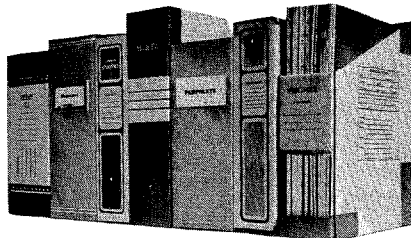
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Foreign Books and Periodicals—Specialty: Building Collections. Albert J. Phiebig Inc., Box 352, White Plains, N.Y. 10602.

For Sale—Used Termatrix optical coincidence information retrieval equipment. Write Box S-218, SLA.

Public Utilities Reports—For Sale. New series vol.61-100. 3d series vol.1-56. Annuals 1954-64. Digest, 2d series. Covers years 1945-65. \$500.00. C. D. Williams, Gilbert Management Consultants, 525 Lancaster Ave., Reading, Pa. 19603.

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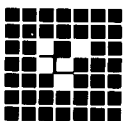
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